ENTREPRENEURSHIP

ACCOUNTING PROFESSION OPTION

For Rwandan Schools

Senior **5** Student's Book

Experimental version

FOREWORD

Dear Student,

Rwanda Basic Education Board (REB) is honored to present Senior 5 Entrepreneurship book for the students of Accounting Profession Option which serves as a guide to competence-based teaching and learning to ensure consistency and coherence in the learning of the Entrepreneurship. The Rwanda educational philosophy is to ensure that you achieve full potential at every level of education which will prepare you to be well integrated in society and exploit employment opportunities.

The government of Rwanda emphasizes the importance of aligning teaching and learning materials with the syllabus to facilitate your learning process. Many factors influence what you learn, how well you learn and the competences you acquire. Those factors include the relevance of the specific content, the quality of teachers' pedagogical approaches, the assessment strategies and the instructional materials available. In this book, we paid special attention to the activities that facilitate the learning process in which you can develop your ideas and make new discoveries during concrete activities carried out individually or in groups.

In competence-based curriculum, learning is considered as a process of active building and developing knowledge and meanings by the learner where concepts are mainly introduced by an activity, situation or scenario that helps the learner to construct knowledge, develop skills and acquire positive attitudes and values.

For efficiency use of this textbook, your role is to:

- Work on given activities which lead to the development of skills.
- Share relevant information with other learners through presentations, discussions, group work and other active learning techniques such as role play, case studies, investigation and research in the library, on internet or outside.
- Participate and take responsibility for your own learning.
- Draw conclusions based on the findings from the learning activities.

To facilitate you in doing activities, the content of this book is self-explanatory so that you can easily use it yourself, acquire and assess your competences. The book is made of units as presented in the syllabus. Each unit has the following

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structure: the unit title and key unit competence are given, and they are followed

that are connected to real world problems more especially to production, finance and economics.

The development of each concept has the following points:

- Learning activity which is a well set and simple activity to be done by students in order to generate the concept to be learnt.
- Main elements of the content to be emphasized.
- Worked examples; and
- Application activities to be done by the user to consolidate competences or to assess the achievement of objectives.

Even though the book has some worked examples, you will succeed on the application activities depending on your ways of reading, questioning, thinking and handling calculations of problems not by searching for similar looking worked out examples.

I wish to sincerely express my appreciation to the people who contributed towards the development of this book, particularly, REB staff, development partners, University Lecturers, and secondary school teachers for their technical support. A word of gratitude goes to Secondary School Head Teachers, Administration of different Universities (Public and Private Universities) and development partners who availed their staff for various activities.

Any comment or contribution for the improvement of this textbook for the next edition is welcome.

Dr. MBARUSHIMANA Nelson

Director General, REB.

ACKNOWLEDGEMENT

I wish to express my appreciation to the people who played a major role in the development of this Entrepreneurship textbook for Senior 5 students in Accounting Profession Option. It would not have been successful without active participation of different education stakeholders.

I owe gratitude to different universities and schools in Rwanda that allowed their staff to work with REB in the in-house textbooks production initiative.

I wish to extend my sincere gratitude to University Lecturers, Secondary school teachers and staff from different education partners whose efforts during writing exercise of this book were very much valuable.

Finally, my word of gratitude goes to the Rwanda Basic Education Board staffs who were involved in the whole process of in-house textbook elaboration.

Joan MURUNGI

Head of CTLR Department

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Unit 1 INTRODUCTION TO MARKET RESEARCH

Key unit competence: To be able to conduct amarket research

Introductory activity

Read KANYARWANDA's Case Study and answer the questions below.

KANYARWANDA was a famous trader of maize flour in IMIHIGO village. He started a fruits' shop straight away after realizing that the first business (maize flour) was successful. Two months later, the fruits 'shop failed completely.

Questions.

a) Have you ever experienced a business failure similar KANYARWANDA's fruits shop?

b) What do you think might have led to KANYARWANDA's fruit shop failure?

c) What advice would do you give to KANYARWANDA before opening the fruits shop

1.1. Market research

Learning Activity 1.1

Read Kamaliza's Case Study and answer the questions below.

Kamaliza is a senior four students at UBWOROHERANE secondary school. After completing senior four entrepreneurship program, she decided to start a small orange juice processing business to serve restaurants located in UBUMWE village as the main market. Two years later, she starts thinking of introducing a new product to the market. She is asking herself many questions about the new product to launch, but the most important question in her mind is what she can do to ensure that the new product satisfies the customer needs.

Questions.

a) What should KAMALIZA do to assess whether the new product will satisfy the customers' needs/market?

b) Why do you think it is very important for Kamaliza to gather information related to sales before launching the new product?

1.1.1.Meaning of market, and market research

A market is defined as any arrangement between the buyer and the seller involving the exchange of goods and services against money. A market may also refer to all individuals, institutions and other enterprise that buy goods or services of a particular kind. The development of the Internet, where almost all transactions are conducted online, added a digital market to the physical market.Businesses cannot successfully meet the needs and desires of all consumers, so businesses must focus on a group of consumers that can be differentiated. This process is called market segmentation.

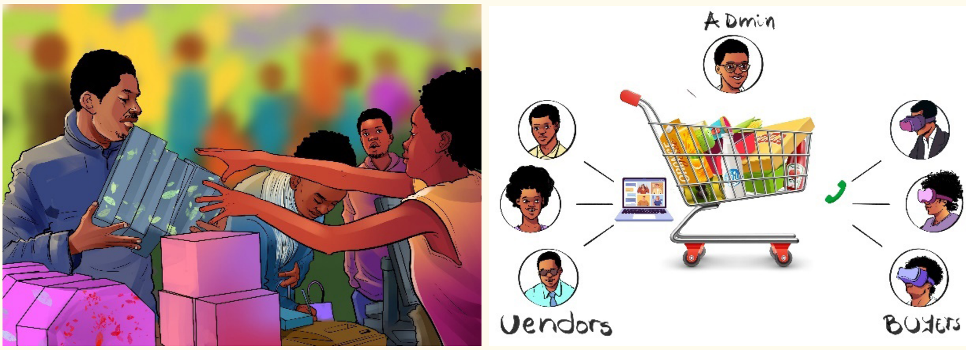


Figure 1.1: Sellers and buyers can exchange both physically and virtually

Market research refers to the process of collecting and analyzing information or data related to the demand of a good or service in a particular market. Market research gathers information about consumers, competitors, distributors, within a firm's target market. This is the process of determining the viability of a new product or service through research conducted directly with potential customers. Market research is a tool that helps to discover the target market and get opinions of the consumers about the product or service. The following is the step-by-step guide to market research:

- **Define a business project before doing market research:** Before doing market research, it is important to clarify the idea and define the project. At this stage, it is recommended to create a definition of the product or service that is as precise as possible.
- **Test and improve your business idea before doing market research:** After someone has got the ideas in writing, it is time to define the problems he/she wants to solve and the answers he/she wants to provide. This allows you to choose the research methods that are right.
- **Choose a precise method for your market research:** At this point, you can now filter out which analysis is to be carried out. They depend on the issues and opportunities identified in the previous steps.
- **Analyze trends and the environment using PESTEL analysis**
- PESTEL Analysis stand for Political, Economic, Social, Technological, Environment and Legal Environment.

After you have got your ideas down on paper, tested your idea using a prototype, and chosen the methods for your market research, it is time to get to the point. You will now turn to the question of market trend and environmental study analysis (also called PESTEL analysis).

- **Data Collection and Interpretation:** This is the crucial phase of your market research that could influence the success of your future business. It will enable you to come up with all the required information/ data. After gathering reliable data and interpreting it, you will come up with qualitative or qualitative research information.
- **Synthesize the results of market research before the business plan:** Once you have done your market research, you need to summarize the results to include in your business plan.

1.1.2. Importance of market research

Market research provides important information about the market and business landscape. It can tell the business owner how the business is perceived by the target customers. Market research can also play an important role in developing business products and services, bringing them to market, and marketing them to consumers. Here are some ways market research can support a business activity:

- Market research helps to reduce the risks involved with a new product because data obtained is used to assess with a degree of accuracy the likely chances of the new product achieving satisfactory sales.
- Market research helps a firm to improve their knowledge of consumers and competitors so that changing trends can be identified.
- Market research helps a business to predict its sales and make appropriate plans. If sales are expected to increase, production will be increased and reduced if sales are expected to reduce.
- To monitor the effectiveness of business activities. For example, a company that makes cooking oil may want to know the number of homes that use their product.
- Market research is used to gather data which can be used as a basis for market decision making.
- Market research is used to assess favorable designs, styles and packaging that consumers appreciate.
- It helps firms to identify competitors.
- Market research data provides explanations for product success or failure in the market.

1.1.3. Components of marketing mix

A marketing mix is often referred to as the “4Ps” of marketing i.e. Product, Price, Place and Promotion. It is a term used to describe all the activities which go into marketing a product.

To meet customers’ needs, a business must develop products to satisfy them, charge the right price, get the goods to the right place and it must make the existence of the product known through promotion. The components of marketing mix can be explained as bellow:

i) **Product:** A product is something that is offered to a market. A product can be tangible (a good e.g. a book) or intangible (a service e.g. insurance).

ii) **Price:** This is the amount of money paid by a consumer for a product. The fixing of a price level for a commodity is a vital component of marketing mix. Price has a great impact on the consumers' demand for a product. If price is set too low, then the consumers may lose confidence in the quality of the product. If the price is too high, many consumers will not be able to afford the product.

Factors affecting pricing decision:

- **Government influence:** In some instances, the government may set prices, mainly for essential goods.
- **Level of competition:** Where there are many producers of a similar product, the price set will be in line with the competitors' prices in order to compete with them favorably.
- **Demographic factors:** The decision to set a price of a product also depends on the number of potential buyers, location of customers, their economic strength and the expected consumption rate of buyers.
- **Costs incurred:** If costs incurred during the production process are high, then the final price will also be relatively high.

iii) **Place:** This shows how products move from the manufacturer to the final consumer. It refers to the channel of distribution that is used. The distribution process includes: manufacturers, wholesalers, service providers, retailers, marketing specialists and customers.

Intermediaries in the distribution process:

- **Middlepersons:** Refers to an independent business concern that operates as a line between producers and consumers or industry and consumers.
- **Agents:** These are wholesalers/retailers who do not own the goods they sell. Agents normally specialize by customer type or by product or by product line.
- **Wholesaler:** These are merchant establishments that engage in bulk buying, storing and physically handling the goods and sales of goods to retailers.
- **Merchant middlemen:** These engage in the buying of goods from

the wholesalers and selling them to final consumers.

- **Brokers:** Are people who do not buy goods themselves but arrange deals between buyers and sellers.
- Below is the illustration of different distribution chains:

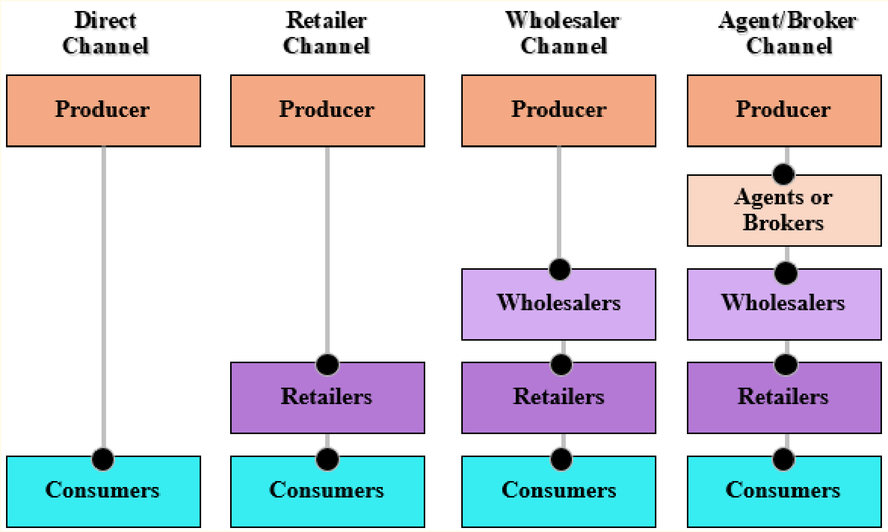


Figure 1.2: The entrepreneur should understand the length of the distribution process

NB: The chain of distribution used depends upon the nature of the product to be supplied e.g. perishable goods suits direct channel while durable goods are suitable for agent channel.

iv) **Promotion:** This involves ways of attracting customers to buy products either for the first time or to buy more of them.

Figure 1.3: Good use of basic elements of promotional mix is very important to every business.

There are several forms of promotions that can be used by a business. They include the following among others:

- **Advertising:** This is the process of informing the public about the existence of goods or services through the use of the media such as: newspapers, radios, television, journals etc. Advertising can either be informative; that is the emphasis of advertising is to give full information about the product or it can be persuasive that is where emphasis is put on convincing customers that they really need the product and they have to buy it.
- **Personal selling:** This is one of the traditional forms of promotional tool wherein the salesman interacts with the customer directly by visiting them. It is a face to face interaction between the company representative and the customer with the objective to influence the customer to purchase the product or services.

Figure 1.4: Salespersons play invaluable role in personal selling.

- **Public relations:** The marketers try to build a positive image in the market by building relationships with the general public. The companies carry out several promotion relation campaigns with the aim of supporting all those directly or indirectly related to them. The public consists of customers, employees, suppliers, vendors, shareholders, government and society at large. Advertising is one of the forms of public relations that the company may use with the intention of bringing newsworthy information to the public.

E.g.: Some companies join hands with the government to clean up their surroundings, build toilets and support local government officials to achieve their missions.

- **Direct marketing:** With the intent of technology, businesses reach customers directly without intermediaries or paid media. Emails, SMS, fax are some of the direct marketing tools. The companies can send emails and messages to the customers when they need to be informed about the new offers or the sales promotion programs. Thus, depending on the type of product and the overall goal of the business, the businesses can use any instrument of the promotion mix.
- **Sales promotion:** This refers to the application of various techniques to attract customers and increase sales. They include the following:

– Giving discounts or price reductions
– Free gifts for purchase of a product
– Self-service, where customers serve themselves
– Delivering a product to customers' homes
– Use of fantastic music
– Attractive display of products
– Answering questions about the product and demonstrating the usefulness of the product

1.1.4. Importance of marketing mix in business activity

The core marketing mix fundamentals based on 4 Ps enhance the success of products by passing on the following benefits:

- **Offering**

Part of marketing is conveying to customers what you have to offer and why it is different and better than other alternatives. The product element is most obvious in the offering, since your product is what people buy. Where you offer it, whether in-store or online, is important, making the distribution element a factor. The price point is part of the overall offering, because it affects your product's value.

- **The target**

When you market, you also have to strategize about who your target customers are. Your primary customer group becomes the target customers of your marketing campaign. Your product and price offer direction in identifying the right audience. For instance, cutting-edge mobile technology advertisements often are targeted to young consumers. Identifying the media used by these customers is also important.

- **Message delivery**

4ps enable the business to publish its brand loyalty through different promotional activities. You have to decide what messages and formats to use to persuade your target customers to buy. Humor, sexuality, fear and anxiety are all used to present emotional appeals in marketing. Selecting the right media within television, radio, newspapers, magazines, the Internet, billboards and other support media is another critical part of successful promotion.

- **Value creation**

In a general sense, the marketing mix allows you to understand how to build and sell value to your customers. Ultimately, customers buy what they perceive is the best value for their money in a purchase situation. Implementing marketing campaigns that show off great products at fair prices gives you an opportunity to succeed. Finding affordable marketing options also helps you get better return on your investment from marketing.

Value creation helps in the following ways;

- Ensures we get our goods and services to our customers effectively and efficiently
- Builds and maintains brand value and awareness
- Delivers profitable growth
- Builds customer value
- Enhances shareholder value
- Companies that focus on customers' needs and deliver great customer experience are more successful than those that do not

Application activity 1.1

Z-shine is a business club established in UBUMWE school. Today, the business club is 5 years old, and it has been struggling to increase sales and profit levels respectively. Assume that you are invited by the club management to train club sales and marketing members on how they can interrelate the 4Ps of marketing in order for the club to increase its sales and profit. What will be entailed in your presentation?

1.2.Beachhead market

Learning Activity 1.2

Kamaliza needs to secure the place where she can locate her business. She hopes that once her business gains a dominant market share, it will have the strength to attack neighboring markets with different opportunities hence building a larger company. With a clear example, explain the technique that Kamaliza can use to secure a given place where she may gain a dominant market for her new product.

1.2.1.Meaning and characteristics of a beachhead market

Figure 1.5: It is better to start a business with a small and controllable market

If everyone says he/she loves your product but nobody buys, you probably made the mistake of satisfying multiple markets. You must focus on one beachhead market and de-select all others. Be the best in your beachhead market and don't try to please everyone.

The term **beachhead** derives from a military strategy that advocates that as you approach enemy territory, you should focus all your resources on capturing a small frontier area that becomes a fortress area from which you can penetrate enemy territory.

A beachhead market is defined as a small market with specific characteristics that make it an ideal target for selling a new product or service. The choice of market is based on the compatibility between the available resources, the product and the market itself. The market should help the company to achieve certain goals that will help it to penetrate other markets from the beginning.

For instance Niyonzima established a coffee shop in his community and later introduced roasted chicken which got preferred by a group of tax drivers who also convinced motorcyclist to consume it, this eventually enabled his business to earn a lot of sales from the coffee shop.

There are three characteristics that define a beachhead market:

- The customers within the market all buy similar products.
- **The customers within the market have a similar sales cycle and expect products to provide value in similar ways**. Sales cycles are predictable phases in which a company wants to sell its products or services to customers in a specific market segment. For example, if you are trying to sell scholastic materials, your buyer persona will be based on those in the education sector, as you are not going to put your efforts into researching what those in the transport sector like.
- **Word of mouth takes place between customers in the market**. Word of the mouth marketing (WOM marketing) is when a consumer's interest in a company's product or service is reflected in their daily dialogues. Existing customers serve as high-quality references for potential customers.

Example: A beauty salon that provides super beautification quality service is always recommended by its actual customers.

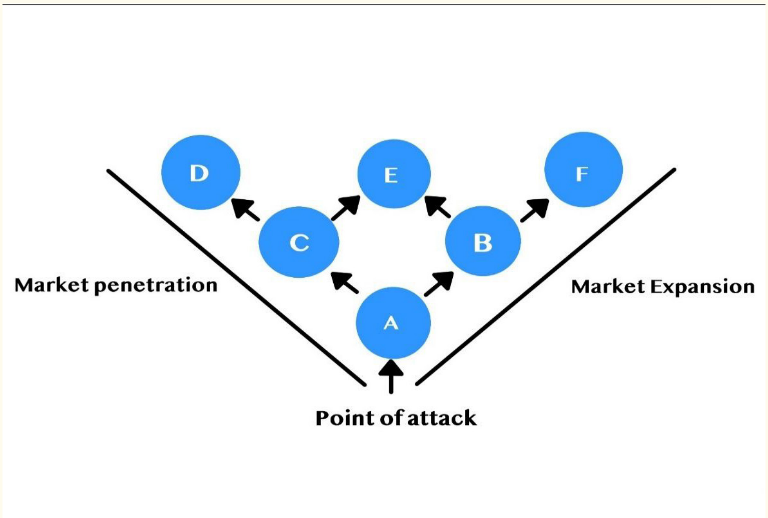


Figure 1. 6: Beachhead strategy is vital for any business to expand its market share.

1.2.2. Steps considered while selecting beachhead market

Before choosing a beachhead market, you should first consider all potential markets for your product. Think big, creative and divide the whole market into groups with common characteristics.

The following steps are considered during beachhead market selection:

- **Considering all the market segments:** Systematically evaluate possible market segments for your idea. Select one beachhead market that gives you the best chance of success based on your ability to execute, your ability to enter the market, and profit potential.
- **Narrowing down to major market segments:** The next step is to narrow down the target markets to better reach their regular customers. These are the customers who use their products the most and spend the most money. Evaluate each market segment using the target market evaluation criteria. The evaluation criteria include your passion, your reputation, your competition, your competence, and your opportunity.
- **Finding the beachhead market:** After you have evaluated each of your candidate market segments against the target market evaluation criteria, you must choose your beachhead market. Make sure you weigh all five factors against each other when making your final decision. For example, you may have a market segment with a candidate who is a fantastic fit in terms of reputation, competition, skill and opportunity, but you just don't have the passion for it. If you chose this market as a beachhead, your business start-up would probably fail. In other words, it is better to choose a beachhead market where you do reasonably well in all five ranking factors, rather than have three or four outstanding matches and one or

two aspects very poor matches for your abilities.

1.2.3. Criteria to pick the right beachhead market

There are factors that determine the identification and selection of a beachhead market. These influence a lot in the process of beachhead market creation. They include the following:

- **Segmentation for the beachhead market**

It is very important to understand the composition of the population that forms the beachhead market. Collecting statistics on the financial capability of potential clients in the Beachhead market is a key factor. It is necessary to know whether the customers have the money to pay for the product.

- **Product specification**

When selecting a beachhead market, it is necessary to know the type of product going to be produced is addressing the specification that meets the needs of the clients. Product specification is a key factor in determining a beachhead market. Using the targeted customers to specify how they want the product to be is important.

- **Customer profile**

While determining the beachhead market, it is advisable to understand who your potential customers are. This will involve describing the customers' characteristics. Study the demographics, age, and interests of the people. This is important because it helps in knowing best the marketing messages can be designed showing how the needs and challenges are to be addressed, therefore influencing them to purchase your product. When you find that there is a huge number of people having similar customer profiles to your interest, then, make it your beachhead market.

- **Psychological segmentation**

It is important to divide the potential customer groups into segments that determine purchasing behaviours, such as beliefs, social status, values, opinions, activities, and lifestyles. This calls for grouping potential customers into various segments which determines the purchasing behaviours.

- **Market accessibility**

This is a factor considered while selecting a beachhead market. Make sure that the region or area identified is accessible, and that customers are able to access the products to be produced.

- **Word of mouth**

Determine whether there is active mouth communication amongst the potential customers. This is very important because the expansion of a beachhead market depends on the references made by the clients within the beachhead market area.

- **Strategic market**

One of the factors to be considered while selecting a beachhead market is the area's strategic position which offers undisputable chances of expanding the market to the nearby areas.

- **Similar sales cycle**

Ensure that the customers within the market have the same sales cycle and have high expectations of the product or services to yield value in the same way.

- **Purchasing of similar products**

The beachhead market must be composed of clients that consume similar products, therefore, providing a steady and reliable market. This is a factor that determines the choice of an area to be one's beachhead market.

- **Size of the market**

This must be considered while determining a beachhead market. It is good to look at all the possible markets and narrow them down to one market area which is the best suitable one that can favour the business expansion. Later on, as the cash flows grow, the business extends to other markets as earlier predicated. This should be small enough to generate a very fast impact and influence cash flow.

1.2.4. Segmentation for beachhead market

The factors analyzed while determining the segmentation for the beachhead market are specific. However, it is very important to note that these have a close similarity with the criteria applied which determining the beachhead market. The difference lies in the purpose and application.

When a beachhead market is selected and created, now the business is operational. With time, the customers increase, and change in interests set in, therefore, the business owner begins to discover new data or information about the target audience. Therefore, this calls for designing targeted strategies capable of pulling more people who are already interested in the product. Hence, need for market segmentation of that particular beachhead market

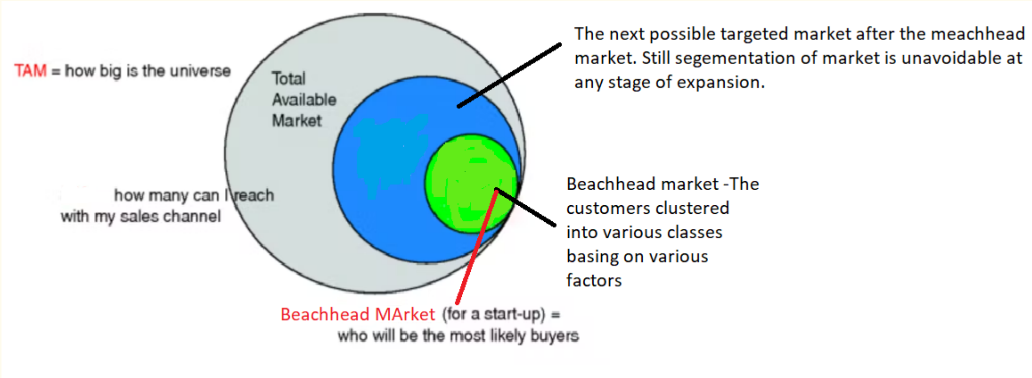


Figure 1.7: Market expansion begins with beachhead market

Segmentation of the beachhead market is executed based on the following factors:

- **Geographic:** These relate to the location customers both in urban and rural areas. Therefore, within a beachhead market, the business owner divides the market into two categories composed of customers in urban or rural areas. These require varying marketing strategies and approaches.
- **Behavioral:** The business owner determines the brand loyalty level or traits of the people within the beachhead market. These include price sensitivity associated with the clientele. This therefore, compels the business owner to have differentiated marketing approaches that serve the differences existing in the area of operation.
- **Psychographic:** While segmenting the beachhead market, the lifestyles of the customers must be analyzed. These include interests, fashions, taste in Tech, and pop culture among others. Therefore, it is very important to understand the psychographics of your customers and start catering to the needs of individual clusters of your clientele that form your beachhead market.
- **Demographic:** The population dwelling with the geographical locus that forms the beachhead market, must be studied by the business owner. The parameters to be considered include age, gender composition, religion, income, educational levels, and socio-economic type such as family sizes associated with a given locality under the beachhead market.
- **Media:** This is another factor that influences the segmentation of the beachhead market. It is recommended that the business owner must understand the preferred social media used by the clients across the entire area within the limitation of the beachhead market.
- **Benefit:** This refers to customers' values. This provides guidance

on what customers value most. These include but are not limited to, preferring quality against rapidity, packaging standards. The disparities obviously influence the business owner to have smaller clusters with the beachhead market.

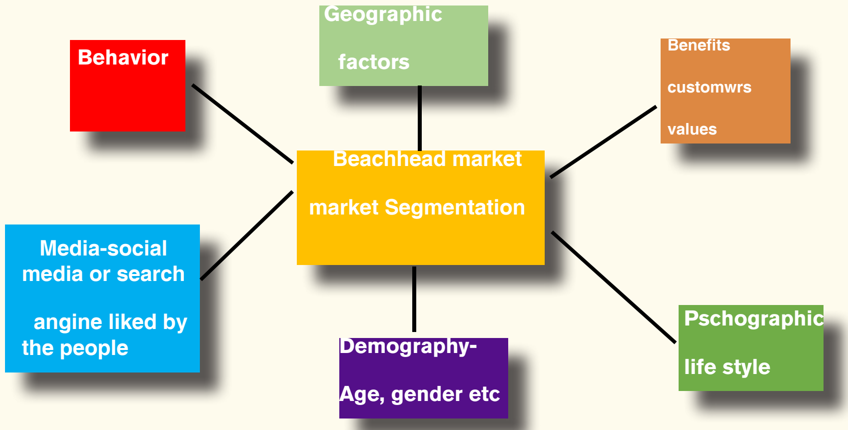


Figure 1.8: Key factors considered while segmenting a beachhead market

1.2.5. Importance of beachhead market

The beachhead market is of great importance to any business. Its importance includes the following:

- The beachhead market is used for start-up companies or companies looking to extend and diversify its product range to get a foothold on new markets by using small steps.
- There is easy flow of information about new products between clients because the market is small and manageable.
- Basis for market: When a company has identified specific and small market segment to sell to, it helps to focus on the segment it targets with a specific product or service. The beachhead market serves a base that helps the business grow to other potential markets.
- Better serve a customer's needs and wants: By defining the beachhead market, the business can satisfy customer needs by offering the right product to their needs. Different forms and promotional activities are used based on the needs and characteristics of the particular beachhead.
- Manageable competition: When a company focuses on a small market, its competitiveness in the market increases. Which in turn leads to a higher return on investment (ROI). The company focuses on specific segments and learns everything they need to know about that segment in order to market their products to them.
- It serves as a strategy to penetrate a market with a new product or service.

Application activity 1.2

Think and decide on a business idea and an initial target market to pursue. Describe in two (2) short paragraphs the idea you will pursue, and the initial target market for that idea. Be sure to explain exactly how the customers benefit from your product/service.

Skills Lab 1

In groups, design a customer survey tool (a set of questions) that includes key information you may need to learn about customers, then visit your school canteen, business club or a nearby community business and data related to customer behaviours using the designed customer survey tool. Thereafter, present how important the information gathered will help you to start your own business.

End of unit assessment

Mahoro is an entrepreneur dealing in groceries in her local area. She provides fruits and vegetables to her customers. Having started the business with no prior information on that market; from the last three months, her customers started claiming that the quality of the greens she provides are always spoiled, she charges them higher prices and does not give discounts. Additionally, the only one supplier that she has, comes from very far away and that is considered to be one of the reasons why many of Mahoro's products are always spoiled before sale and somehow expensive compared to those of her competitors. On the other hand, near Mahoro's shop in the same centre, there are other dealers in groceries who provide varied quality fruits and fresh vegetables at affordable prices. They have fridges to keep their vegetables fresh and their suppliers are diversified to stock shortage. Mahoro's competitors earn more income than her and she is now planning to carry out a research that can help her compete in the market.

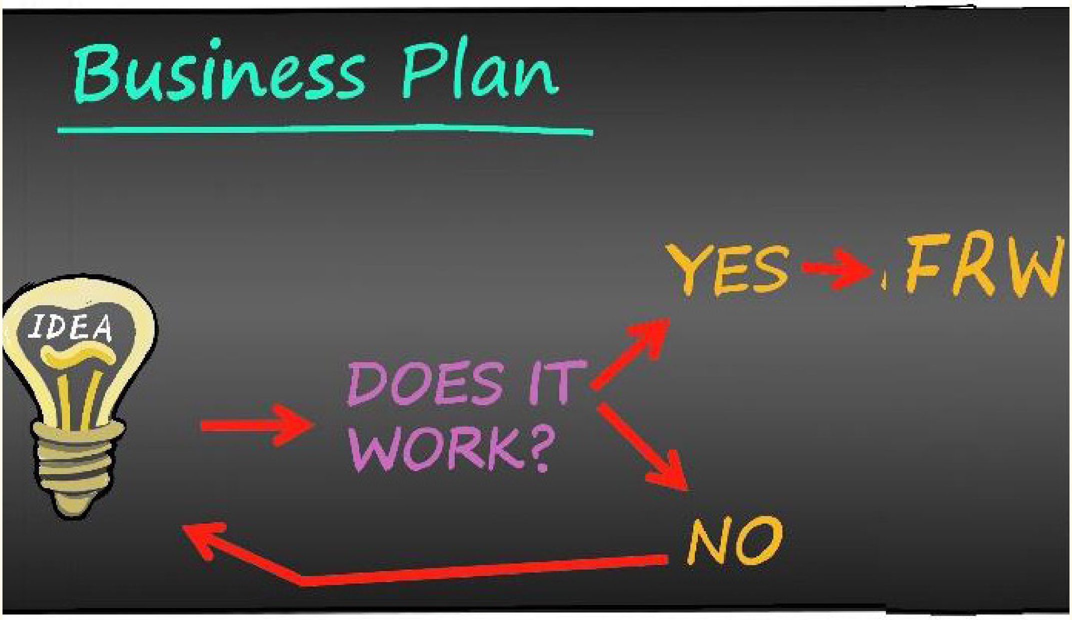
Questions:

(i) What wouldyou advise her to incorporate in the research she intends to do?

(ii) What market research tips can Mahoro followto fit her groceries business?

(iii) Mahoro's business might have been too ambitious to serve a larger market that is beyond their capacity. Advise Mahoro on the use of beachhead market approach for the success of her business

Unit 2 BUSINESS PLAN FOR AN ENTERPRISE



Key unit competence: To be able to prepare a business plan for an enterprise

Introductory activity

Munezero and Kabera are twin brothers and Accounting graduates. They have always had a dream of being self-employed. Munezero wanted to start a restaurant and Kabera wanted to start a piggery project. Both had knowledge of entrepreneurship from school, secured financing from their parents as well as personal savings accumulated while at school.

Munezero starts immediately and after a few months the business started doing well but later before the year ended, he was in a great loss and decided to close down.

Kabera took his time to discover and learn about the business he intended to start and devised/developed a plan and laid strategies on how to put the plan in action. He started later after five months, but a few challenges came his way though he never gave up. He now has over 100 pigs and has recently secured a sausage making machine and obtained enough market in Kigali and outside the country to supply her products.

Questions

a) According to the above case, what do you think is the secret of Kabera's success?

b) Why do you think it is important for an entrepreneur to plan before undertaking any business venture?

c) Suggest the elements that you would put into consideration while preparing a business plan?

Questions

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2.1. Introduction to Business plan

Learning Activity 2.1

Case study

Mugabo had a business idea of buying and selling boiled eggs in his village where many people were doing poultry farming. He negotiated a loan with a nearby Umurenge Sacco. During his loan application process, the Sacco requested him to bring a document detailing how his business will be started and run over at least 5 years to come. He finally secured a loan of 60,000FRW from Umurenge Sacco and bought eggs, boiled them and started selling them but unfortunately, he didn't find any customers to buy his eggs. After two days, all eggs were damaged and he lost his capital.

i) Use the case above to fill in the following statements with appropriate words/sentences:

   a) A business plan is……………………………………………over a given period of time.

   b) Financial institutions are one of the users of …………………………

ii) Describe other stakeholders that may be in need of Mugabo's business plan.

2.1.1. Meaning of a business plan

The business plan is a detailed document detailing how the business will be started and operated over a given period of time. It is a written document of an entrepreneur's proposed business venture highlighting its goals and objectives, and his skills, abilities and requirements to implement it.

It helps the owner to make judgments and decisions on opportunities and threats by providing a framework to assess the options. A business plan describes how the business operates, how it is managed, how it interacts in the marketplace, how it functions financially and what its strengths and weaknesses are.

2.1.2. Users of a business plan

Business plan provides essential information to a range of users. Users of a business plan include but are not limited to the following:

a. Business owners/Entrepreneurs

The entrepreneur needs a business plan for various reasons which include the following:

- To create a new business. This helps the entrepreneur to mobilize and coordinate needed resources.
- Better understanding of competition.
- Better understanding of business customers.
- To assess the feasibility of the venture. That is to determine if the business is profitable on not
- To document the business revenue model. Documenting the revenue model helps to address challenges and assumptions associated with the model.
- To determine business financial needs. This process is essential for raising capital for business and for effectively employing the capital.
- To reduce the risk of pursuing the wrong opportunity. Writing the business plan helps to assess the attractiveness of this particular opportunity versus other opportunities.
- To help you research and really know your market.
- To plot your course and focus your efforts. The business plan provides a roadmap from which to operate, and to look for direction in times of doubt.
- To position your brand. Creating the business plan helps to define your company's role in the marketplace.
- To judge the success of your business. A formal business plan allows you to compare actual operational results versus the business plan itself.

b. Government agents

- The business plan made by entrepreneur helps the government to assess the viability of a business to determinate specific incentives like tax exemptions, credit guarantees and subsidies that the government may give to the entrepreneur.
    - The business plan helps the government to plan for infrastructures and other services that it may want to put up.
    - With business plan, the government determines a relevant tax for the business.
    - In some cases, the entrepreneur may want to borrow money from financial institutions like, banks; such loans require the government to guarantee basing on how good a business plan is.

c. Managers

- Business planning is important to managers because the whole point of management is to allow a business to operate more efficiently and to be able to achieve its goals.

- Business plan helps managers allocate scarce resources appropriately.
- It enables managers to control the different aspects of their projects and processes to ensure each task stays on course.
- Business plan also provides the framework for measuring the progress of the different processes and tasks.

d. Employees

- The business plan helps the workers to determine production targets that they have to achieve within set periods.
- The business plan gives the employees assurance about the duration of their employment. It gives them job security because they know the expected life cycle of the business.
- The organizational plan helps define tasks and responsibilities of each of the workers and so helps reduce conflict.
- The business plan helps employees to know the mission and vision of the enterprise.

e. Financial institutions

- Most financiers will closely look and verify the following parts of your business plan: The balance sheet is probably the first thing your loan officer will turn to. The balance sheet records your assets, liabilities and capital.
- Along with the balance sheet, they will look very carefully at the profit or loss and the cash flow, which should be very closely related to the balance sheet and to each other.
- Bankers will also look for hard evidence of founders and managers who know their business.

f. Investors

A business plan attracts investors. The business plan answers investors' questions such as:

– Is there a need for this product/service (is there a target market)?

– What are the financial projections? What is the company's growth or exit strategy?

Application activity 2.1

Think of a feasible business of your interest and identify who will be the users of your business plan and explain how they will use it.

2.2. Importance of a business plan

Learning Activity 2.2

As a student of senior 5; you have acquired some initiation and management knowledge. What do you think is the importance of a business plan?

The primary importance of a business plan is that they help you make better decisions. In more details, the business plan helps:

- **To attract investors:** Whether you want to shop your business to venture capitalists, or attract angel investors, you need to have a solid business plan. A poor presentation may anger their interest, but they will need a well-written document they can take away and study before they will be prepared to make any investment commitment.
- **To test the feasibility of a business idea:** Writing a business plan is the best way to test whether or not an idea for starting a business is feasible or not. In this sense, the business plan is your safety net.
- **To secure funding such as bank loans:** Having a business plan gives a business person the chance of getting the money needed to start, keep operating or expand the business. This money can be sourced from banks, donors, government which require the business plan as a prerequisite to disburse their money.
- **To make business planning manageable and effective**: A business plan is essential when the entrepreneur is thinking of starting a business, but it is also an important tool for established businesses.

Application activity 2.2

Kanyange has had a dream to start a business ever since she started studying entrepreneurship subject in secondary schools. After completing her secondary education, she visited her colleague Kanzayire who was operating a successful small coffee shop in her home trading centre. Kanyange wanted to start the same business and asked her friend for advice. Kanzayire advised her to prepare a business plan before starting to which Kanyange ignored as useless. Kanyange copied her colleague's business model and started it immediately in her village without any prior study. 6 months later, the business collapsed.

Questions:

i) What should Kanyange have done to succeed in her business?

ii) Advise Kanyange on the importance of preparing a business plan before starting any business venture.

2.3 Components of a business plan

Learning Activity 2.3

Assume that you are selected by Educate! Rwanda, an NGO aiming at entrepreneurship promotion, to train youths on business planning start-up and development. Explain what will be entailed in your training presentation as the main elements of a business plan

Business plans differ in content depending on the purpose, but the basic format remains the same. There is no exact number of sections to include in a business plan. The sections to include in a business plan depends on the size and nature of the business.

2.3.1. General business description

The business description outlines vital details about a business, such as:

i) **The name of a business:** This is the official name of your business as registered in the country where you do business.

ii) **Contact address:** This is the contact anyone can use to ask some information about your business. It may be a phone number, email, website, fax and the location address of the business, etc.

iii) **Legal form:** A legal form of business refers to businesses allowed by the government to be run by business entrepreneurs. The business owner must choose the legal structure of his business. e. g. sole proprietorship, partnership, company, cooperative, etc.

iv) **Types of business:** The type of business refers to the nature of business-like agribusiness, manufacturing; trading, service, etc.

v) **Description of the business idea and market:**

This section includes the following;

- **Information about the owner:** The first item in a plan should be written in the description of business owner background, including name, address, email, phone number, education, family status, sex etc.
- **Mission statement:** A clear mission statement that represent the purpose of your business. E.g.: To provide uncompromised quality product to our customers
- **Objectives:** An outline of what you want to accomplish in the mediate future based on the data in the rest of the business plan as well as future growth goals. E.g.: To increase the market share by 13% by the end of 2021
- **Vision statement:** About how you envision the future of the company, e.g.: Transforming the livelihood of the population.
- **Business location:** Where is the business / company and its headquarters?
- **Business history:** When did the business start or when do you plan to start if it is a new business. What inspires you to start the business?
- **Products or services and target market:** A brief overview of what you plan to sell and to whom.
- **Description of market:** Which include geographical area, type of customers, size of total market, description of the competitors, market share for the new business, etc.
- **SWOT analysis:** The analysis of strengths, weaknesses, opportunities and threats of the business.

<table>
<tr><th></th><th>Positive</th><th>Negative</th></tr>
<tr><td>Internal</td><td>-S- STRENGHT OF THE BUSINESS

(Factors within the business that give it advantage over other businesses)

E.g.:
– Skilled and motivated staff,
– Modern equipment,
– Strong research team,
– Sufficient working capital,
– Excess capacity,
– Wide distribution network.</td><td>-W- WEAKNESS OF THE BUSINESS

(Factors within the business that limit its capacity and its competitiveness)

E.g.:
– Small market share,
– Inexperienced staff,
– Insufficient capital,
– Poor product image,
– Outdated production equipment,
– Poor financial management,
– Inappropriate distribution network.</td></tr>
<tr><td>External</td><td>-O- OPPORTUNITIES OF THE BUSINESS

(Factors outside the business that are likely to be of benefit to the business)

E.g.:
– Favourable government policy,
– Increasing dement of the product,
– Other industries that complement the business,
– Improved infrastructure,
– Reduced taxes on such product,
– New channels of distribution,
– Invention of better technology.</td><td>- T- THREATS OF THE BUSINESS

(Factors outside the business that are likely to affect the business negatively)

E.g.:
– Possibility of entry of new competitors,
– Change in government policy,
– Scarcity of raw materials,
– Declining of population (reduction in demand),
– Negative changes in customers' testes and preferences,
– Collapse of infrastructure,
– Raising costs of electricity,
– Economic depression.</td></tr>
<tr><td></td><td></td><td></td></tr>
</table>

Exercise 2.1

Think of any business you intend to start after graduating from accounting profession. Prepare its sound general business description

2.3.2. Statement of vision, mission, goals and objectives

- **Vision and mission statements**

Assume you have started your business and everything is going according to your plan. What would your business look like in five years? How would you describe it in one sentence? The vision statement is a description of the company based on best results, i.e. assuming all goes well. The vision statement should motivate and inspire you to work towards it. It should therefore be short and inspirational.

Example of vision statement: "To be the leading quality beverage provider in East African region"

On the other hand, the mission statement explains why your business exists.

Example of mission statement: "To produce quality and nutritious fruit juices"

- **Goals and objectives**

Goals are the targets that the entrepreneur wants to achieve with the company in the medium and long term. The goals are certainly based on the mission statement of the company. Objectives are specific goals that an entrepreneur sets that allow them to move towards achieving their goals and ultimately mission. An entrepreneur can develop multiple goals from his mission and multiple goals from each goal.

An example of a goal statement may be: "To increase production capacity by 7% per year over a period of 4 years".

You should always be mindful that business activities are derived from the objectives of the business. The business activities are core part of the action plan.

Exercise 2.2

Set the vision, mission, goals and objectives of the business you intended to start in exercise 1

2.3.3. Action plan

An action plan is the careful lay out of the sequenced steps towards achieving the business goals. The main purpose of the action plan is to guide the entrepreneur as a time table during the business plan, and to help him/her become and remain focused on the implementation of his/her business.

The action plan in particular will help the entrepreneur to:

- Find road blocks in advance or expected challenges so as to take appropriate steps to solve them.
- Locate sources of information and resources needed for the business.
- Obtain feedback on the progress towards enterprise established.
- Coordinate efficient use of resources for the business.
- Implement planned activities.
- Specify how workers' responsibilities and tasks are traced and allocated.
- Monitor and evaluate work progress.
- Discover business challenges and how to solve them.

Example of an action plan format:

Activity	Time Frame									Person responsible
	Jan	Feb	Mar	Apr	Ma	Jun	Jul	Aug	Sept	

Figure 2.1: Gantt chart showing what time is specified for different activities

Exercise 2.3

Prepare an action plan of the business you intended to start in exercise 1 and whose vision, mission, goals and objectives are set in exercise 2.

2.3,4, Organization plan

This part describes the form of business ownership, the lines of authority and accountability for members of the new venture.

It includes items such as:

- Form of ownership
- Identification of business partners or principal shareholders.
- Authority of principals.
- Management team and background.
- Roles and responsibilities of members of the organization.
- Decisions on the numbers or types of workers that are required to operate the proposed business.

Organizational structure:

This is the systematic arrangement of human resources in an organization so as to achieve common business objectives. The following is an example of an organization structure which is also known as "Organogram"

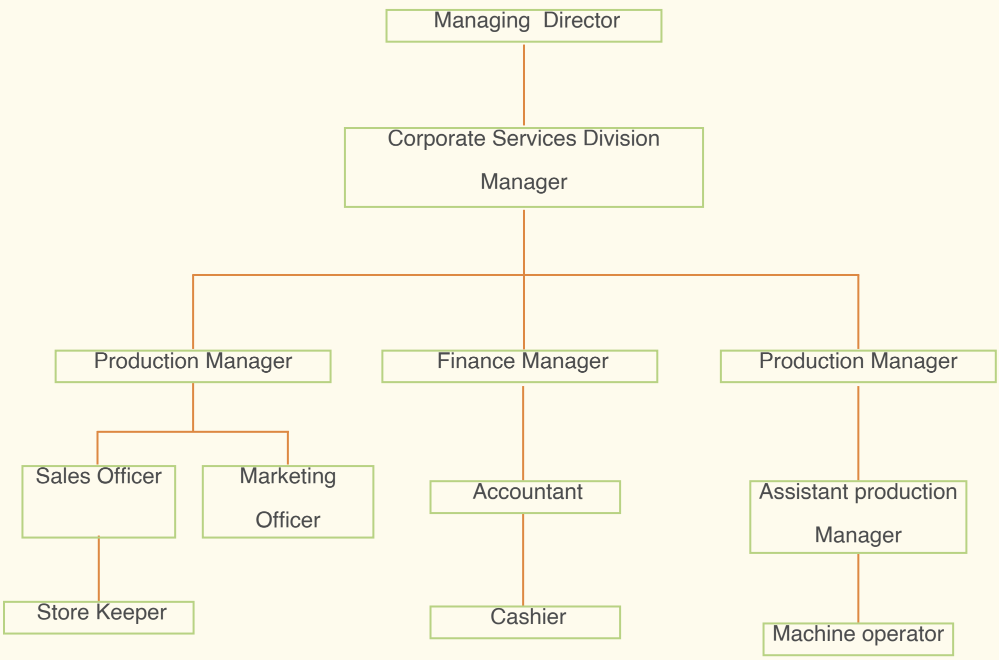


Figure 2.2: A sample organizational chart (Organogram) for a business

Compensation budget i.e. salary, bonuses, etc.

Position	Number of employees	Monthly pay (000FRW)	Total per year (000FRW)
Managing Director	1	1,500	18,000,000
Corporate Services Division Manager	1	1,000	12,000
Sales & Marketing Manager	1	700	8,400
Finance Manager	1	700	8,400
Production Manager	1	700	8,400
Sales Officer	3	400	14,400
Marketing Officer	3	400	14,400
Accountant	2	500	12,000
Assistant Production Man-ager	1	350	4,200
Store Keeper	2	300	7,200
Cashier	2	300	7,200
Machine operator	6	350	25,200
Total	24	7,200	139,800

Figure 2.3: A sample compensation budget for a business

Exercise 2.4

With the same business you decided to start in exercise 1, outline at least 10 key activities that should be performed for the first year. Using the business key activities outlined, prepare the action plan for your business.

2.3.5. Production plan

This consists of projected needs for manufacturing the proposed product. It is then necessary to assess whether production at this scare is technically feasible.

The production plan mainly focuses on:

- Location of the business,
- Sources of raw materials,
- Production staff,
- Quality control,
- Production utilities required,

- Packaging materials
- A description of the product and what it does, manufacturing process,
- Product innovation, suppliers of raw materials, quality control, nature of packaging, production staff,
- Machinery, equipment and techniques used,
- Product development and substitution,
- Intangible assets and protection.

Factors to consider in deciding the location of the business include:

1. **Distance to your customers and suppliers:** Transportation costs are usually a large component of total supply chain costs. Generally, the further you are from your customers and suppliers, the higher the transportation costs will be.

2. A**ccess to the transportation network.** Operating an effective supply chain is contingent upon having good access to your transportation network. This may include alternate transportation methods.

3. **Security.** The location of a business can increase the probability of being affected by insecurities. So, it is better to choose a location which is more secure and safe for your business.

4. **Labour availability.** Understanding the labour market situation in the area will assist in determining projected labour costs and the availability of workers with the skills you require. In addition, transportation access to your facility for your staff is very important.

Figure 2.4: An entrepreneur contemplating on the location for his business

Exercise 2.5

Keeping in mind the nature of the business you decided to start in exercise 1, prepare its production plan.

2.3.6. Marketing plan

A marketing plan is a business document outlining market strategy and tactics. It is often focused on a specific period of time (for instance 12 months) and covers a variety of marketing related details, such as costs, goals and action steps. The marketing plan is built from the results of the market research and the specific value proposition of the product or a service.

The right marketing plan should basically identify the following:

- Your target customers;
- How you will reach and retain them;
- How much are customers willing to pay?
- Product description, current production, distribution channel that will be used;
- What are competitors' prices?
- Forms of advertisement, pricing strategies to be used, and how the price will be determined?

The key elements of any successful marketing plan include:

a) **Product description:** A portion of a marketing plan should describe the type of business you run, including a list of the products and services you offer to potential customers. It is a detailed description of the product or service. It includes the denomination specification (size, colour, quality) of the product, packaging and after sales service.

b) **Customer description, demand/ need for the product, competition**

i)Customer description: Before you can begin marketing your product or service, you have to know the type of customers you are trying to attract to your business. Outline your target market by listing characteristics such as age, income, education level, geographic local, marital status, lifestyle, hobbies and interests. This information can help you pinpoint the most effective media to use when you are marketing to your target clients.

v) ii)Demand/Need for the product: This entails uniqueness of the business from existing businesses. It looks at the extent to which a particular business is different from the others. The most important item in this section is a description of why your product or service is better than or is likely to be better than that of its competitors.

iii) **Competition:** Regardless of the size of the business, you likely have competitors who offer products and services that are similar to what your business provides. There is a need for every entrepreneur to identify who their competitor is, by name, listing the types of products and services they offer, the types of customers they target and take note of the tactics they use to attract and retain customers. This information will help him/her to develop his/her own marketing strategies and tactics.

c) **Current production:** In this section, you compare the quantity that you can produce to the market and to your competitors (your capacity to produce all products or services needed to the market). This section includes: Capacity to produce, What quantity you plan to produce in order to satisfy the market and compare to competitors;

d) **Price:** The pricing strategy portion of the marketing plan involves determining how you will price your product or service; the price you charge has to be competitive but still should allow you to make a reasonable profit. You can charge any price you want to, but for every product or service there is limit to how much the consumer is willing to pay. Your pricing strategy must consider the last amount the customer is willing to pay.

e) **Sales forecast for next 12 months:** Generally, the primary goal of the marketing plan is to get people to buy your products or services. The sales and distribution part of the marketing plan details the following;

f) **Promotion:** Promotion includes a description of the planned actions to inform customers about the opening of new business (e.g. printed information, brochures, posters, newspapers articles, radio advertisements, opening ceremony, etc.).

Exercise 2.6

Now that you have prepared essential plans (from exercise 1 above) of the business you intended to start, you are required to develop a marketing plan for your business.

2.3.7. Financial plan

The financial plan section of the business plan covers all of the business' financial needs and forecasts. It shows what the company expects to spend and earn. This section draws its information from other sections of the business plan. So it is done when all the other sections of the business plan are done. For example, you cannot prepare the income statement before you have prepared the management plan because you receive salaries and wages from the management plan that go into the income statement.

- It is important to keep your statements current and to refer to them on a monthly basis.
- You should include the following financial plans with projections for three to five years:

i) **Start-up budget**: A start-up budget is an itemized list of income and expenses for a new business, which often covers the period up to commencing operations and perhaps a small amount of time after operations have commenced.

Example of a start-up budget:

Start-up Budget	
Sources of funds	**Amount (FRW)**
Owner's funds	400,000
Loan from Umurenge Sacco	1,000,000
Loan from Kagabo	700,000
Total	**2,100,000**
Planned uses of funds	**Amount (FRW)**
Buying a plot of land	550,000
Construction of a house	800,000
Insurance	80,000
Operational expenses	150,0000
Cash at bank	520,000
Total	**2,100,000**

ii) **Forecasted income statement:** While planning for your business, you should forecast the statement of profit and loss of the business for some years to come.

Example of a forecasted income statement:

iii) **Cash flow projections:** An entrepreneur should show projection of cash movement in his/her business plan i.e. cash inflows and cash out flows for a given period of time.

Example:

.... Forecasted Cash flow Statement for 3 years			
Details	**2023**	**2024**	**2025**
Cash inflows			
opening balance		1,020,000	320,000
Owner's funds	400,000		
Loan/Umurenge Sacco	1,000,000		250,000
Loan/Kagabo	700,000		
Income from sales	600,000	500,000	1,900,000
Total (A)	**2,700,000**	**1,520,000**	**2,470,000**
Cash outflows			
Buying a plot of land	550,000		
Insurance premium	80,000		
Operating expenses	150,000	700,000	1,400,000
Construction of a house	800,000		
Purchases	100,000	500,000	700,000
Total (B)	**1,680,000**	**1,200,000**	**2,100,000**
Closing cash balance (A-B)	**1,020,000**	**320,000**	**370,000**
Net cash position			***370,000***

iv) **Projected balance sheet:** this is also referred to as a pro forma balance sheet. It shows the estimation of the total assets and total liabilities of any business. A pro forma balance sheet is a tabulation of future projections. As a result, it will help your business manage your assets now for better results in the future.

Example of a forecasted balance sheet:

……….Forecasted Balance Sheet For 3 Years						
Details	**2023**		**2024**		**2025**	
FIXED ASSETS						
Land	550,000		500,000		450,000	
Buildings	800,000		750,000		700,000	
		1,350,000		1,250,000		1,150,000
CURRENT ASSETS						
Debtors	600,000		700,000		500,000	
Cash at bank	520,000		600,000		700,000	
		1,120,000		1,300,000		1,200,000
Total Assets		**2,470,000**		**2,550,000**		**2,350,000**
EQUITY + LIABILITIES						
Capital	400,000					
Profit/loss for the year	(150,000)		100,000		150,000	
Loan	1,700,000		1,400,000		1,150,000	
Creditors	920,000		1,050,000		1,050,000	
Total Equity and Liabilities		**2,470,000**		**2,550,000**		**2,350,000**

Other elements of the financial plan include:

- A breakeven point analysis (BEP): this is an investment appraisal technique to determine at what point a company, a new product or service will be profitable. It is a financial calculation used to determine the number of products or services you must sell to at least cover your production costs. At break-even point, total revenues are equal to total costs.

Example:

Using the balance sheet above, let us use the following additional information to determine the break-even analysis:

- Price: 20 FRW/unit
- Total Fixed Cost: 180,000 FRW
- Variable cost/Unit: 8 FRW

Required: Determine the break-even point in both quantity and revenue.

Solution:

Profit=TR-TC

Profit= P*Q-(FC+VC*Q), where P: Price, TR: Total Revenue, VC: Variable Cost, Q: Quantity and TC: Total Costs

20Q-(180,000+8Q) =0

20Q-180,000-8Q =0

12Q=180,000

Q=180,000/12

Q=15,000 Units, hence Break-even quantity is 15,000 Units. This means that the business has to sell 15,000 units to cover the total cost incurred.

Break-even in revenue= 15,000 units*20FRW= 300,000FRW

We may ask ourselves how much the business will have to sell in 2024 to make a profit of 100,000FRW ceteris paribus.

Let us do it,

Profit= P*Q-(FC+VC*Q)

100,000FRW=20*Q-(180,000+8Q)

100,000FRW=20*Q-180,000FRW-8Q

100,000FRW+180,000FRW=12Q

280,000FRW=12Q

Q=280,000/12

Q= 23,333.33333 units

Proof:

P*Q-(FC+VC*Q) = Profit

20*Q-180,000FRW-8Q

20*23,333.33333-(180,000+8*23,333.33333)

466,666.6667 – (180,000 +186,666.6667) = **100,000FRW**

- **Payback period (PBP):** this is the length of time it takes a business to recover the cost of investment using its projected cash inflows.

Let us determine the payback period for our business in examples above:

Assumption:

Year	Annual cash in-flows
2022	(2,100,000)
2023	600,000
2024	500,000
2025	1,900,000

Year 1: 2,100,00FRW-600,000FRW=1,500,000FRW

Year 2: 1,500,000FRW-500,000FRW=1,000,000FRW

Year 3: (1,000,000FRW*12)/1,900,000FRW= 6 months

The payback period is 2 years and 6 months or 2.6 years. This means that the business will recover its investment of 2,100,000FRW in 2 years and 6 months.

Decision criteria: the shorter payback period, the better investment project.

There are other investment appraisal techniques that can be used such as:

- Return on Investment (ROI),
- Accounting Rate of Return (ARR)
- Net present value (NPV),
- Internal rate of return (IRR)
- Modified internal rate of return (MIRR)
- Profitability index (PI), etc.

Note: When making financial projections, it is important to explain how you determined the figures you used. If you are looking for financial assistance, lenders will want to know where you will get financing for your business and how you will spend the money.

Exercise 2.7

Congratulations! You have covered one of the most important parts of a business plan which shows whether your financial capacity fits the business financial requirements. Now, Prepare the financial plan for your business taking into consideration all the previous sections you have covered so far

2.3,8 Contingency plan/Risk management

Understanding a risk is critical as you start, run and grow your business. The process of identifying risks, assessing them, and developing strategies to manage them is known as risk management. A risk management plan is an essential part of any business as it helps to understand potential risks to your business and identify ways to mitigate them or recover from their effects.

- **Broad categories of risks in business:**

a) Internal risks

These are internal factors which affect the business but are within a company's control and sometimes occur as a result of improper systems put in place or the lack thereof. The hidden costs of transportation delays, warehousing and misaligned strategies among business partners can often hinder the major cost benefits of global sourcing.

Generally, internal risks are easier to identify and manage while external risks are more elusive.

b) External risks

External risks are outside the control of the project team and its host organization. Because of this, external risks are generally more difficult to predict and control. Factors such as a key vendor going bankrupt, economic upheaval, wars, crime, earthquake, floods and other events may directly impact the business' effectiveness.

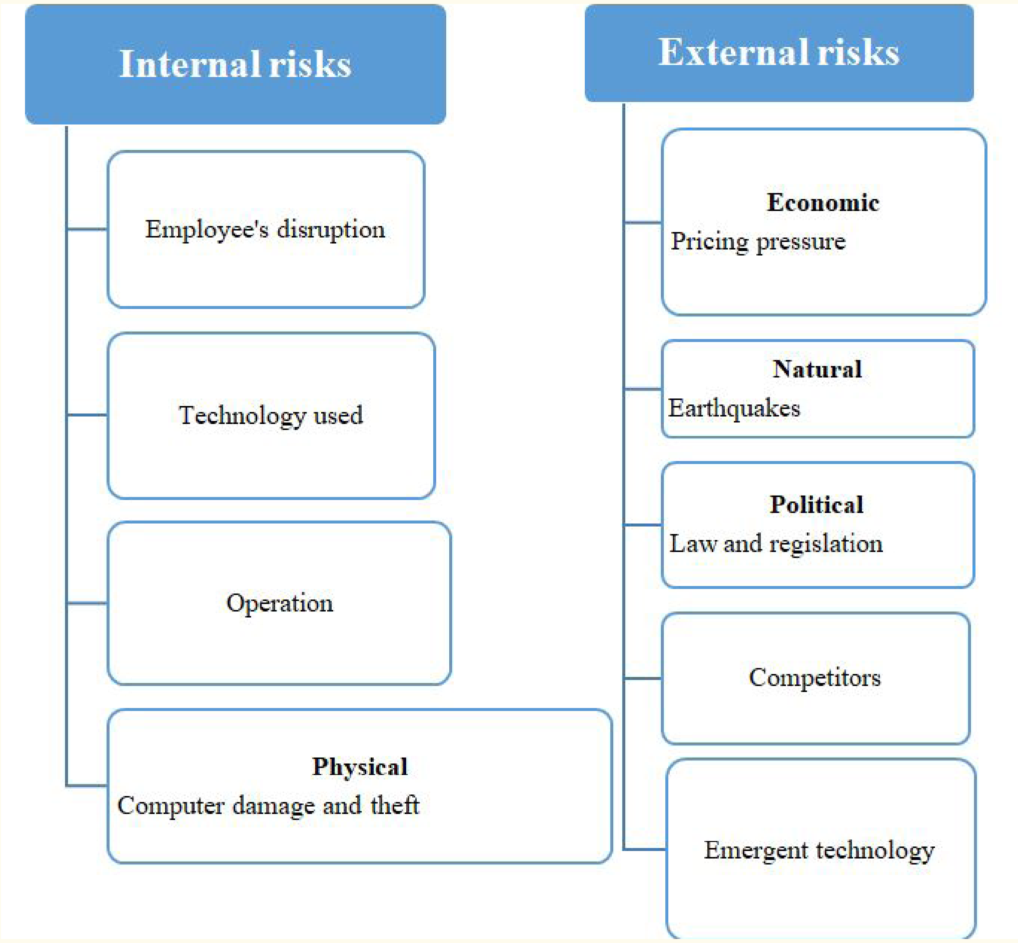


Figure 2.5: Internal and external business risks

- **Procedure strategies to reduce/avoid the risks**

There are different techniques that an entrepreneur can apply to address risks that his/her business faces. Those techniques may include, but are not limited to the following:

i) **Select a business structure that limits personal liability:** Change your business structure from a sole proprietorship in which you are personally liable for business operations to a limited liability company where you have limited liability.

ii) **Transfer risk to insurance companies:** Insure against major risks such as damage to your facilities, product liability, injuries to customers or suppliers and death or incapacity of company principals.

iii) **Perform a risk analysis:** evaluate the consequences of risky activities, the likelihood of the consequences occurring and the benefits of the risky activities. Avoid risk by not carrying out activities that have severe and likely consequences and low benefits.

iv) **Transfer the risk of activities with severe and likely consequences but high benefits to other parties:** Create a new, independent company to carry out these activities or assign them to suppliers or partners.

v) **Reduce risk from product failure and warranty claims:** implement a quality assurance program. Develop a system of reporting from customer service to identify problems. Structure the quality assurance program to document production tasks and product testing. Link the problems reported by customer service to specific failures in production or testing procedures and institute corrective action.

vi) **Reduce risk of surprises in operating results:** keep accurate records and instituting effective controls. Put in place a system that limits who can authorize specific actions and how much they can spend. Implement a reporting system that gives you key information about company performance. Evaluate the controls and reporting system by comparing actual practice and performance to the control procedures and the reported information.

vii) **Reduce financial risks:** manage your accounts receivable to minimize outstanding balances and identify poor credit risks. Implement credit and payment standards, specifying which credit scores and payment records are acceptable. Evaluate customer payments and ask for advance payment from customers who don't meet the standards.

Guidelines to create a business risk management plan:

No matter how well you plan and prepare for every aspect of your business operation, you cannot predict everything that you, your employees and your business partners will experience over time. Creating a proper risk management plan for your business is all about making sure your business is able to survive any type of unforeseen circumstance and surprise that comes its way.

- **-Defining business risks for your risk management plan template:** The first step in creating a quality risk management plan for your organization is to define your business risks. A business risk is a circumstance, event or occurrence that has the potential to adversely affect your business.
- **Identify your business risks:** The first step you must take in creating an effective risk management plan is to systematically look at the types of risk your organization faces. This not only allows you to get a good picture of the potential issues you may be facing, but also to assess how serious those risks are and understand what you need to do to mitigate them.

- **Evaluate your business risks:** Once you have identified all of your risks, it is time to assess them to determine which risks are more dangerous than others. There are two things to consider when assessing your risks; how likely they are and what impact they could potentially have on your business.
- **Determine how to deal with your business risks:** This part of the process of creating a risk management plan involves deciding how to prepare your organization to manage those risks. In most cases, you will have to avoid, reduce, accept, and transfer risks as strategies to implement for almost any potential business risk.
- **Monitor the effectiveness of your business risk management plan**: Once you have a risk management plan for your business that you are happy with, the next step is to regularly check that it is working and that it is working.

When evaluating your business risks in your initial risk management plan and revisiting them, focus on two things in particular:

- How your risks have evolved over time?
- How effective your chosen strategies for dealing with them have been.

Exercise 2.8

Remember, you have selected a business of your interest at the beginning of your business plan. Identify all possible risks that may occur in your business, and develop risks management plan to mitigate those risks.

2.3.9.Executive summary

The executive summary should be the first section of a business plan after the table of contents to give the reader an insight of what the entire business plan talks about. However, it is typically written/ prepared last after all the other sections since all other information (other parts) are clear to the face of an entrepreneur.

An executive summary discusses the following items:

- **Business name, address and contact person.**
- **Business idea and goals:** This section provides an overview of the business project, what product or service is being sold and what the entrepreneur's goals are. It also indicates where the business expects to be in a year's time and later.

- **Legal form:** e.g. sole proprietorship, partnership, company.
- **Marketing:** This part looks at how the products or services of business will be sold. Who will be the main target markets (customer groups)? And what are the main elements of the proposed advertising and promotion strategy for the firm?
- **Operations:** This is concerned with where the business will be located. How many staff will be needed and how they will be managed.
- **Finances:** How much money is required to finance the plan, where will such capital be obtained from and how it will be repaid. How much profit the firm is expected to make by the end of the business plan time period?

Application activity 2.3

Using the different business plan sections you have prepared from exercise 1 to exercise 8, you are required to:

i) Prepare the executive summary and

ii) Compile your business plan document.

Skills Lab 2

Think about the project you plan to start in your business club. Prepare its business description and marketing plan that must be presented and submitted to the teacher and the club leadership committee for further consideration.

End of unit assessment

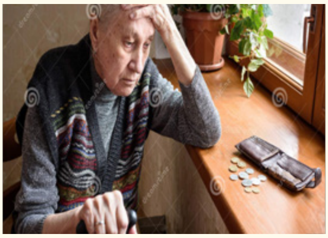
1. After your studies, you have a dream to start a small business and you have just started writing your business plan. Describe how financial institutions can use that business plan.

2. You have just established a mushroom growing business in your home area. You intend to launch your business to create community awareness.

Required: Describe any three risks that a new enterprise might face and propose the possible measures to mitigate them.

3. Discuss the term “marketing mix” as used in business planning.

Unit 3 CONSUMER BEHAVIOUR





Key unit competence: To be able to analyze the influence of consumer behaviors in allocation of economic resources.

Introductory activity


Kalisa has only 20,000FRW (his budget constraint), he must choose how to allocate his funds between buying school shoes and buying hens (the bundle of goods).

If, each pair of school shoes cost 1000 frws and a hen costs 2000 frws, Kalisa can purchase any combination of school shoes and hens that costs no more than 20,000frws.

He could decide to buy only school shoes, or buy only hens, or a combination of both shoes and hens, or he could keep all 20,000FRW in his pocket. Kalisa is able to choose different bundles of goods and services; logically, he chooses those that bring the greatest benefit (or maximizes utility).

Required: In reference to the photographs and case study above;

a) What economic term is given to Kalisa's act of purchasing school shoes and hens?

b) What is the aim of Kalisa, as he tries to purchase the two items?

c) If Kalisa decided to use all his income to purchase either school shoes or hens, how many units would he purchase?

d) Given alternatives to choose from, why may you buy more of one commodity than the other?

3.1. Meaning of conceptual terms

Learning activity 3.1:

Define the following economic terms:

i) Consumer

ii) Consumer behavior

iii) Utility

iv) Marginal utility

v) Disutility

vi) Total utility

a) A consumer:

Consumer is the final user of goods and services to satisfy his/her wants. i.e. a person or household that buys a final product for use. The main aim of a consumer is utility maximization (satisfy his/her wants) by buying from the cheapest source possible. The consumer demand for a product is based on the utility derived from it. From product point of view, utility refers to the power of a commodity to satisfy consumer wants.

b) Consumer behavior

Consumer behavior refers to the study that analyzes how consumers make decisions about their wants, needs, purchases, or actions related to a product, service, or organization. Understanding consumer behavior is very important in order to analyze potential consumers' behavior towards a new product or service. It is also very useful for companies to identify opportunities that have not yet been exploited.

The companies that fail to monitor consumer behavior are unable to fill this gap in the market and are left behind. Understanding consumer behavior enables proactive companies to increase their market share by anticipating the shift in consumer choice

c) Utility

Utility is the satisfaction that is derived from consuming a product. Different people have different needs. These needs have to be satisfied. Consumers do not buy commodities for the sake of buying them. They purchase commodities to use them to satisfy their needs.

d) Disutility

Disutility: refers to negative loss of satisfaction derived from consuming more units of a commodity (negative satisfaction).

e) Total utility

Total utility (TU) is the overall satisfaction derived by a consumer from consumption of various units of a good or service, at a certain point or over a period. For instance, if one person takes one cup of tea and another takes two cups, the two may not get the same utility. As one continues to consume more units of a given commodity, he/she reaches maximum satisfaction or saturation point / bliss point/ point of satiety of a consumer. Extra units consumed after this point of satiety cease to provide satisfaction but instead provide dissatisfaction or negative satisfaction. This means that total utility starts declining.

f) Marginal utility

Marginal utility refers to the additional/extra satisfaction received by a consumer on the consumption of an extra unit of a commodity. It implies the addition to the total utility, due to the consumption of one more unit of a good or service. Marginal Utility is also known as "marginal satiety". As more units of a commodity are consumed, total utility increases because each new unit consumed adds to the total. This means that as one adds more units of a commodity, there is extra or additional satisfaction to him/her thus Marginal utility (MU).

Application activity 3.1

Make short notes and present to the class about the scenarios of what happen under the following economic terms:

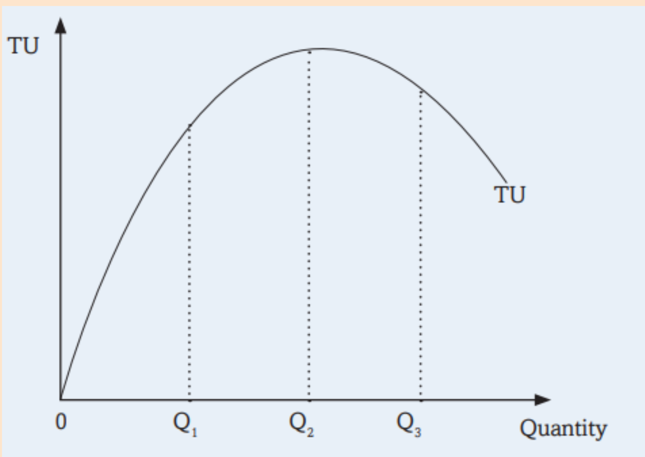
a) Utility (b) Total utility (c) Marginal utility (d) Disutility

3.2. Relationship between Total Utility and Marginal Utility

Learning activity 3.2:

Given that the relationship between TU and MU is such that:

- When TU is increasing, MU is decreasing.
- When TU is at the maximum, MU is zero.
- When TU is decreasing, MU is in negative. (Disutility)



State the nature of MU at:

(a) Q1

(b) Q2

(c) Q3

Total Utility can be expressed as: **TUn** = Ux + Uy + Uz or TU = MU

Where **TU** = Total Utility **n** = Number of commodities

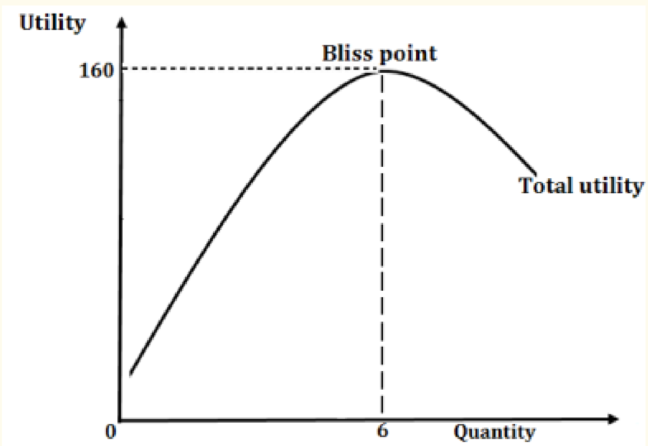
Ux , Uy , Uz = Total respective utilities of consumption of goods

MU = Marginal Utility.

Example:

Units	Total Utility
1	60
2	100
3	130
4	150
5	160
6	160
7	150
8	130

From the above table, we plot total utility as below:



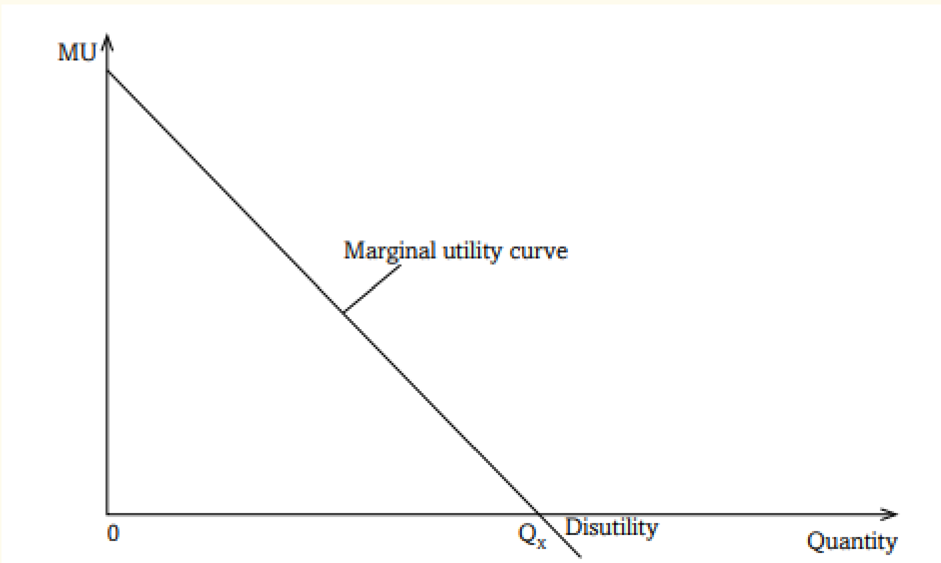
From above illustration, total utility increases up to 6th unit. At this point, the consumer has reached his or her point of saturation (maximum point of satisfaction). As consumption goes beyond 6th unit, total utility starts to reduce. The consumer gains no more utility for consuming a given product. Consumption of the commodity beyond total satisfaction (point of saturation) leads to disutility or negative satisfaction.

Marginal utility (MU) is given by $MU = \frac{\ddot{A}TU}{\ddot{A}Q}$

Where MU = Marginal Utility; $\ddot{A}TU$ = Change = in Total utility; **ÄQ** = Change in units consumed.

Thus $MU = \frac{\text{Change in Total Utility}}{\text{Change in Units Consumed}}$

Marginal Utility Curve:



If more and more units of a good are consumed, the additional utility from each additional unit consumed continues to decrease and even becomes negative. This means that marginal utility is temporarily negative.

Suppose that you are hungry and buy food for dinner. Let's also say that a plate of food costs 2500frw. If you are so hungry that you would pay 3,000frw for the plate of food, the food is said to provide 3,000frw worth of benefit. In other words, you're willing to pay 3000frw to get the satisfaction out of the plate of food no matter what it actually costs.

Total utility is just the concept of utility applied to more than one good. If consuming a good brings you a certain utility, consuming more goods of the same good will get you more, less, or the same amount.

E.g.: Assume that you plan to eat two plates of food. However, after eating the first plate, you're not quite as hungry as you were before. Now you only pay a lower price, e.g. 2000frw for the additional utility of the second plate. It's not worth that much to you now that you're a little fed up. This means that the two plates of food together provide 2000frw (2nd plate of food) + 3000 frw (first plate of food) = 5000frw of total utility. A consumer would ultimately not buy the extra plate of food because their marginal utility (2000frw) is less than their marginal cost (2500frw). Basically, you lose utility in this transaction, so it's not in your favor.

Units	Total Utility (TU)	Marginal Utility ( )
1	60	-
2	100	40
3	130	30
4	150	20
5	160	10
6	160	0
7	150	-10
8	130	-20
9	100	-30
10	60	-40

$$\text{MU for the} 2^{nd} \text{ unit} = \frac{100-60}{2-1} = \frac{40}{1} = 40$$

$$\text{MU for the} 3^{rd} \text{ unit} = \frac{130-100}{3-2} = \frac{30}{1} = 30$$

$$\text{MU for the} 4^{th} \text{ unit} = \frac{150-130}{4-3} = \frac{20}{1} = 20$$

$$\text{MU for the} 5^{th} \text{ unit} = \frac{160-150}{5-4} = \frac{10}{1} = 10$$

$$\text{MU for the} 6^{th} \text{ unit} = \frac{160-160}{6-5} = \frac{0}{1} = 0$$

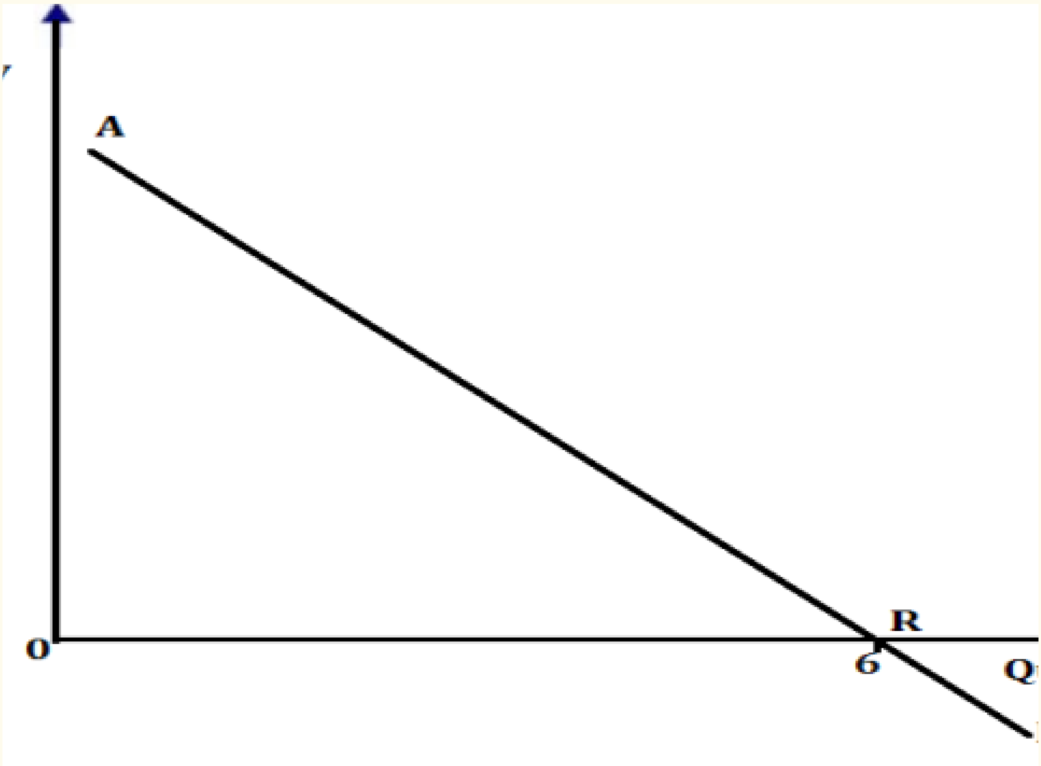
$$\text{MU for the} 7^{th} \text{ unit} = \frac{150-160}{7-6} = \frac{-10}{1} = -10$$

$$\text{MU for the} 8^{th} \text{ unit} = \frac{130-150}{8-7} = \frac{-20}{1} = -20$$

$$\text{MU for the} 9^{th} \text{ unit} = \frac{100-130}{9-8} = \frac{-20}{1} = -30$$

$$\text{MU for the} 10^{th} \text{ unit} = \frac{60-100}{10-9} = \frac{-40}{1} = -40$$

From the example worked out above, we can plot the MU curve as below.



From point A to point R, MU is still positive. At point R, MU is zero (0) and after that point, MU becomes negative (disutility). If the additional consumption of a commodity generates less satisfaction than the previous one, the consumer is willing to pay less for any additional unit to be consumed. This makes the consumers demand decrease as he/she consumes more units of a commodity, which explains the shape of the marginal utility curve.

Note the following relationship between Total Utility and Marginal Utility:

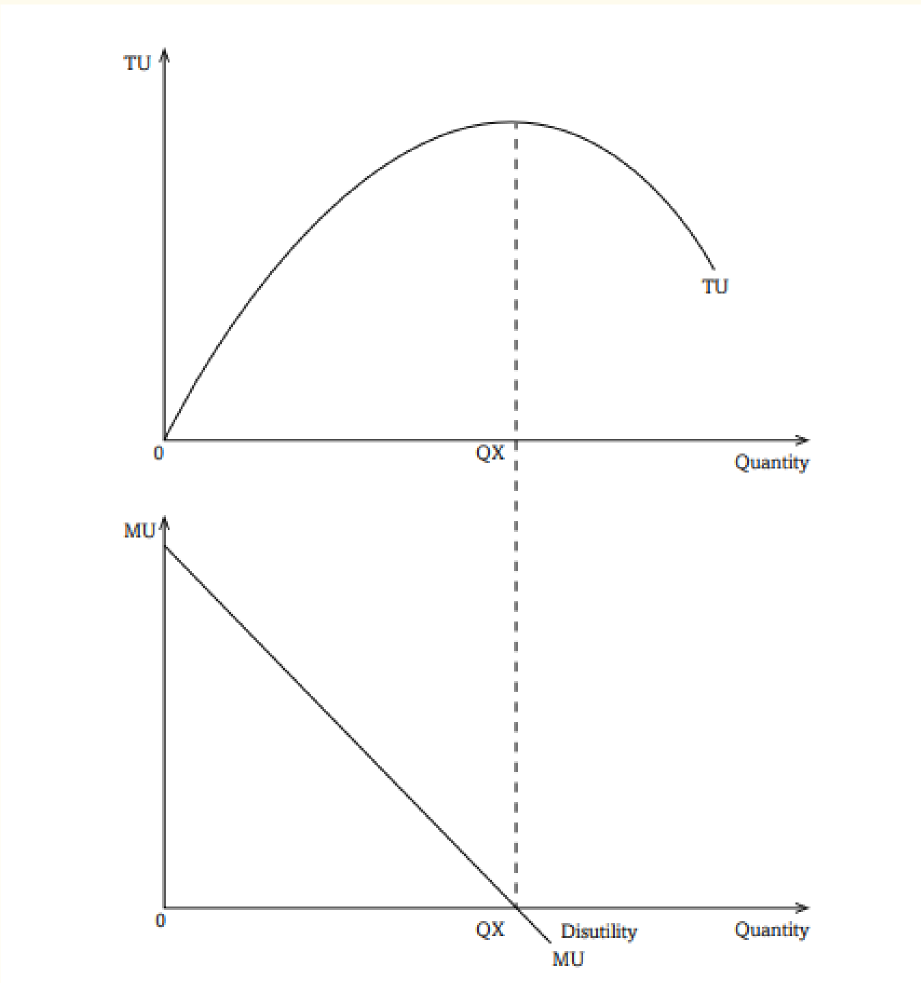
- When **TU** is increasing, **MU** is decreasing.
- When **TU** is at maximum, **MU** is zero.
- When **TU** is decreasing, **MU** is negative (disutility).

Illustration of relationship between TU & MU:

MU, from the 1st unit isn't known because the **TU** before the 1st unit isn't indicated. After the 1st unit **TU** is increases but at a decreasing rate. After the 6th unit, **TU** declines because **MU** becomes negative due to disutility or negative satisfaction (utility) which sets in.

For example, one may start vomiting after the 6th unit, a situation that reduces **TU** he/she had gained. The 1st units of a commodity give a higher satisfaction than the subsequent units. This is because the need that the commodity covers is gradually satisfied. The quantity consumed and **MU** vary inversely.

This relationship can be illustrated as below:



Disutility is the negative or dissatisfaction that is derived from the over consumption of a good or service. For instance, if you consume too much soda to the extent of vomiting you will have gone into dissatisfaction.

Application activity 3.2

The table below shows Kalisa's utility got from consuming eight bottle of soda of the same brand

Units	Total Utility
1	100
2	160
3	200
4	200
5	220
6	220
7	160
8	100

Use the above information:

a) To calculate the marginal utility

b) To plot total utility and marginal utility

3.3. The law of diminishing marginal utility, its assumptions and application

Learning activity 3.3:

Use the information on the table below to answer the questions that follow assuming that a thirsty consumer took successive bottles of soda until his/her satisfaction:

Units (Bottle of fanta drunk)	Total Utility	Marginal Utility
1st	40	-
2nd	64	24
3rd	80	16
4th	84	4
5th	84	0
6th	78	-6

Imagine you were this consumer,

a) Which bottle took less time to finish and why?

b) Which bottle was enjoyed most?

c) Which bottle do you think was highly or less paid for and why?

The law of diminishing marginal utility states that: "As a consumer consumes more and more units of a specific commodity, the utility from the successive units goes on diminishing".

Assumptions of the law of Diminishing Marginal Utility.

i) The consumer is rational and strives for utility maximization.

ii) The goods are taken in reasonable and suitable units. If the units are too small, then the MU can increase to a few units instead of falling.

iii) Constant taste of a consumer; That is, the law applies when a consumer's tastes do not change. E.g. if a consumer develops a taste for wine, the additional units of wine may increase the MU.

iv) The consumption must be continuous, without abnormal and prolonged intervals between the consumption of different units. For example, if you eat one plate of food in the morning and the second in the afternoon, the

MU of the second plate of food may increase

Let us explain the law of Diminishing Marginal Utility by using an example:

Suppose someone is very thirsty. He/she goes to the market and buys a glass of water. The glass of water gives him great pleasure or we say the first glass of water is of great utility to him/her. If he/she then takes a second glass of water, the utility is less than that of the first. This is because the edge of his/her thirst has been greatly reduced. If he/she drinks a third glass of water, the utility the third glass will be less than that of the second, and so on.

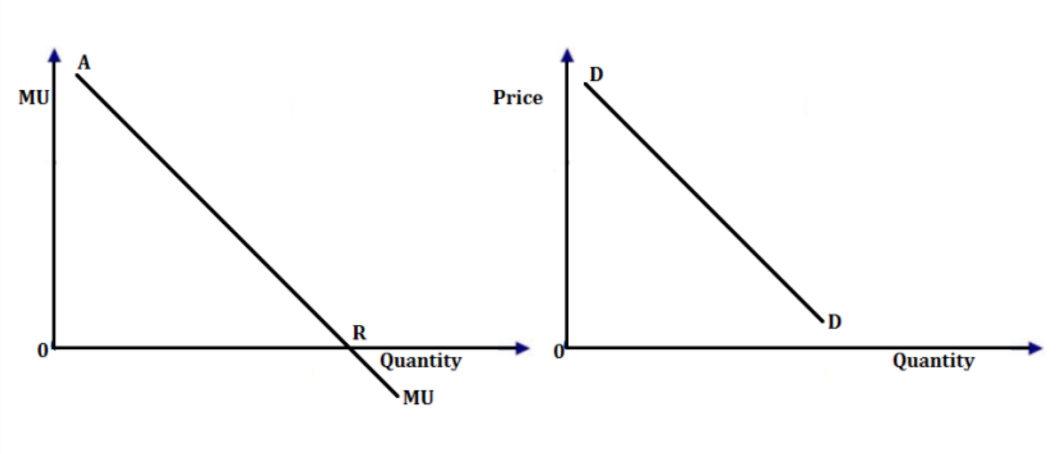
The utility continues to decrease with the consumption of each successive glass of water until it falls to zero. This is the **saturation point**. It is the position of consumer's equilibrium or maximum satisfaction. Continuing to force the consumer to drink a glass of water results in **disutility**, thereby reducing total utility. The marginal utility will become negative.

A rational consumer will stop taking water at the point where marginal utility becomes zero, even if the good is free. In short, the more we have of something, ceteris paribus, the less we want more of it, or more precisely. The more a consumer receives of a given product in a given period of time, the less eager he is to obtain more units of that product, or we can say that additional units provide less additional satisfaction when more units of a good are consumed than previous units.

Relationship between MU and demand curves.

This law explains why the demand curve slopes from left to right. When a consumer gets high marginal utility from a unit of a commodity, he is willing to pay a high price for it. If the amount consumed increases and marginal utility decreases, the consumer is willing to pay a lower price.

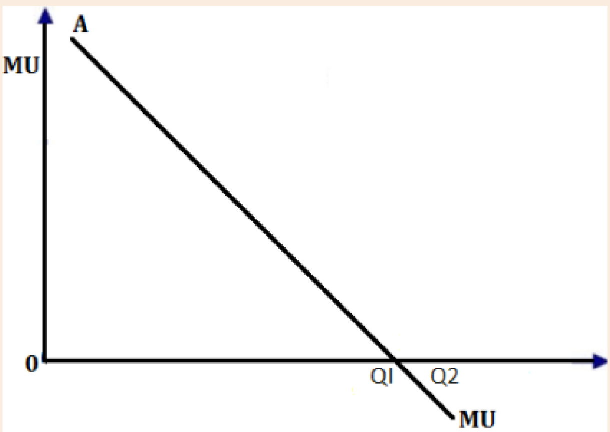
The demand curve corresponds only to the positive part of the MU curve. The demand curve does not intersect the x-axis because we cannot have negative price even though we have negative MU. This can be illustrated as follows.



When MU decreases, the consumer is willing to pay less for the goods. This indicates that the price of a commodity depends on the MU. The higher the MU, the higher the price and vice versa. Because MU is high, the price is high, but the demand is lower. When MU falls, one is willing to pay less for the commodity, hence demand is high

Application activity 3.3

Observe and analyze the graph below:



a) Which point shows total utility when it is at maximum and support your answer.
b) Explain where the total utility would be at point Q2.

3.4. The budget line

Learning activity 3.4:

Use the formula below to answer the following questions.

$P_x \times Q_x + P_y \times Q_y = Y$ (price of x times its quantity plus price of y times its quantity = income).

Given that the price of commodity X is 1,000Frw per unit while commodity Y costs 500 Frw per unit. John has a fixed income of 20,000Frw, which he wants to spend on the two commodities X and Y.

a) Find how many units of each commodity he will purchase if:

i) He spends 10,000Frw on each commodity.

ii) He spends 12,000Frw on commodity X.

iii) (iii) He spends 15,000 Frw on commodity X.

iv) He spends all his income on commodity X.

v) He spends all his income on commodity Y.

b) Illustrate your findings on a curve.

3.4.1. Meaning, assumption and budget constraint

Meaning of budget line

The quantity that the consumers buy to consume depends on the level of their incomes and the price of the commodities. A **budget line** is a line that shows various combinations of two commodities that a consumer can purchase using his or her fixed income.

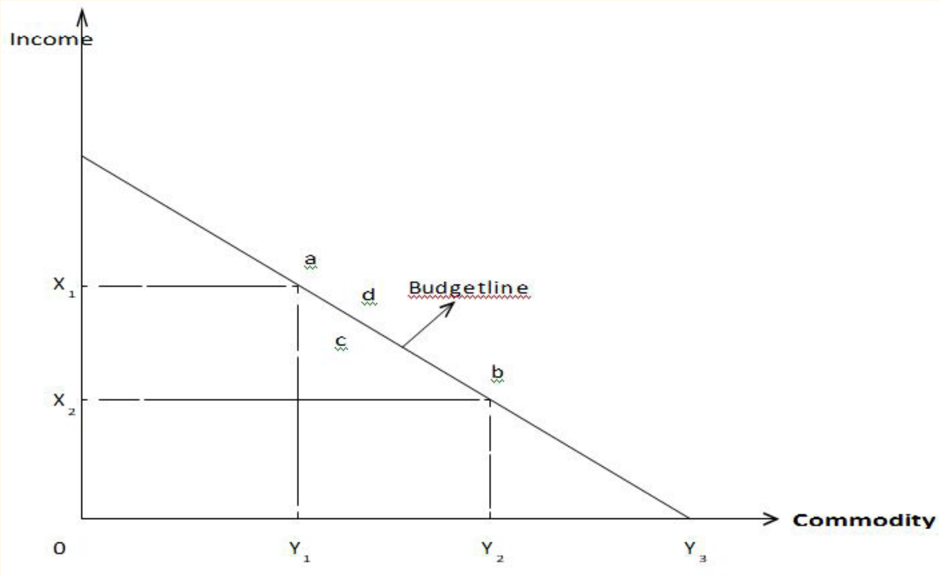
Assumptions of budget line

- Only two commodities can be purchased.
- The price of the items should be given.
- The income to be spent should be given and fixed.
- All income set should be spent.
- All other factors that can influence this analysis should be kept constant throughout the entire analysis.

Budget constraint

This refers to the amount within you spending limit, that is, you cannot spend more money than what you have.

3.4.2. Calculation, slope and illustration



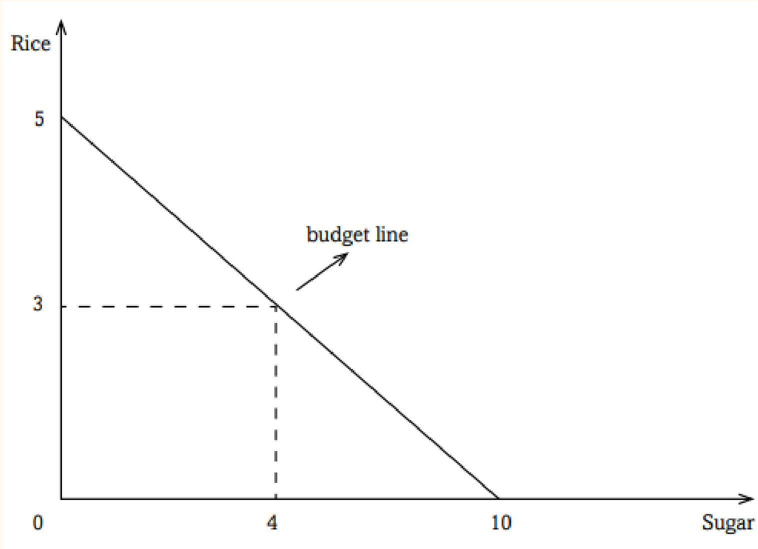
Consider the following graph:

Using the fixed income, the consumer can purchase Y1 units of commodity Y and X1 units of commodity X (**combination Y1 X1, point a**). The consumer can also purchase Y2 units of commodity Y and X2 units of commodity X (**combination Y2 X2, point b**) and all the income is used up.

All combinations that lie along the budget line (such as points a and b) show what can be purchased when the consumer's income is used up.

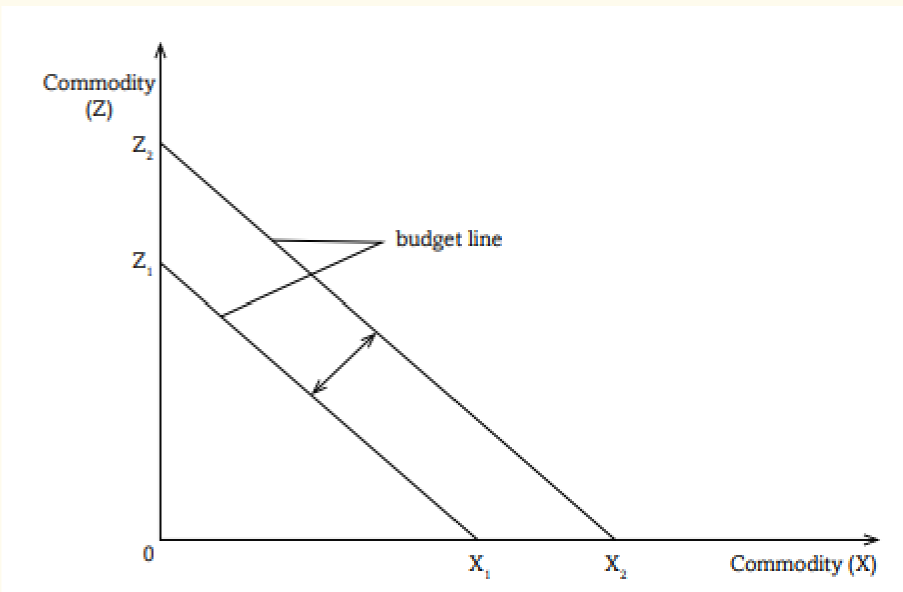
Points below the budget line (such as point c) show that some income will not be used. Points outside the budget line such as point d, are unachievable with the same level of income.

E.g.: If the income is fixed at 10, 000Frw and the price of sugar and rice is 1, 000Frw per kilogram and 2,000Frw per kilogram respectively, then the consumer can buy 4 kg of sugar and 3 kg of rice and all the income is consumed. Alternatively, with the same income, the consumer can buy 10 kg of sugar alone or 5 kg of rice alone. The following budget line can be derived from these figures.



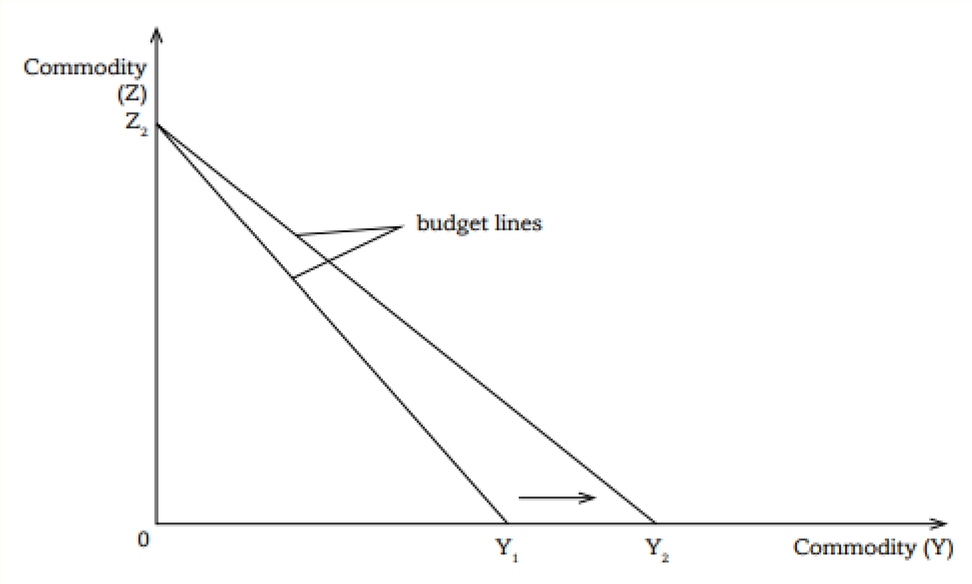
A change in consumer income at constant prices shifts the position of the budget line. An increase in consumer income shifts the budget line to the right, while a decrease in consumer income shifts the budget line to the left. A change in the price of the two goods, given constant consumer income, also shifts the position of the budget line. An increase in the price of the two commodities shifts the budget line to the left, while a decrease in the price of the two commodities shifts the budget line to the right.

- **Extension or contraction in the budget Line**



A change in price of one commodity shifts the budget line on one side. This is the same when the increase in income is used on one commodity.

A shift in the budget line on one side



A decrease in the price of commodity Y means that with the same income, the consumer can now buy more of commodity of Y and the budget line shifts to the right on the side of commodity Y from Y_1 to Y_2 .

The budget line equation

The budget line equation is a mathematical expression that explains the mode of combining quantities of two items using the fixed income-budget constraint.

Let us use an example of Irish potatoes and sweet potatoes to develop the idea. Take **y** for Irish potatoes and **x** for sweet potatoes, **B** for budget constraint price of Irish potatoes 100frw and price of sweet potatoes 50frw. From these, the mathematical arrangement relating the budget constraint, the prices of the two items and their quantity purchased is as follows:

Where:

- **B** is the budget constraint, let us take 1,000FRW
- **X** is the quantity of item 1, let us say Irish potatoes.
- is the price of **X** per unit,
- **y is** the quantity of item 2, let us say sweet potatoes
- **Py** is the price of **Y** per unit.

Given the above data, the budget line is given as: and taking **X** and **Y** as variables. The expression is a clear mathematical model called **the budget line equation**.

This model can be used to find the quantity of X (Irish potatoes) given Y (sweet potatoes), or to find the quantity of Y (sweet potatoes) given X (Irish potatoes).

- Let's use our example to determine the quantity of Irish potatoes (X) that would be purchased if a consumer chose to buy 6 Kgs of sweet potatoes (Y) under the budget line equation

Answer:

Given the equation where, X= Irish potatoes and Y= Sweet potatoes

If Y=6, Y is substituted in the equation 1000=100X +50Y and we solve for X.

$$1000 = 100X + 50(6)$$

$$1000 = 100X + 300$$

$$1000 = 100X + 300$$

$$1000 - 300 = 100X + 300 - 300$$

$$700 = 100X$$

$$\frac{700}{100} = \frac{100X}{100}$$

$$X = 7$$

Using the budget line equation model, a consumer will buy only **7Kgs** of Irish potatoes when he had chosen to buy **6Kgs** of sweet potatoes

- That model would help also to know the direct relationship between the quantities of two items in question. With it, we make one of the items the subject of the formula

$$Given\ B = \mathrm{PxX} + \mathrm{PyY}$$

We can make Y the subject as follows:

Subtract from both side

$$B - \mathrm{PxX} = \mathrm{PxX} + \mathrm{PyY} - \mathrm{PxX}$$

$$B - \mathrm{PxX} = \mathrm{PyY}$$

$$\mathrm{PyY} = B - \mathrm{PxX}$$

Divide through by Py

$$\frac{PyY}{Py} = \frac{B - PxX}{Py}$$

$$Y = \frac{B - PxX}{Py}$$

Application activity 3.4

Given the model $B = PxX + PyY$,make Y the subject

3.5. Indifference curves

Learning activity 3.5:

Carry out research from the internet and library books, on the:

a) Meaning of the Indifference curve
b) Features of indifference curves.
c) Illustrate your findings on a graph

3.5.1. Meaning and assumptions

Meaning of the Indifference curve

An indifference curve is a curve that shows various combinations of two commodities that give the consumer equal satisfaction. The consumption of any combination of the two commodities that lie along the curve gives the same units of utility.

Assumptions of the Indifference curves

The indifference curves analysis is based upon some assumptions which determine its strength, applicability and shortcomings. The following are various assumptions of indifference curves:

- **Rationality:** The consumer is assumed to behave in rational manner, that is, his/her main aim is to maximize his/her total utility given his income and market price. He/She also assumed to have full knowledge of market conditions. Furthermore ,he is consistent in his/her choice, that is, if in one situation he/she chooses combination **A** rather than combination **B,** he/she will not choose **B** in preference to **A** in other situation

- **Non satiety:** This assumption implies that the consumer has not reached the point of saturation in the consumption of any commodity. Thus, he always prefers to have more of both commodities. He always ties tries to move to a higher indifference curve to get higher and higher satisfaction.
- **Two commodities:** It is assumed that a consumer has a fixed amount of money whole of which is to be spent on two goods, given constant prices of both goods. This is very restrictive assumption, because, in reality the consumer deals with a large number of commodities. This restrictive assumption is made to facilitate graphic representation of indifference curves.
- **Transitivity:** Preferences or indifference of a consumer are transitive. Assume there three combinations of two goods **A, B** and **C.** If the consumer is indifferent between **A and B** and also between **B** and **C,** it then assumed that he will be indifferent between **A** and **C** too. This implies that consumer's tastes are quite consistent.
- **Diminishing of Marginal Rate of Substitution:** It is assumed that both the commodities **X** and **Y** obey the law of diminishing marginal utility. This law implies, as more and more units of **X** are substituted for **Y,** a consumer will be ready to sacrifice less and less units of **Y** for each additional unit of **X.** Similarly, a consumer will be ready to give up less and less units of commodity **X** for each additional unit of commodity **Y.**
- **Positive marginal utilities**: The commodities are considered good and have positive marginal utilities. This implies that given any combination of two commodities, increase in quantity of one commodity increases the total satisfaction and vice-versa. Therefore, in order to keep the total utility at the same level, the quantity of one commodity should be increased for every reduction in quantity of other commodity.
- **Divisibility**: The commodities are assumed to be divisible. This means that quantities of commodities can be increased (or decreased) in minute amounts and the corresponding changes in total satisfaction can also be very small. This assumption makes an indifference curve continuous without curves or breaks.
- **Ordinal utility:** Utility can be measured only in ordinal terms and not cardinal ones. In other words, consumer cannot measure precisely utility or satisfaction in absolute units. He can conveniently arrange various combinations of two or more commodities in ascending or descending order of preference.

  Between any two combinations, he is only able to tell that utility from one combination is more than, equal to, or less than the utility from the other combination. He is not in a position to tell the amount of difference in the utility from any two combinations.

3.5.2. Characteristics and Illustration of indifference curves

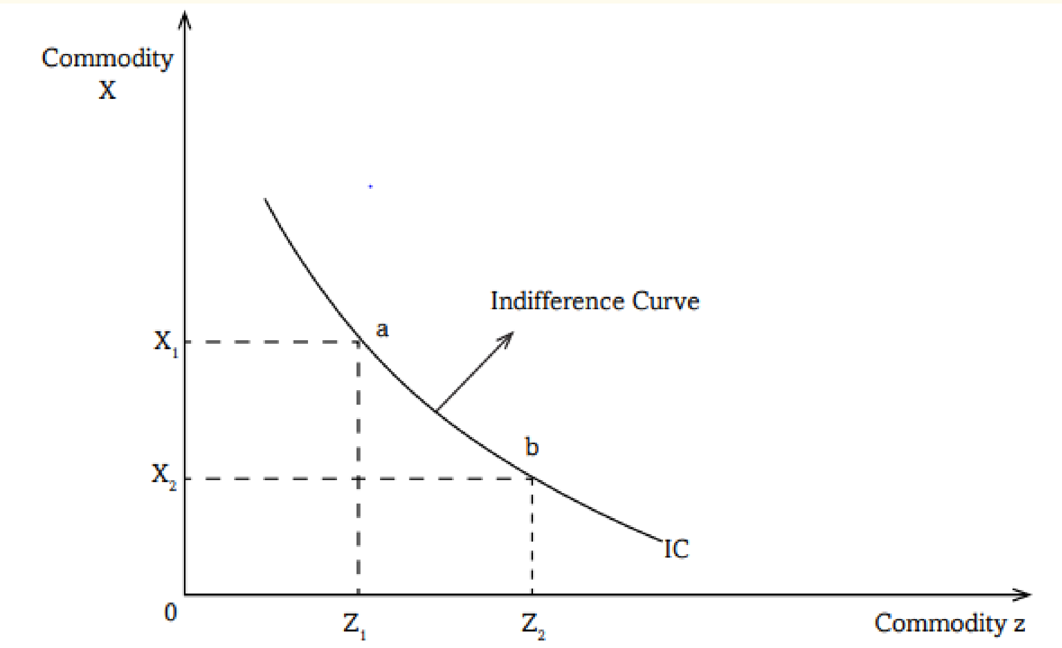
Indifference curves have the following characteristics:

- Indifference curves are convex to the origin.
- Indifference curves are parallel to each other for example two indifference curves cannot meet (they cannot intersect each other).
- The indifference curves are negatively sloped
- Indifference curves do not touch the X or Y-axis except when the two commodities X and Z are complete substitutes, that is to say, Indifference curves do not touch the horizontal or vertical axes
- Higher indifference curve represents higher level of satisfaction.

Many indifference curves on the same graph make up **an indifference map**.

All combinations along the indifference curve give the same satisfaction.

Consider the following indifference curve:

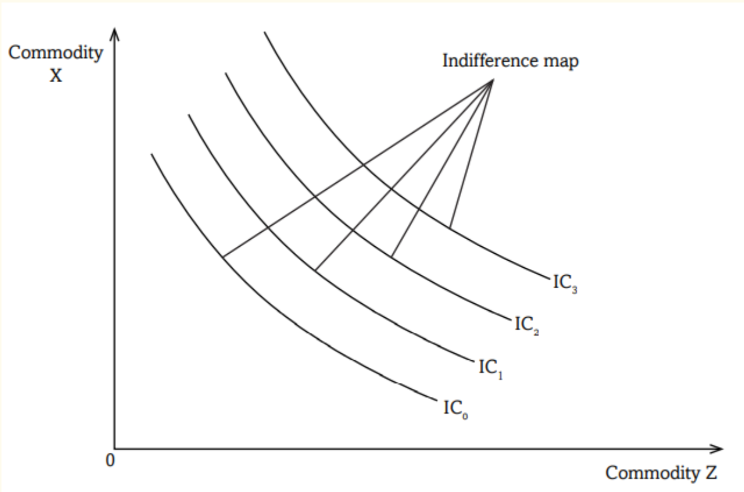


At point a, the consumer takes Z1 units of commodity Z and X1 units of commodity **X (combination Z1 X1).**

At point **b**, the consumer takes Z2 units of commodity Z and X2 units of commodity X **(combination Z2 X2).** In this case, **the utility gained at point**

a is equal to what is gained at point b.

Increase or decrease in satisfaction means that the consumer has increased or decreased consumption of both commodities. This will lead to a shift in the indifference curve. Increase in satisfaction shifts the indifference curve to the right. Decrease in satisfaction shifts the indifference curve to the left. Drawing many indifference curves on one graph gives an **indifference map**.



Application activity 3.5

Explain the situation which can lead the indifference curve to shift to the right or to the left. Use the graphical representation to demonstrate that shift.

3.6. Consumer equilibrium

Learning activity 3.6:

Conduct a research on:

a) The meaning of consumer equilibrium.

b) How to determine consumer equilibrium using both the indifference curve approach and the marginal utility approach.

3.6.1. Meaning of consumer's equilibrium, equation and illustration

The consumer strives for maximum satisfaction at the lowest possible cost. The consumer must ensure that he uses less of the disposable income but enjoys it to the maximum.

Consumer equilibrium occurs when the consumer gets maximum equal satisfaction from each unit of his or her income spent on consumption.

This can be explained by two approaches:

a) The utility approach.

b) The indifference curve approach.

3.6.2. Equilibrium using utility and indifference curve approaches

The marginal utility approach explains consumer behavior under the assumption that the consumer consumes only one good while the indifference curve approach assumes two commodities.

Consumer's Equilibrium using utility approach

In this approach, the consumer is in equilibrium when the marginal utility derived from spending a unit of his or her income on a unit of commodity **X** is equal to the marginal utility got from spending his income on commodity **Y**.

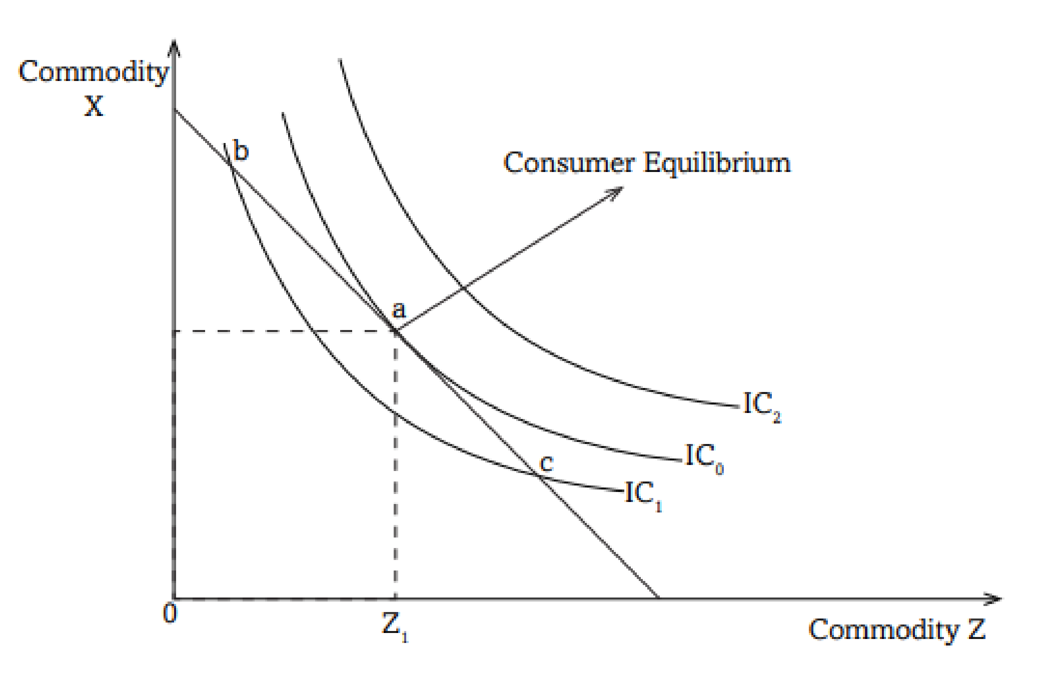
Thus: $\frac{MUx}{Px} = \frac{MUy}{Py} = \frac{MUn}{Pn}$ Where, • MUX is marginal utility from commodity X.

- MUY is marginal utility from commodity Y.
- Px is price for commodity X.
- Py is price for commodity Y.
- MUn is marginal utility from any othe commodity consumed.
- Pn is price of any other commodity consumed.

When the above situation is fulfilled, the consumer is in equilibrium.

Consumer's Equilibrium using indifference curve approaches

With this approach, consumer equilibrium occurs at a point where the indifference curve touches the budget line. Consumer equilibrium is reached when the budget line is tangent to the indifference curve.



Points **a, b**, and **c** lie on the budget line. This implies that the consumer's income is sufficient to purchase any combination of the two commodities at any of the points.

- Indifference curve IC1 is lowest and therefore all points lying on it give the lowest utility, i.e. point's b and c are within the consumer's budget line but give the lowest satisfaction.
- Point a lies along the highest indifference curve that is within the consumer's budget line, and therefore provides maximum satisfaction that is affordable for the consumer.
- At point a, where the indifference curve IC0 is tangent to the budget line, the consumer is in equilibrium.
- The indifference curve IC2 is higher but it is outside the budget line. This implies that consumers' incomes are insufficient to afford a combination along this curve.

Application activity 3.6

1. Explain the consumer's equilibrium using the following approaches:

   a) Utility

   b) Indifference curve

3.7. Consumer surplus, producer surplus and social surplus

Learning activity 3.7:

When you visit a market place, you find sellers and buyers negotiating about prices.

(a) In relation to your knowledge of utility, discuss why the buyer negotiates for a lower price.

(b) Using the formula given, calculate the consumer surplus.

Consumer's surplus = Total utility - Total expenditure	
Price per unit. (FRW)	**Quantity demanded**
500	**1**
400	**2**
300	**3**
200	**4**
100	**5**

(c) Using 100 as market price find the consumer surplus.

3.7.1. Consumer surplus

Consumer surplus is defined as the difference between the total amount that consumers are willing and able to pay for a commodity and the total amount that they actually pay (i.e. the market price). Consumer surplus is presented by the area under the demand curve and above the price.

Consumer surplus is a measure of the welfare that people gain from consuming goods and services. For example, the consumer is willing to pay 1000FRW but the market price is 750FRW, therefore, consumer's surplus is 200Frw. i.e.: 1000-750 = 250.

As MU diminishes, the consumer is willing to pay less for the successive units of the commodity. Thus, MU diminishes as the consumer's surplus also diminishes. Consumer surplus always increases as the price of a good falls and decreases as the price of a good rises.

Consumer’s surplus = Price consumer is willing to pay – market price.

If the demand curve is a straight line, the consumer surplus is the area between the demand curve and equilibrium price. Therefore the consumer surplus is calculated using the formula of a triangle which is: $CS = \frac{1}{2} b \times h$ Where

CS: Consumer Surplus

b: Base

h: Height

Alternative formula that could be used:

$$CS = \frac{1}{2} Qmkt \left(Pmax - Pmkt \right)$$

Where

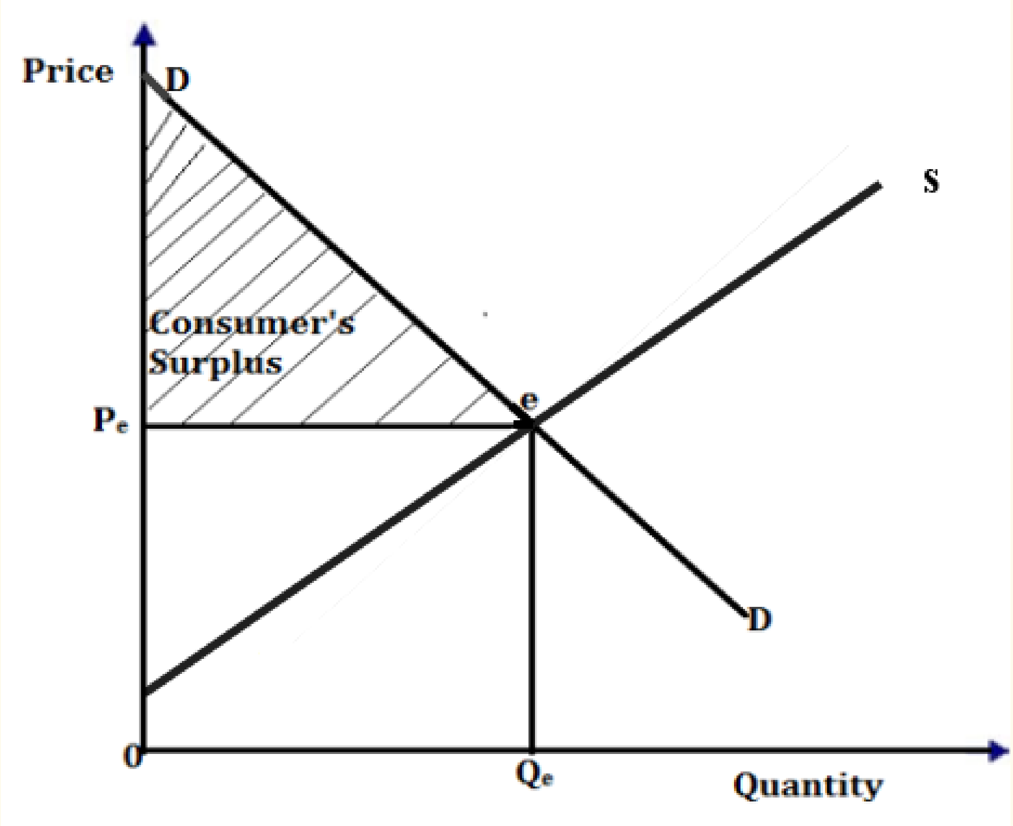
CS: Consumer Surplus

Qmkt: Equilibrium Quantity (total quantity purchased at equilibrium price)

Pmax: Maximum Price (price at which the quantity purchased would fall to 0, that is, where the demand curve intercepts the price axis)

Pmkt: Equilibrium Price (where quantity supplied equals quantity demanded)

By illustration, the consumer’s surplus is the area below the demand curve and above the equilibrium price as seen below



e.g.: Kayiranga is willing and ready to pay 200frw for one mangoes. When he reached the market he found 20 mangoes for 80Frw per one mangoes.

Required:

a) Calculate Kayiranga's consumer surplus.

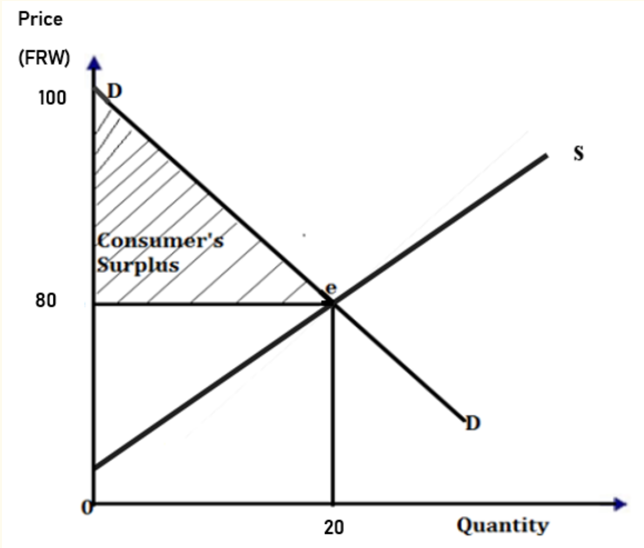
b) Use the demand and supply curve to derive Kayiranga's consumer surplus

$CS = \frac{1}{2} Qmkt \left(Pmax - Pmkt \right)$ CS: Consumer Surplus

$Qmkt$ Equilibrium Quantity (total quantity purchased at equilibrium price)

$Pmax$ Maximum Price (price at which the quantity purchased would fall to 0, that is, where the demand curve intercepts the price axis)

$Pmkt$: Equilibrium Price (where quantity supplied equals quantity demanded)



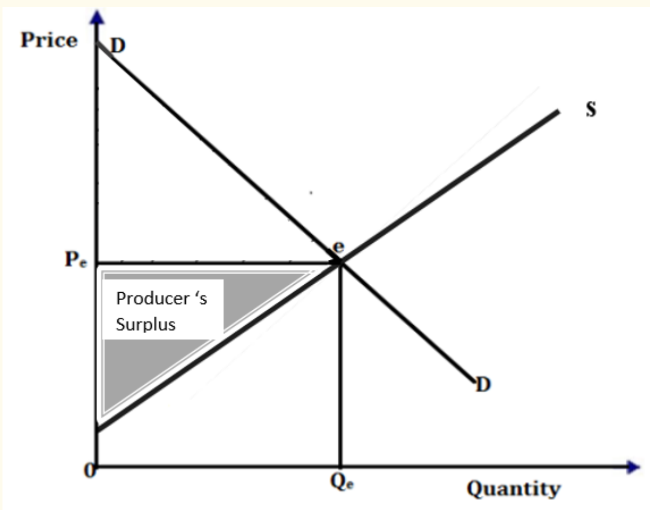
3.7.2. Producer surplus

Producer surplus refers to the difference between the price that the producer is ready and willing to accept for his or her commodity and what he or she actually receives.

The producer usually has a particular price at which he is ready to offer his product for sale. The producer usually has a particular price at which he/she is ready to offer his/her product for sale (reserve price).

Producer surplus is a measure of producer welfare. It is measured as the difference between what producers are willing and able to supply a good for and the price they actually receive.

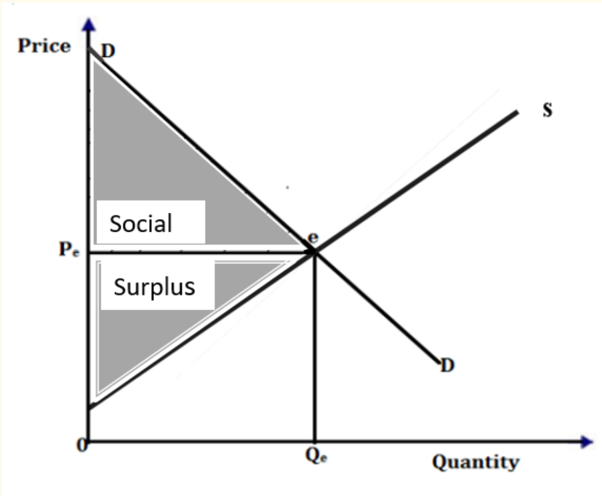
It is the area below the equilibrium price and above the supply curve.



3.7.3. Social surplus

Social surplus is the total sum of the consumer surplus and producer surplus combined.

This can be illustrated as below:



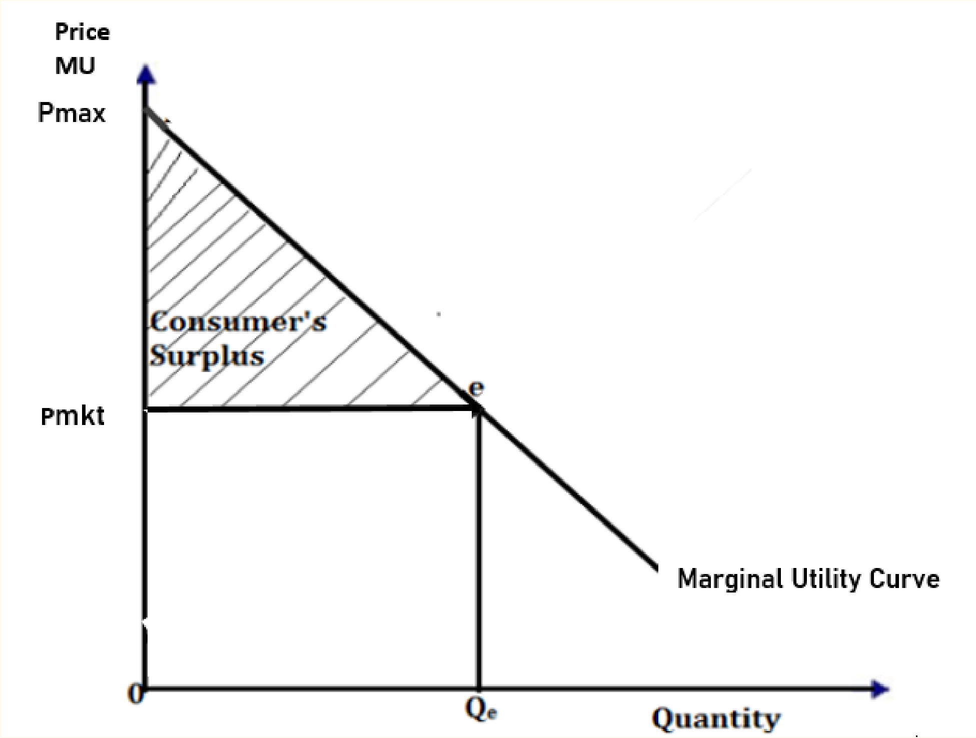
3.7.4. Relationship between consumer surplus, utility and price

Utility is the benefit or satisfaction a consumer gets from using a good or a service. Price and utility are intertwined. If a seller of juice sells it at 400Frw. A consumer will buy it if he expects to get 400Frw worth of utility from the consumption of juice. However, this depends on how thirsty the consumer is at the moment and how much he likes juice.

The price of juice to be paid by the consumer depends on the satisfaction worth the price. In relation to consumer surplus, a consumer pays 400Frw for juice if he thinks the juice provides utility worth 400Frw. Consumers who think juice provides satisfaction more than 400Frw will be willing to pay more, that is to say, 500Frw or even more 600Frw.

Consumer surplus occurs when the price consumers pay for a product or service is less than the price they are willing to pay. It is a measure of the additional benefit consumers receive by paying for something less than they were willing to pay.

A price increase decreases consumer surplus, while a price decrease increases consumer surplus. Marginal utility explains the price a consumer is willing to pay for units of the good purchased, as more goods are purchased, marginal utility falls.



For **0Qe** quantity the consumer is willing to pay price **0P$_{max}$eQe** but actually pays **0P$_{mkt}$eQe** hence getting a consumer surplus of PmktPmaxe₌**0P$_{max}$eQe Pmkt-0P$_{mkt}$eQe.** In our graph CS/ $P_{mkt}P_{max}e$ is presented by the shaded area

Application activity 3.7

1. Construct the relationship between consumer surplus and the producer surplus
2. Rukundo is a food processing plant owner, he is willing to sell 1litre of yoghurt at 500Frw but the market price is 600Frw. Kwizera who is a consumer is willing and ready to buy 10litres of yoghurts at 800Frw

   Determine the:

   a) Consumer surplus
   b) Producers and the social surplus

Skills Lab 3

Consider your business club as the suppliers of the products of your business club and consider the students as the consumers. In teams, discuss under what circumstances may consumers' surplus or producers' surplus occur. Share your findings with the entire class and provide advises to your club (producer) on what to do in case consumer's wish to pay below market price?

End of unit assessment

3. Given that the price of meat is 2,000 FRW per kg and that of sugar is 2,500 FRW per kg. The income of the consumer is fixed at 50,000Frw. Derive a budget line for this consumer
4. Differentiate between Budget line and Budget constraint
5. Differentiate utility from disutility

Unit 4 THEORY OF COSTS, PRODUCTION, AND PROFIT OF THE BUSINESS/FIRM

Key unit competence: To be able to determine the profit of the busine

4.1. Introduction to production

Introductory activity

Read the case study bellow and answer the questions that follows ;

Every business requires resources to produce a certain amount of goods and services. However, these resources are not easily accessible to every entrepreneur as a business owner, hence one has to rent or buy such resources in order to enable production and achieve the given goals. Some resources are needed and acquired daily, while others are acquired once and for all, unless they lose value after a long time.

Required:

a) What economic term is given to expenses on resources in production?

b) What do you think needs to be spent on as a resource in production?

c) Why do you think it is important to calculate expenses in production?

Learning activity 4.1:

Analyse the case studies bellow and answer the questions that follow:

Muhizi, a farmer in Nyagatare, rears cows for milk and purposely for his home consumption. He only sells some few litres when he wants to buy some basic items at home like, salt, soap etc.

Mwiza, a poultry farmer in Kamonyi, raises chicken purposely for selling to different markets and rarely eats them at home.

Required:

a) What economic name is given to Muhizi's and Mwiza's act of production respectively?

b) Describe the characteristics of each person's activities named above

The theory of production in economics strives to explain the principles by which firms make decisions about their output or products they will produce in relation to their inputs or factors of production that they will use. The theory incorporates some of the most fundamental principles of economics, involving the relationship between the quantities and prices of commodities and the factors of production used to produce them, in order to minimize costs and maximize profits. Therefore, the theory of production relates to the mixture/combination of the factors of production and how to make maximum use of these factors.

4.1.1. Meaning of production

Production is the organized activity of transforming resources into finished products in form of goods and services. It can also be explained as the process through which resources are converted into intermediate or final goods. Intermediate goods are goods, which can be used to produce other goods and services. In other words, it is a process of turning the inputs into outputs.

4.1.2. The purpose of production.

The purpose of production is consumption. With a market system firms specialize in producing particular types of capital goods and consumer good. Their direct motivation for producing these goods is to sell them for a profit.

4.1.3. Types and levels of production

a) Types of production

There are basically two types of production. These include:

1. **Direct production:** This is the production of goods and services by an individual for personal use (one's own consumption). It is at times referred to as subsistence production. However, a small surplus, if any, may be exchanged for one's other requirements. For example, if Mr. Mugisha grows maize, rice and rears cows for milk, chicken for eggs, builds his own residential house etc., all this is direct production.

2. **Indirect production:** This is production of goods and services for sale/exchange/market. It is at times called commercial production. With this type of production, the money got from the sale of items is used to acquire other items one requires, which he/she cannot produce him/herself.

b) Levels of production.

Every product we see in the market undergoes several production processes. In a sugar factory for instance, there is need for the raw material (sugarcane) to be harvested first, and then transported to the factory, before commencing the production process. The same process applies to all other products.

For general purposes, it is necessary to classify production into three main levels:

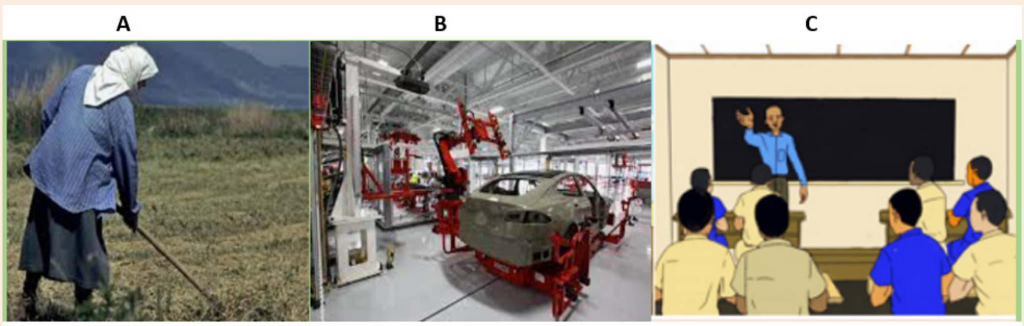
i) **Primary Production**: This refers to the extraction of commodities in their raw form as provided by nature. It is the first stage of production. Primary production is carried out by 'extractive' industries which are engaged in such activities as extracting the gifts of nature from the earth's surface, beneath the earth's surface and from the water bodies like agriculture. it includes activities like forestry, fishing, mining, oil extraction, hunting, quarrying etc.

ii) **Secondary Production**: This is the transformation of raw materials and intermediate goods into semi-finished and finished products. Generally, the output of primary production is used as input for the secondary production.

For instance, production of sugarcane is the primary production used to produce sugar. At times, primary products are converted into semi-finished products and then used by other manufacturing units to produce final goods. Examples of such industries include; Construction, manufacturing ((cars, furnishing, textiles, engineering), processing (fruits into juice, milk into butter, ghee, yoghurt, sugarcane into sugar), oil refining (petroleum into diesel, petrol, paraffin), leather tanning. Etc.

iii) **Tertiary Production**: This involves the provision of services only. It includes the processes which increase the value or utility of commodities. Tertiary production starts after producing the final product. Industries in the tertiary sector produce all those services which enable the finished goods to be put in the hands of consumers. In fact, these services are supplied to the firms in all types of industry and directly to consumers. Examples include banking, insurance, transport and communications, government services, such as law, administration, education and health, etc.

Application activity 4.1



Observe the pictures above to answer the question below

iv) Identify the economic activities taking place in each of the above pictures, A, B and C.

v) Under what level of production would you categorize the activities taking place in above pictures, A, B and C.?

vi) Give at least two more examples of economic activities that fall under the three levels of production mentioned in (ii) above.

4.2. Factors of production

Learning activity 4.2:

Think about the scenario where your friend comes to you seeking advice about his proposal to start up a given business in their locality, what resources would you advise him to have before the start of the business.

Group those resources into categories depending on their similarities or kind, then present to the class

Production of a good or service requires the use of certain resources or factors or agents of production. Since most of the resources necessary to carry on production are scarce relative to demand for them, they are called economic resources. Therefore, factors of production are the resources or inputs required in the production of a commodity. Production is made possible by combining certain resources in various ways, by firms or enterprises, to produce an annual flow of goods and services. They include land (natural resource), labor (human resource), capital (man-made resource), and entrepreneurship (organizational and risk-taking resources).

4.2.1. Land

a) Meaning of land

In economics the term land is used in a broad sense to refer to all natural resources or gifts of nature on earth, beneath or above the earth's surface. It includes farming and building land, forests, and mineral deposits, soil, fisheries, rivers, lakes, oceans, the sun, rain etc. all those natural resources (or gifts of nature) which help us (the members of the society) to produce useful goods and services. The **reward** to land for its contribution in the production process is **rent.**

b) Characteristics of land

- **Land has fixed supply:** The total land area of earth (in the sense of the surface area available to men) is fixed. Therefore, the supply of land is strictly limited.
- **Land is a free gift of nature:** Land existed long ago, before human beings came in existence. Land is not as a result of human effort.
- **Land is permanent:** it is not easy to destroy it. Even when destroyed, it can be restored after sometime.
- **Land is a primary factor of production**: Any production process starts with land.
- Land is geographically immobile but can be occupationally mobile since it can have alternative uses.
- **Land has inelastic supply**: The supply of land cannot be adjusted according to its demand.
- **Land is differentiated**: Land is not homogeneous i.e. it differs in fertility and thus productivity which results into different prices of land.
- **Demand for land is derived**: land is demanded not for its own sake but for the production of goods and services.
- **Alternative uses:** Although the total supply of land is fixed, land has alternative uses.
- **No cost of production:** Since land is a gift of nature, it has no cost of production (zero supply price). i.e. since land is already in existence, no costs are to be incurred in creating it just like training labour or creating capital.
- **Operation of the law of diminishing return**: This simply means that as more and more workers are employed on the same plot of land, output per worker will gradually fall

c) Importance of land

Land as a factor of production is of immense importance such as:

- It is a source of water for home use, using in industries and generation of electricity.
- It is a source of medicine like herbs which help promote health standards of nationals of a given country.
- It helps in transport systems like road network, railways, air transport which aids production directly and or indirectly.
- It is the original source of raw-materials for industries, thus promotes industrialization.
- It includes soils and climate which are vital for agriculture.
- It is a source of fuel like oil, coal, firewood etc.
- It is a source of fish which is used for food or exchange locally or

externally

- It provides scenery for tourism e.g. waterfalls, wild animals, natural forests, mountains etc. all which earns a country revenue in form of forex.
- It provides a site on which all developments stand.
- It is a source of minerals like gold, copper etc. which can be exchanged to provide revenue.
- Land is taxed to earn government revenue.

d) Rent and its Determinants

Recall that the rent is explained as the reward for use of land. Its determinants include the following:

- **Size of rental property:** The size of the rental property determines the rent to be paid. If the rental property is big then rent will be high and if it is small then rent will be low.
- **Location:** Rental properties that are located in areas that strategically located in areas that have access to roads, communication network and other social economic infrastructures, will attract high rent than those located in remote areas that have no access to such infrastructures.
- **Amenities:** properties that have more facilities will attract high rent than those that have less facilities.
- **Demand and supply:** When the demand for rental property is high, rent will also be high but if demand is low as compared to supply, rent will be low.
- Ability: The ability of the customers will also determine the rent to be charged. When their ability to pay is high, high rent will be charged but if their ability is low, low rent will be charged.
- **Competitors:** The degree of competition among property owners influences the rent to be charged. If competition is high, rent will be low but if competition is low, rent will be high.
- **Prevailing market conditions:** The existing economic conditions such as level of inflation, government policies, taxes and subsidies among others determine the rent to be charged. If these conditions are favourable, rent will be low and if they are unfavorable rent will be high.

4.2.2. Labour

a) Meaning of labour

Labour refers to any human effort, mental and or physical, that contributes towards the production of goods and service. Labour can be productive labour or unproductive labour. Productive labour is the labour that is engaged in producing goods and services, and it is paid a wage/ salary. Unproductive labour is the labour that does not produce goods or services and therefore it receives no wage.

b) Characteristics of labour

Labour is human. Every labourer has his or her own preferences, habits and feelings which must be put into consideration by the employer.

- Labour is geographically and occupationally mobile. Labour can easily be transferred from one occupation to another or from one geographical location or area to another
- Labour supply is regressive. An increase in wages may reduce the supply of labour. This is because achievement of targets may reduce and more time set aside for leisure.
- Labour is both the beginning and the end of production. Production can only start if labour is applied to land and capital while the end of production is consumption of final goods and services, which is done by labour.
- Labour is heterogeneous. There are differences in labour efficiency. Some labourers are more efficient than others. This can be due to differences in skills, experience gained, natural ability and level of training
- Labour has weak bargaining power. As a result, its payment is usually low compared to other factors of production. Since labour cannot be

stored, it is less organized and lacks reserve funds to support it when there is no work.

- Labour is perishable. It cannot be stored, postponed or accumulated for the next period or for future.
- Labour cannot be separated from the owner or labourer. Labour and the provider are the same.

c) Categories of labour

Labour can be categorized into:

i) **Skilled labour**: This is labour which is highly trained and experienced and can engage in productive activities without any supervision e.g. teachers, doctors, lawyers, engineers and veterinary officers.

ii) **Semi-skilled:** This is labour which is partly trained and has some degree of experience but requires some supervision to complete certain tasks e.g. drivers, tailors, hair dressers, carpenters, mechanics, plumbers and artisans etc.

iii) **Unskilled labour:** This is labour which lacks training and experience in any particular job. E.g. house maids, wheel barrow pushers, cleaners, car washers, herds boys, and farm workers.

d) Specialisation and Division of labour

- **Specialisation** refers to an economic situation where labour concentrates in the production of one or very few commodities in a more effective and efficient way. In this case, resources are concentrated in production of relatively few commodities. Specialisation at individual level refers to the allocation of tasks among workers so that each worker concentrates on the task he or she is most effective and efficient. Example, the specialisation of teachers in different subjects in Accounting. Specialisation by individual tasks is called 'division of labour'.
- **Division of labour** refers to the separation of a 458 work process into a number of simple and separate tasks, with each task being performed by a separate person or a group of people. Each worker is responsible for a particular task where he or she can perform better

Advantages of specialisation and division of labour:

- Time is saved because workers are able to concentrate on only tasks they perform better and this eliminates the constant need to move from one operation to the next by the workers.
- Use of specialised machinery may arise from the division of the general manufacturing process into small, separate and simple tasks. This in turn may greatly speed up the individual jobs which are automated.

- It is also generally considered that, because of the cost of training, workers to perform simple tasks is far less than training each worker to complete the whole production process, division of labour can lower average cost of production.
- Specialisation and international trade increases the size of the market, offering opportunities for large-scale production for a larger market.
- There is increased competition for domestic producers which acts as an incentive to minimize costs and to be innovative to remain competitive. Competition will help to keep the prices lower in the economy.
- Workers become very skillful and effective into their single allocated task because
- There is increase in levels of outputs produced because work is done by specialized people which leads to reduction in the price levels in the country.
- There is production of high quality products which in turn leads to improvement in people's standards of living.
- Consumers' choice increases because through specialization and division of labour a variety of goods and services are produced.

Disadvantages of specialisation and division of labour:

Although division of labour can lead to considerable gains in the productivity and quality of production, division of labour can also have negative effects on the production for the following reasons:

- Division of labour increases industrial interdependence which results into delays in production, inefficiency and losses in case of a breakdown in the process of production or an absence of a worker can halt the whole production process. For example, a strike in one part of the factory can halt the whole production process.
- It reduces mobility of labour because a worker is trained to handle only part of the whole task. This makes it hard for the worker to find a similar job in another place.
- It can result into the rise of monopoly as a worker specializes in performance of a given task he or she may become a monopolist in that field and may end up cheating customers.
- Specialisation leads to loss of craftsmanship (skills) because it results into increased use of machines. As a result, labour becomes machine attendant hence low skill utilization.
- Very high degree of division of labour can create demand for very specific, narrow skills, which creates the possibility of increased unemployment among the labour force of the country. In the long-term, this may lead to structural unemployment where the worker is replaced

by a machine, and because the worker's skill is no longer required, the worker has trouble finding employment, because he is not trained in anything else.

- Division of labour leads to boredom and hostility (disaffection), which people may experience because of doing the same task continuously. This may have a negative effect on the labour force and labour relations and eventually the productivity of the workers
- There is a possibility of overproduction. Due to specialisation, there is large scale production which creates excess supply. This leads to losses to the producers.

e) Labour mobility

Labour mobility is the ease with which labour can move from one occupation to another or from one geographical area to another. The movement of labour from one occupation to another is known as occupational mobility of labour. The movement of labour between geographical areas is known as geographical mobility of labour. It should be noted that labour can move within the same occupation either vertically or horizontally, or in different occupations.

- **Vertical mobility** of labour is the movement of a worker from one position (or job group) to another, but within the same occupation. This involves change of status. It may be a promotion or a demotion. For example, a teacher may be promoted from being a classroom teacher to a Senior Teacher, a deputy or a head teacher.
- **Horizontal mobility** is the movement of labour from one job to another at the same level in a given industry. A secretary for instance, can be moved from finance department to the human resource department, within the same firm or industry.

f) Labour efficiency

Labour efficiency is the ability of labour to produce the greatest quality and quantity of output within the shortest time possible. It is the productivity of a unit of labour per unit of time.

4.2.3. Capital



a) Meaning of capital

Capital refers to all manmade resources used in the production process of goods and services. Or it is any physical asset capable of creating further goods and services. It is also used to refer to wealth used to produce more wealth. Capital is that part of wealth which is not used for the purpose of consumption but is utilized in the process of production. Capital has also been defined as "produced means of production". Thus, all those items produced by man to help in the production of further goods and services are examples of capital e.g. Tools and machinery, factories, dams, canals, transport equipment, stocks of raw-materials, seeds and fertilizers, etc. are examples of capital. Capital is rewarded with interest in the market of factors of production.

b) Forms of capital:

- **Money /nominal /liquid capital:** This is capital which is in monetary form or near liquid assets. It is the paper notes and coins, and it is used as a method of payment for capital goods. It is not directly productive. To a lay person, it is money capital that matters while to an economist, it is real capital that matters.
- **Real/physical/fixed capital** is the stock of physical assets capable of producing goods and services. It is not for satisfying wants directly but is used in production. Real capital increases the volume of goods and services. Examples are roads, railways, machines, factories, buildings, etc.
- **Human capital:** This is productive qualities found in human beings that are used in production of goods and services. Such qualities are acquired through training and education.
- **Sunk capital:** This capital which is specialised and cannot be easily adopted to an alternative use e.g. railways.
- **Private capital:** This is capital owned exclusively by an individual and it yields him/her income
- **Social overhead capital or public capital:** This is capital which is in most cases owned by the state on behalf of the people e.g. roads

schools, hospitals defense etc.

- **Floating capital:** This is capital that can be used for a number of purposes in a number of ways e.g. Money and raw materials.

c) Role of capital

Capital plays a vital role in the modern productive system

- Capital enables the use of monetary exchange thus reduces the subsistence sector and its negative effects.
- As finance, capital increases the level of savings which stimulates investments in the economy.
- Capital breaks the state of technological backwardness by enabling the country to acquire modern technology thus promotes technological development.
- Capital increases occupational and geographical mobility of other factors of production which results into efficient distribution of resources and increase in quantity of resources available
- Capital facilitates production of high-quality goods and services because with it producers are in position to use high levels of technology in production.
- Capital facilitates research which helps the producers to increase on the quality and quantity of outputs. Capital makes it possible for producers to undertake research which improves their operations thus becoming more innovative and more competitive in the markets
- Capital can be exported in form of loans, grants, foreign investments which can create more income to the country and employment.
- Capital enables labour to specialise in operating different tasks which enables them acquire more skills thus increasing their efficiency and production of more goods and services
- It creates employment opportunities in the country when it is invested. When the capital is produced, some workers have to be employed to make capital goods like machinery, factories, dams and irrigation works. And at the same time, more labour force has to be employed when capital has to be used for producing further goods.
- It increases the levels of outputs produced when it is invested. Capital adds greatly to the production of more outputs in the economy due to growth of technology and specialization associated with capital which in turn leads to economic growth.
- It also leads to infrastructural developments when it is invested. Capital facilitates construction of dams, roads, irrigation works, railway lines, air ports bridges and many others which all contribute towards economic growth and development.

- Capital enables the country to improve her balance of payment (BOP) position through establishing import substitution industrial strategy where a country invests so much in establishing industries to produce goods which were previously imported into the country and this in turn reduces the amount of goods imported and then improves on the country balance of payment.
- It also leads to the exploitation of idle resources in the country for example idle land, minerals and other resources which later leads to economic growth.
- The use of capital enables a country to achieve a self-sustaining economic growth and thus helps to break through vicious cycle of poverty.

d) Capital accumulation/ formation:

People use capital goods like machines, equipment, etc. because they (capital goods) are the creators of other goods and services. Capital also helps to produce goods and services with less effort and lower costs than would be the case if labour were not assisted by capital. But in order to use capital goods people must first produce them. This calls for a sacrifice of current consumption to increase on capital goods. Thus, the opportunity cost of the capital goods is the potential output of consumer goods which has to be foregone in order to produce that capital. This means that the production of capital demands abstinence from current consumption. This is what we call capital accumulation or formation. Therefore, capital accumulation/ formation refers to the process of increasing a country's stock of real capital/ assets over a given period of time. Or it is the increase in the stock of capital goods.

Factors that affect capital accumulation (formation)

- Government policy of Taxation or subsidization. Favourable government policy on taxes and subsidies encourage savings and investment and production hence increasing the formation of capital. Unfavourable policies on taxes and subsidies discourage savings, investment and production and thus reduce the process of capital accumulation.
- Level of infrastructure development. A country that has well developed and equally distributed socio-economic infrastructures attracts more investments leading to higher capital accumulation than when socioeconomic infrastructures are undeveloped and unevenly distributed
- The level of savings. Whenever one's levels of saving increase, his/her levels capital accumulated increase, but when levels of saving reduce even the levels of capital accumulated reduce.

- Culture of the society. If the culture of the society is favourable for example favouring people to save, invest and to be good entrepreneurs, the levels of capital formation will be higher than when culture is not favourable.
- Extended family system. In most cases, people with small families are always able to save more money because of having low expenditures leading to higher levels of capital accumulation than extended families with high level of expenditures and low saving levels.
- Level of financial sector development. If the economy has a well-developed financial sector e.g. enough good commercial banks; this will encourage most people to save their money in banks which in turn increases capital accumulation, but if it not well-developed, most people will keep their money in cash form which reduces levels of saving and capital accumulation.
- Government and security. Capital formation is a function of good governance and management of the country's resources. A politically stable environment ensures investors' confidence in the economy, which in turn favours the capital formation process than a politically unstable one which scares away potential investors both local and foreign.
- The profit levels. When profit levels are high, producers will be encouraged to re- invest their capital leading to higher levels of capital accumulation but when profit levels are low they will be discouraged from re- investing leading low levels of capital accumulation.
- Labour productivity. Well trained and skilled workers always produce more and high quality products which increases capital accumulation but when workers are not well trained and skilled their productivity will be low leading to low capital accumulation
- Technology levels. If the levels of technology are high a country will be able to produce more and high quality output which leads to higher capital accumulation than when the levels of technology are low.
- Level of entrepreneurship: The higher the level of entrepreneurial skills in a country the greater the level of investments and capital accumulation, and the lower the level of entrepreneurial skills, the lower the level of investments and capital accumulation.
- Capital stock. The existing levels of capital stock are vital in explaining the levels of investment and capital accumulation in an economy. If the existing stock of capital is big the level of investment and capital accumulation will be higher than when the existing capital is small.
- The wage rate and remuneration. If the payments for workers are high they will be motivated and this will increase their productivity, and the

profits of the firms leading to higher capital accumulation than when their wages and remunerations are low. Low payments always discourage workers from their hard work which in turn affects the profit levels of the firms. What a worker earns is important in explaining a firm's output levels and subsequently the profit levels.

- Rate of capital flows: High levels of capital inflows lead to an increase in capital accumulation while high levels of capital outflows lead to a decrease in capital accumulation.
- The size of market: existence of well-organized and expanding market encourages production of goods and services and generates more incomes. This leads to more savings for re-investment leading to increased capital accumulation. When the size of the market is small, it discourages production leading to low incomes, low savings. Low investment and less capital accumulation.
- Population structure: A high population growth rate with more dependents, increase expenditures and reduce savings leading to low capital accumulation while a low population growth rate with a big size of the working class encourages savings, investment, more output hence increased capital accumulation

4.2.4 An Entrepreneur

a) Meaning of an entrepreneur

An **entrepreneur** is a person who organises and co-ordinates other factors of production to produce goods and services. An entrepreneur hires labour and land and looks for capital. The entrepreneur then combines these factors in appropriate proportions to produce goods and services. The entrepreneur is the pivot around which all the activities of the firm revolve. He/she is the one who gives direction to the business firms & ensures its effective operation. The entrepreneur is rewarded profit for his contribution in the production process.

b) Characteristics of an entrepreneur:

- **Risk taker and bearer i.e**. an entrepreneur has the 'willingness to assume risk' arising out of the creation and implementation of new ideas. New ideas are always uncertain and their results may not be immediate/prompt and positive. Therefore, he/she always finds out ways and techniques of reducing or minimizing risks for his/her benefit.
- **Passion and motivation** i.e. an entrepreneur should be able to work over and over again without getting bored, keep awake at night because he/ she hasn't finished a certain task yet, have to build something and want to continue to improve upon it.
- **Self-belief, hard work and disciplined dedication** i.e. entrepreneurs believe in themselves and are confident and dedicated to their project. Their intense focus on and faith in their idea may be misunderstood as stubbornness, but it is this willingness to work hard and defy the odds that make them successful.
- **Adaptable and flexible** i.e. successful entrepreneurs welcome all suggestions for optimization or customization that may enhance their offering and satisfy client and market needs.
- Product and market knowledge. Entrepreneurs know their product inside and out i.e. successful entrepreneurs create something that didn't already exist or significantly improves an existing product after experiencing frustration with the way it worked.
- **Strong financial management** i.e. successful entrepreneurs plan for present and future financial obligations and set aside an emergency fund. Even after securing funding or going fully operational, a successful businessperson keeps a complete handle on cash flow, as it is the most important aspect of any business.
- **Effective planning skills** i.e. successful entrepreneurs have a business plan in place, but remain capable of dealing with unforeseen possibilities.
- **Make the right connections** i.e. successful entrepreneurs reach out to mentors with more experience and extensive networks to seek valuable advice. If they don't have the necessary technical or marketing skills, they find someone who does and delegate these tasks so they can focus on growing the business.
- Exit preparedness since entrepreneurs aren't always successful at the first time around, but they have to know when to cut their losses.

Therefore, sometimes the best solution is to call it quits and try something new instead of continuing to dump money into a failing business.

- Ability to question him/herself intimidating questions like; “can I do this? Do I want to do this?” etc.
- **Committed to outcome** i.e. an entrepreneur rebukes and disciplines self for failing to perform.

Other factors of production are:

i) Time

ii) Technology

c) **Functions of an entrepreneur:**

The entrepreneur in modern business performs the following useful functions:

- Entrepreneur undertakes risks and bears the burden of uncertainties of the business.
- He/she is an initiator. The start of any business enterprise is as the result of the initiative of the entrepreneur.
- He/she directs the development of the enterprise. An entrepreneur develops concrete plans for the development of the enterprise
- He/she organizes other factors of production.
- He/she is an innovator. An entrepreneur introduces new methods of production to improve the quality and quantity of output
- Co-ordinates other factors of production. An entrepreneur sets goals and co-ordinates other factors of production to produce goods and services.
- He/she is a decision maker. The entrepreneur undertakes all the decisions of the business.

d) Barriers to entrepreneurship development

Barriers are the factors that hinder or limit the development of entrepreneurship. Barriers can prevent an entrepreneur from accessing customers or sources of getting more capital for the business. Barriers also hinder entrepreneurs from exploiting their potential. Some of these barriers include the following:

- **Poor entrepreneurship skills**

Most entrepreneurs and potential entrepreneurs have little or no entrepreneurship skills. They lack creativity, innovativeness, endurance, flexibility and other entrepreneurship characteristics.

- **Lack of business and technical skills**

Marketing, accounting and management skills are some of the skills required by all practicing entrepreneurs to effectively manage their ventures. Many ventures also require specialized technical know how to set up, operate and manage. Lack of these skills and high rates of illiteracy at times limits the capacity of entrepreneurs to effectively exploit the full potential of their ventures.

- **Lack of mobility and exposure**

Exposure of entrepreneurs normally offers them biggest revelation for new ideas that shape their creativity and innovativeness as entrepreneurs. However, many of them do not travel, research nor explore widely. This limits the creativeness and innovativeness of potential and practicing entrepreneurs.

- **Lack of business ethics**

Many entrepreneurs have failed to run and sustain their businesses because of unethical behavior. In most cases, there are problems of unpaid loans, debts and accumulated expenses. At times, entrepreneurs evade paying tax and registering their businesses legally, while others engage in corruption, smuggling and drug trafficking. Such tendencies are illegal and should be stopped immediately.

- **Career dependency**

Most people in our country especially the learned, depend wholly on their careers for their livelihoods. Entrepreneurship has long been regarded as a last resort, considered only after failure to secure a white collar job. Entrepreneurship is regarded as a job for the less educated. Although this attitude is rapidly changing, its effects remain a big barrier to entrepreneurship in Rwanda.

- **Lack of role models in entrepreneurship**

Rwanda has few role models in the field of entrepreneurship. This limits the number of people who willingly aspire for careers in entrepreneurship. The available few cannot fully meet the demands of the many upcoming entrepreneurs.

- **Inadequate finance**

Banks and micro finance institutions charge high interests on their loans. As a result, entrepreneurs fear seeking for loans to advance in their businesses. In additions the conditions set for one to access a loan may not favour upcoming entrepreneurs. The terms of credit are unreasonable, requiring difficult collateral securities to secure loans and charge high interest rates.

- **Low purchasing power**

Low incomes and high rates of unemployment limit the purchasing power of the population. This makes it hard for businesses in general and entrepreneurs in particular to acquire the necessary economies of scale.

Application activity 4.2

Reflect back in your communities, identify people who have successfully started businesses and are still running them.

a) List down the types of businesses they run.

b) Identify the characteristics that they have that enable them manage their businesses.

c) Analyse the role they have played in the development process of the areas where they operate from and the entire economy.

d) Describe the resources they have used to start and explain how they relate to the factors of production learnt above.

4.3. Production function (Input-output Relationship)

Learning activity 4.3:

To teach students, there is need of teachers, classrooms, teaching and learning materials.

To have a healthy population, there is need of medical personnel and facilities.

To produce food, there is need for land and capital.

a) From the statements above, categories different things mentioned as output and inputs.

b) How are the two categories related?

4.3.1. Meaning, function and planning periods

a) Meaning and function of production

Production function is an expression of the relationship between physical quantities of inputs and output. It shows the maximum output that can be obtained from a given quantity of physical inputs.

i) As a statement Q = f(L,K,N,M,T).

The relationship can be expressed mathematically as follows: $Q= f(L, K, N, M, T)$.

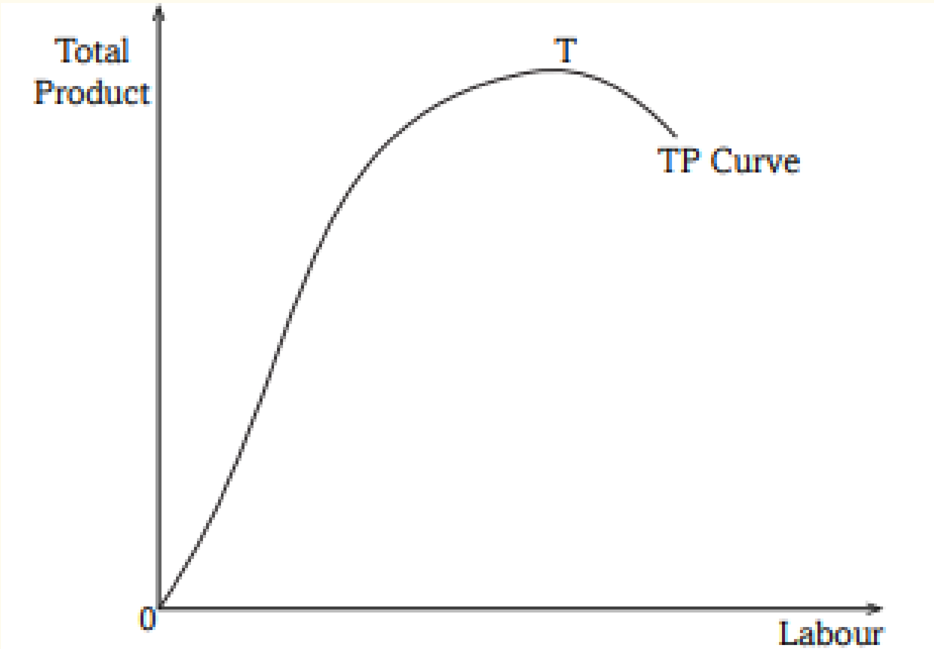
Where Q is output, K is capital, N is land, M is organisation, T is technology and L is labour. f stands for function. The left hand side (Q) represents the dependent variable while the right hand side represents the independent variables. Thus output is the dependent variable while input is the independent variable.

ii) As an equation **Y = a + bx.**

Where Y is output, a and b are constants and x is variable input.

iii) As a graph.

The production function can also be represented using a graph, as below



a) Planning periods

Planning periods are reference periods by any production unit when making production decisions. To study the relationship between a firm's output decision and its costs, we distinguish the two primary time periods or decision time frames /reference periods (i.e. short-run, long-run). Any production unit shows its performance for short run or long run or very long run. These periods do not show specific period of time e.g. a week, month or year, but it depends on the production unit making decision and what it is able to do with in that time. These periods are actually relative for different production units. For example, short run period for one firm, may be long run period for another.

- **Very long run**

This is the very long period in which the company is able to change technology. The company can conduct research and development programs for new technologies during this long period. New products can also be produced

- **Long run period**

This is the period that is long enough for a business/ company to vary all factors of production. For example, the company can buy more land, train top management, etc. However, the level of technology does not change. Therefore, the company can increase output by expanding the size of the company. That is, the company increases output by using variable and fixed factors of production.

- **Short run period**

It is a period during which at least one factor of production is fixed and one or more factors are variable. Since there is a fixed factor, the law of diminishing returns is likely to operate in the short run. In this period output can be increased by adding units of variable factors to the fixed factor. For example, in agriculture, output can be increased by adding units of capital and labor (variable factors) into land (fixed factors).

- **Very short run period**

It is a very short period of time during which supply cannot increase through production. Perhaps this supply can be increased in the market by pulling stock from stores.

4.3.2.Product of the firm (TP, AP and MP)

a) Forms of product of the firm

There are basically 3 major forms:

i) Total product

This is the overall amounts of products or output that are produced by a given ratio of factors combinations in a particular period of time. Or it is the total output resulting from the employment of all factors of production. TP is always considered or measured in physical units e.g. kilograms, tons, grams, liters etc. but not in prices.

ii) Average product (AP)

This is output per unit of a variable factor employed (holding other factor inputs constant). Or it is how much each unit of a variable factor has produced. It is given by the total product divided by the variable inputs employed.

$$\mathbf{AP}\ \frac{Total\ Product\left(TP\right)}{Total\ Variable\ factor\left(Labour\right)}$$

If Variable factor is Labour **AP (TP)/L**

iii) Marginal product (MP)

This refers to the additional output resulting from employment of an extra unit of variable factor when all other units are held constant. It is the change in output as a result of change in the variable factor.

$$\mathbf{MP}\ \frac{Change\ in\ Total\ Product\left(TP\right)}{Change\ in\ units\ of\ \ Variable\ factor}$$

If Variable factor is Labour **MP= (Δ TP)/(Δ L)**

b) Relationship between TP, AP and MP:

This can be explained by a production schedule or curves as below

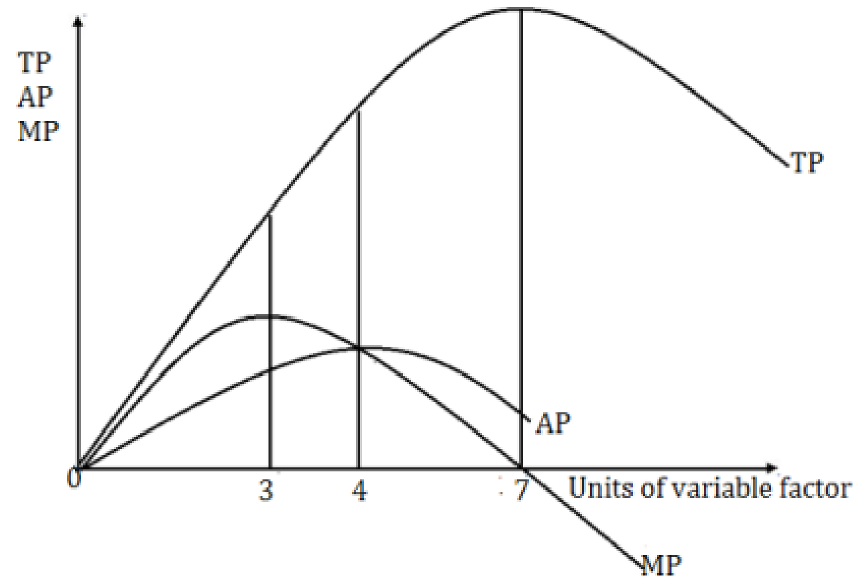
Production function schedule:

Labour (L)	Total product (Q)	Total product (AP)	Marginal product (MP)
1	10	10	-
2	22	11	12
3	36	12	14
4	48	12	12
5	55	11	7
6	60	10	5
7	60	8.6	0
8	56	7	-4

The analysis of the table shows that the total, average and marginal product increase at first, reach a maximum and then start declining. The TP reaches its maximum when 7 units of labour are employed and

it declines. The AP continues to rise till the 4th unit while the MP reaches its maximum at the 3rd unit of labour, then they also fall. This can be illustrated on curves as as follows:

TP, AP & MP curves



From the curves above, it is seen that:

- **TP, AP and MP first increase, reach their maximum and begin to declin**e.

– The point of maximum and of falling are not the same for TP, AP and MP. i.e., MP reaches its maximum first, followed by AP and later on TP.

– When TP is at maximum, MP equals to zero. After this point, TP falls and MP becomes negative.

– The AP is at its maximum when it is equal to MP. The AP starts falling after meeting MP curve but MP is below AP after that point.

– The TP curve first rises at an increasing rate, the reaches the highest point at a decreasing rate and then starts falling

4.3.3. Law of diminishing marginal returns and its assumptions

The law of diminishing returns states that, given a short run situation with 2 factors of production, one variable and another fixed, "**As more and more units of a variable input are applied to the fixed factor in a given state of technology, the marginal product of the variable factor will eventually diminish**." This law is also called **the law of variable proportions**.

Assumptions of the law of diminishing returns

i) Existence of a variable factor of production and other factors are constant.

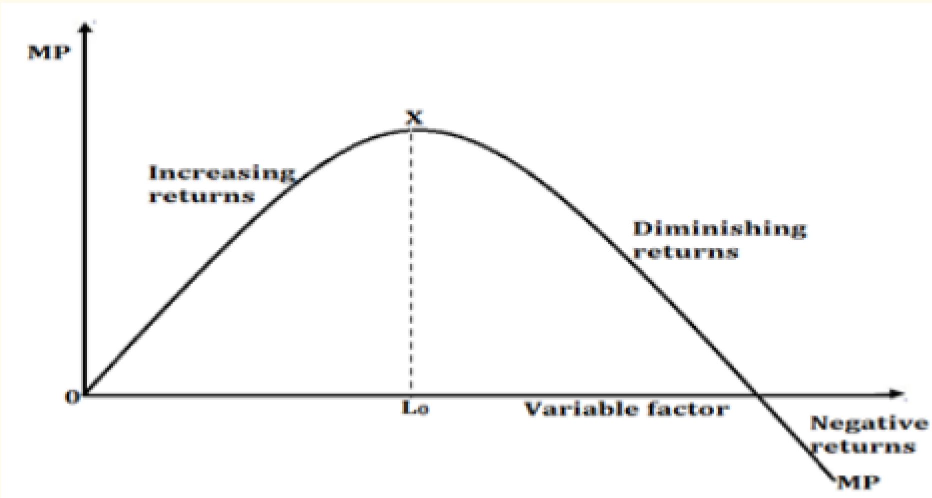
ii) All units of the variable factor are homogeneous.

iii) The price of the product is given and constant.

iv) It assumes a short run period.

v) It assumes that technology is constant.

vi) It is possible to change the proportions in which various inputs are combined



4.3.4. Isoquant and Isocost

a) Meaning

Isoquant is the locus of points showing various combinations of the factors of production that yield the same output.

Isocost is a locus of points showing different combinations of factors of production that cost the production firm equally.

b) Equations

– Isocost equation

Consider the following model:

$$C = P_K K + P_L L$$

Where:

C: The total cost/the constraint

K: The amount of capital

P_K: The cost of each unit of capital

L: Amount /size/number of labor

P_L: Price of labor

The equation $C = P_K K + P_L L$ defines a function C with variables capital and labour.

If you want to make capital or labour the subject of the formula:

$$C = P_K K + P_L L$$

$$P_K K = C - P_L L$$

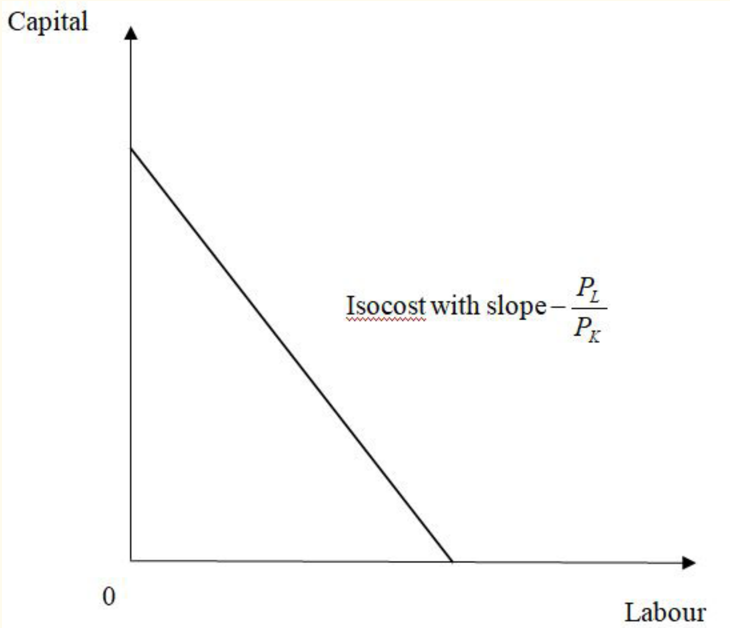
$$\frac{P_K K}{P_K} = \frac{C}{P_K} - \frac{P_L L}{P_K}$$

$$K = \frac{C}{P_K} - \frac{P_L L}{P_K}$$

Where capital (K) is given as the function of labour (L).

This equation is very vital because:

- It shows the nature of isocost curve
- It gives the direct relationship between the capital and labour used since the cost is constant
- $-\frac{P_L}{P_K}$ is the slope of the isocost and it is called the **marginal rate of production cost.** It is negative because the increase in the units of a certain variable/ factor employed because a reduction in the units of the other factor. Therefore, it is a negative relationship.

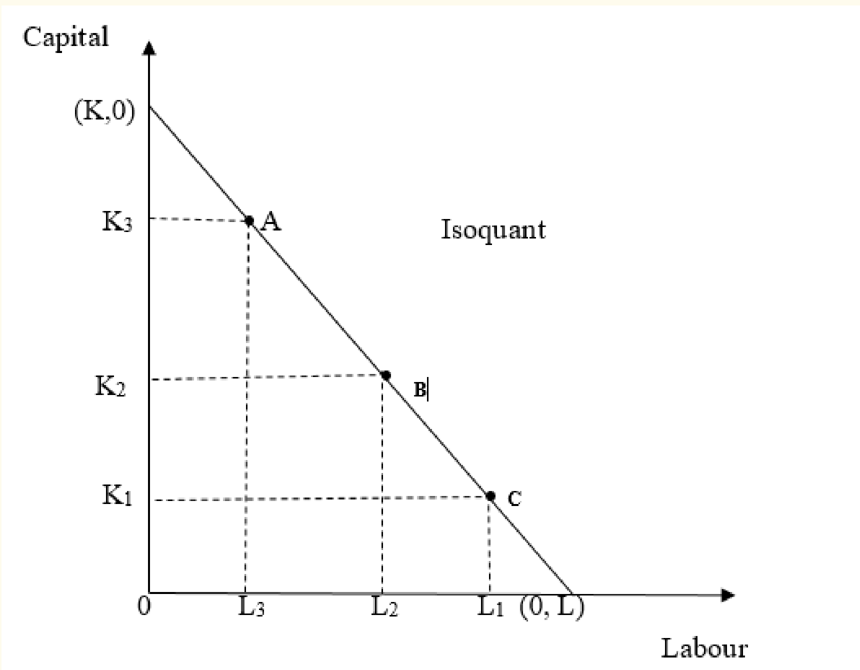


- **Isoquant equation**

  Consider the following equation:

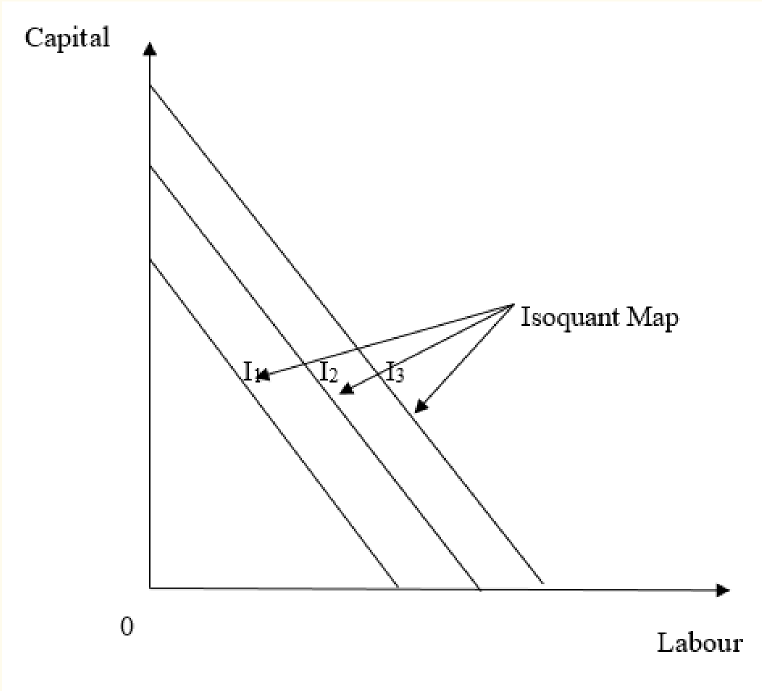
  $P = f(K, L)$

  This equation is stated generally because the ratio or the portion of contribution of the factors can either be fixed or varying.



Each of the factor combinations **A, B** and **C** produces the same level of output; that is why an isoquant curve may be called an equal product curve.

- **Isoquant Map**



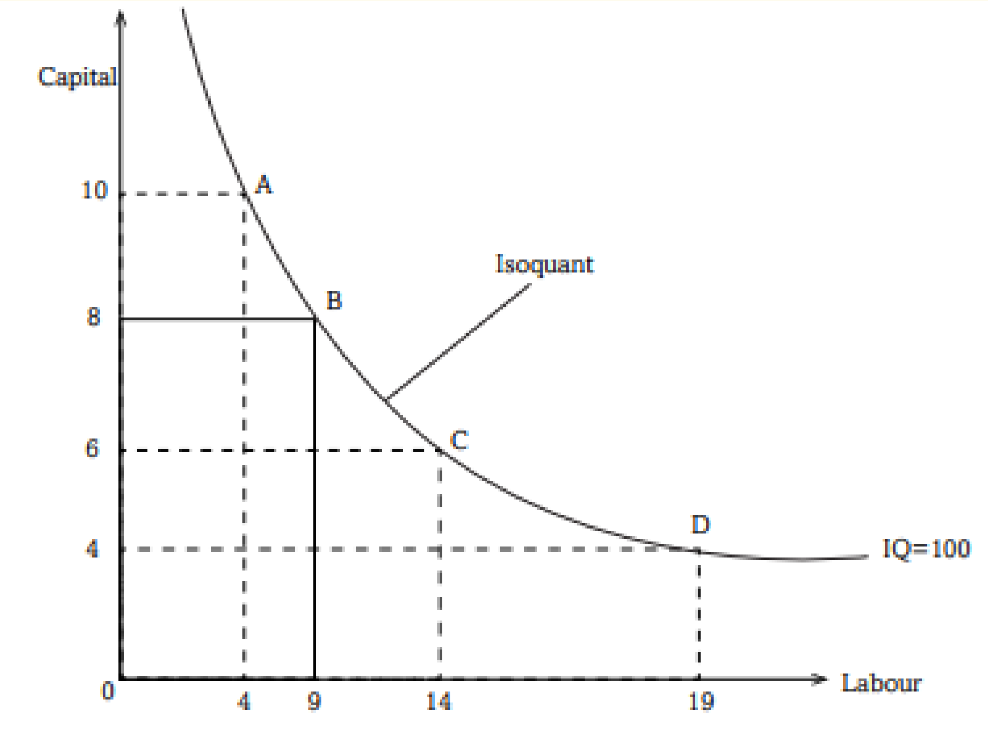
- **The slope of an isoquant**

The slope of an isoquant is known as the **marginal rate of technical substitution (MRTS)since** it shows the rate at which one input is substituted for another while maintaining the same level of output. It can be illustrated from the hypothetical isoquant schedule below.

▪ **Hypothetical isoquant schedule**

Combination	Units of capital	Units of labour	Total output
A	10	4	100
B	8	9	100
C	6	14	100
D	4	19	100

The table shows that a firm can produce 100 units of output at point **A** by having a combination of 10 units of capital and 4 units of labour. Similarly point **B** shows a combination of 8 units of capital and 9 units of labour. Point **C**, 6 units of capital and 14 units of labour and point **D**, 4 units of capital and 19 units of labour to yield the same amount of 100 units.



When labour units are measured along the X- axis and capital units along the Y-axis, the first, second, third and fourth combinations are shown as A, B, C and D respectively. When we connect all these points, we get the isoquant curve

- **Properties of Isoquants**

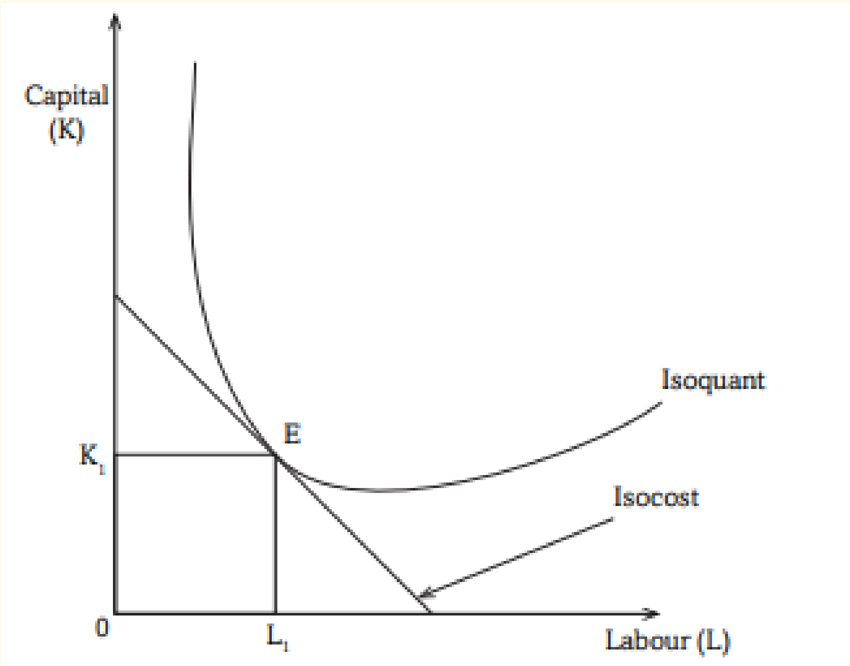
Isoquants possess certain characteristics, which are similar to those of indifference curves:

- Isoquants are negatively inclined. That is to say as the amount of capital decreases, that of labour increases so that output remains constant.
- An isoquant lying above and to the right of another represents a higher output level. 3. No two isoquants can intersect each other, that is, the point of intersection combination would bear less and more output at the same time which is not possible.
- In between two isoquants, there can be a number of isoquants showing various levels of output.
- No isoquant can touch either axis. If an isoquant touches the X- axis, it would mean that the product is being produced with the help of labour alone without using any capital.
- Each isoquant is convex to the origin. As more units of labour are employed to produce 100 units of a product, lesser and lesser units

of capital are used. This is because the marginal rate of substitution between the two factors diminishes

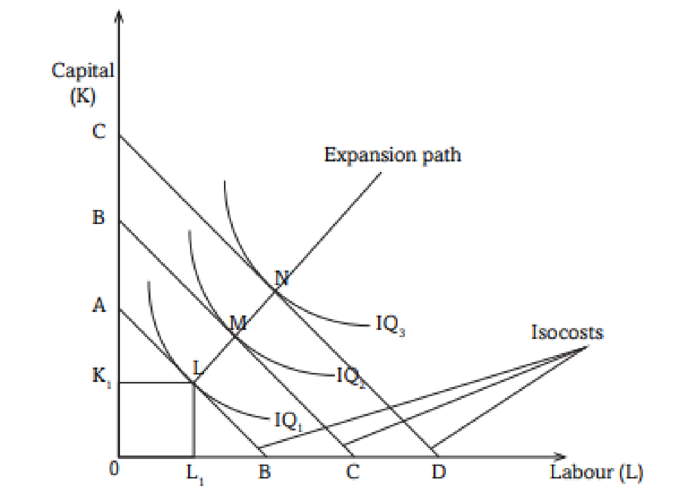
- **The least cost combination**

The Isocost curve represents the locus of all combinations of the two factor inputs which result from the same total cost. If for example the unit cost of labour (L) is w and the unit cost of capital (k) is r, then the total cost is:



$$\text{Total Cost} = rK + wL$$

The firm will be in equilibrium when the highest isoquant curve becomes tangent to the isocost line. At point E, the equilibrium position of the firm is defined as the level of maximum output, subject to the cost constraint. This point is always shown where the isoquant curve is tangent to the isocost. The point of tangency represents the **least cost combination** of the two factors for producing a given o



If all points of tangency like L, M and N are joined by a line, that 'joining' line is known as the expansion path or the output factor curve. It shows how the proportions of the two factors used might be changed as the firm expands

Application activity 4.3

Given the following information, carry out research from the library or the internet and answer the questions that follow;

Fixed Factor	Variable factor	TP	AP (TP/L)	MP ( )
7	1	4	?	?
7	2	14	?	?
7	3	27	?	?
7	4	40	?	?
7	5	60	?	?
7	6	72	?	?
7	7	77	?	?
7	8	80	?	?
7	9	81	?	?
7	10	81	?	?
7	11	71		

i) Using the above case of input-output ratio, Calculate AP and MP and

ii) Illustrate the relationship between TP, AP and MP and make p

4.4. Theory of costs, production, and Profit of the business/ firm

Learning activity 4.4:

3. Discuss the following terms:

i) Costs

ii) Long run

iii) Short run

iv) Variable cost

v) Fixed cost

6. Give examples of costs incurred by your business club and explain how they differ considering their categorization as fixed and variable costs.

4.4.1. Theory of costs

Every firm spends on their daily activities. These expenditures come in different forms and way. For any firm to realise its main objective of maximising the profit, it must incur some costs during production and sales. Not all costs incurred during production must involve the exchange of money.

Costs are the expenses of a firm incurred during production process. Costs consist of payments to factors of production and therefore closely linked to the theory of production. Costs are derived from the production function.

Costs are divided into two:

1) **Implicit costs:** These are basically social costs. They are costs that cannot be included in the computation of the firm's profits. This is because such costs cannot easily be monetised. They include noise, time wasted, and opportunity cost.

2) **Explicit costs:** These are costs for items for which the firm can make specific payments on. It is the actual expenditure of a firm incurred when purchasing the input factors. These include costs of raw materials, labour, transport, energy and many others. They include both fixed and variable costs.

Variation of costs in the short & long run

- **Short run costs of the firm:**

Short run is a period in which the firm cannot change its plant, equipment and the scale of operations. To meet increased demand, it can only raise output by hiring more labour and raw materials or asking the existing labour force to work overtime. The short- run total costs are divided into:

i) Total Fixed Costs (TFC).

ii) Total Variable costs (TVC). And the

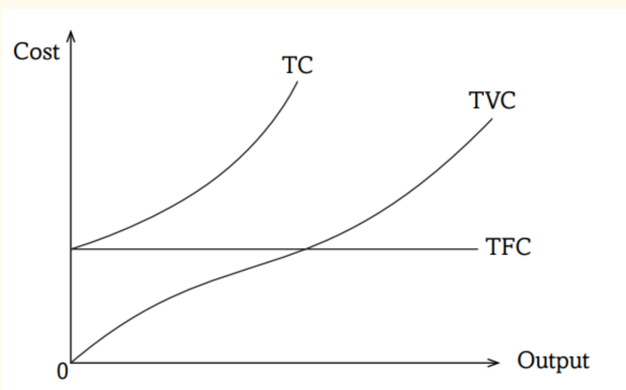
iii) Total Costs (TC)

This is the sum of the total fixed costs and the total variable costs in the business.
TC= TFC + TVC

When the output is zero, total cost will equal fixed costs since variable costs will be zero. When production begins to increase, total costs will continue to rise as variable costs increase since variable costs must increase as output expands.

In the short run analysis average costs are more important than total costs. The units of output that a firm produces do not cost the same amount to the firm, but they must be sold at the same price. Therefore the firm must know per unit cost or the average cost. The short run average costs of a firm are the average variable cost (AVC), the average fixed cost (AFC) and the average total cost (ATC).

Output (Q)0	Total fixed Costs (RWF)	Total Variable Costs (RWF)	Total Costs (RWF)
0	50	0	50
1	50	20	70
2	50	30	80
3	50	35	85
4	50	45	95
5	50	65	115

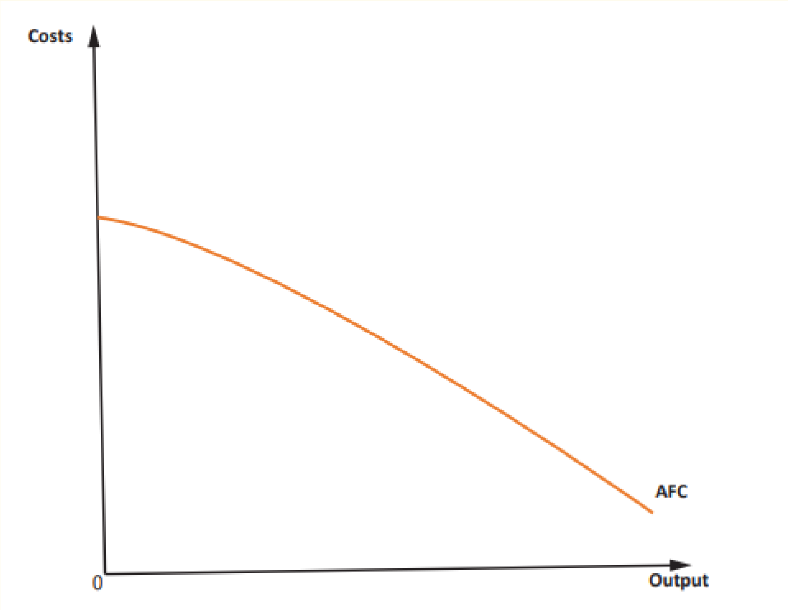


The total cost curve cuts the vertical axis at a point above the origin and rises continuously from left to right. This is because even when no output is produced the firm has to incur fixed costs. The TVC curve starts from the origin (0) because when output is zero, the variable costs are also zero. They increase as output increases.

The average fixed cost (AFC)

This is the total fixed cost at each level of output divided by number of units produced.

That is:

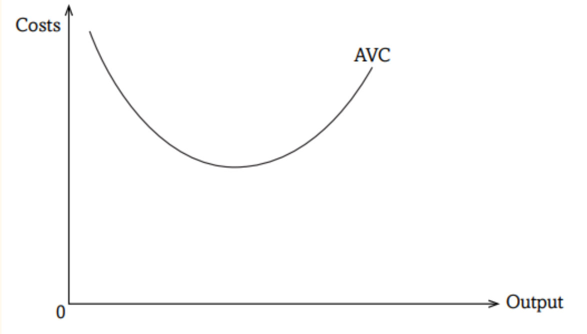


The average fixed cost diminishes continuously as outputs increases. This is because when a constant figure such as the TFC is divided by continuously increasing unit of output, the result is a continuously diminishing average fixed cost. Thus the AFC curve is down ward slopping but doesn't cross the quantity or output axis because if it did, then AFC would be zero in which case TFC would be zero which cannot be the case.

The average variable costs (AVC)

This is the total variable cost at each level of output divided by the number of units produced.

That is:



The curve is U- shaped because of the law of diminishing marginal returns. The AVC first declines with the rise of output as larger quantities of variable factors are applied to fixed factors but eventually they begin to rise due to the law of diminishing marginal returns.

The average total cost (ATC)

This is the average cost of producing any given output.

ATC = TC/Q = (TFC + TVC)/Q = TFC/Q + TVC/Q

ATC = AFC + AVC

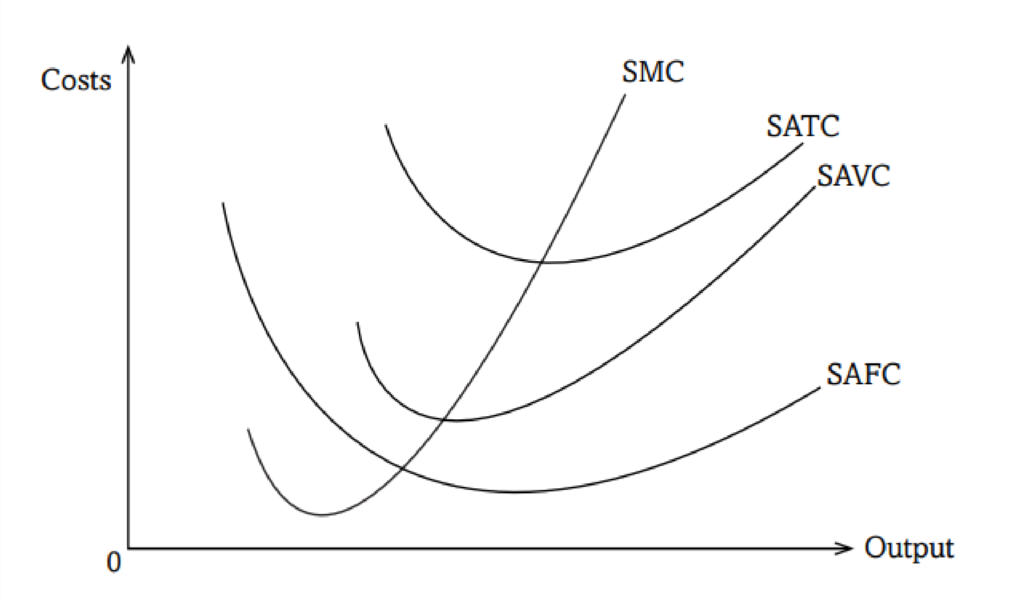
The marginal cost (MC)

A fundamental concept for the determination of the exact level of output of a firm is the marginal cost (MC). Marginal cost is an additional cost that is incurred to produce an extra unit of output.

MC = ∆TC/ ∆Q

The relationship between short run cost curves

Q	TFC	TVC	TC	AFC	AVC	ATC	MC
0	60	0	60	-	-	-	-
1	60	30	90	60	30	90	30
2	60	40	100	30	20	50	10
3	60	45	105	20	15	35	05
4	60	55	115	15	14	29	10
5	60	75	135	12	15	27	20
6	60	120	180	10	20	30	45
7	60	180	240	8.5	26	34.5	60
8	60	240	300	7.5	30	37.5	60

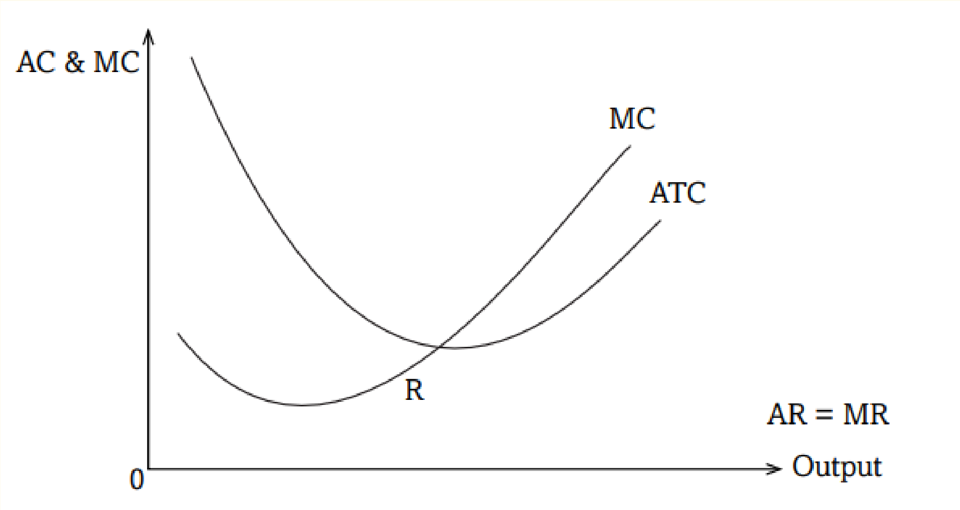


The AFC declines continuously and is asymptotic to both axes that is, it never touches either axes.

The AVC curve first declines, reaches minimum at point A and rises thereafter. The ATC first declines, reaches a minimum point P and the MC = ATC.

The relationship between MC and ATC

There is a direct relationship between the ATC and the MC



Both curves are U- shaped and when the ATC falls MC is less than the ATC. This is because a fall in MC is related to one unit of output while in case of ATC; the same decline is spread over all units of output.

When the ATC is at minimum, it's equal to the MC. The MC curve cuts the ATC curve from below at its minimum point R.

When the ATC rises, MC is greater than ATC. The MC curve is above ATC when ATC is rising i.e. MC is greater than the ATC

The long run cost curves

In the long run, all inputs (factors of production) are variable and firms can enter or exit any industry or market. Consequently, a firm's output and costs are unconstrained in the sense that the firm can produce any output level it chooses by employing the needed quantities of inputs (such as labour and capital) and incurring the total costs of producing that output level.

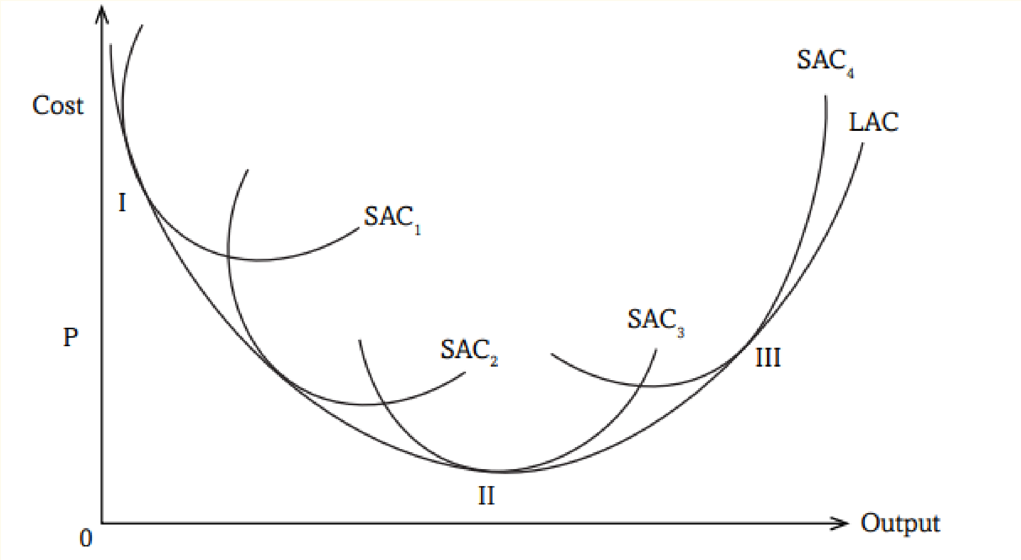
In the long run, the law of diminishing marginal returns does not operate and do not guide production and cost. Instead long run average cost is affected by increasing and decreasing **returns to scale**, which translates into economies of scale and diseconomies of scale.

Long run average cost curves (LAC)

The Long-run Average cost Curve (LAC) of a firm shows the minimum average cost of producing various levels of output from all possible short run average cost curves (SAC), thus the LAC is derived from the SAC curves that is the LAC can be viewed as a series of alternative short run situations into any one of which the firm can move. Each Short-run Average Curve (SAC) curve represents a plant of a particular size which is suitable for a particular range of output. The firm will therefore make use of the various plants up to that level where the short run average costs fall with an increase in output. The firm will not produce beyond the minimum short run of producing various outputs from all the plants used together.

Deriving the long run average cost curve (LAC)

Let us assume that we have five plants represented by their short run average cost curves SAC1, SAC2, SAC3 up to SAC4 where each curve represents the scale of the firm. The long run average cost curve is shown as smooth curve fitted to the short run average cost curves so that it is tangent to each of them at some point as shown in the illustration below:



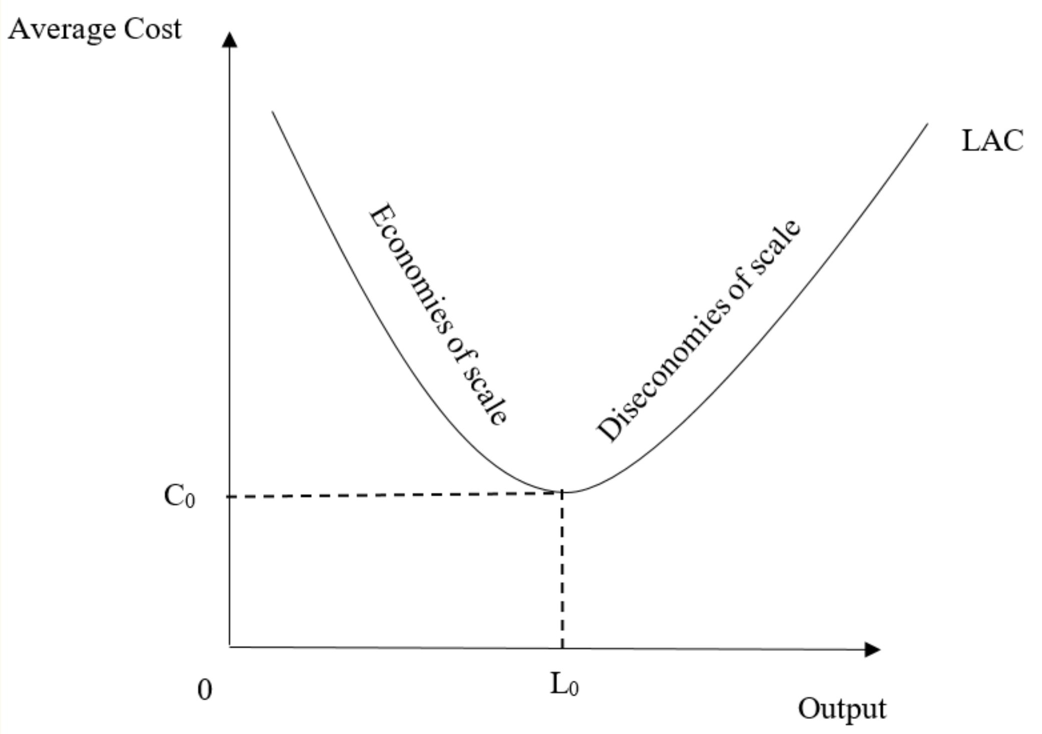
The LAC is U- shaped due to economies and diseconomies of scale. These are the advantages and disadvantages of producing on a large scale respectively. The LAC curve can be divided into three parts.

Part I shows that the costs of the firm are falling while output is increasing. In this region there are increasing returns to scale.

In part II LAC is constant but output is increasing, there are constant returns to scale in this region. The factor inputs increase by the same proportion as the increase in factor output. In part III output is increasing at increasing costs and this is due to the diseconomies of scale thus there are **diminishing returns** to scale in this region.

Economies and diseconomies of scale:

Growth brings both advantages and disadvantages to a business. These interact, and depending on the nature of the business and the way it is managed, decide the optimum or most efficient size for the business. This results into the area of **economies and diseconomies of scale**. It should be noted that average cost falls as output increases, with the result that large firms may enjoy lower costs than smaller competitors. This competitive cost advantage allows large firms to have larger profit margins and have more options in pricing policy.



a) Economies of scale:

These are advantages that a firm enjoys in form of reduced average costs as the firm expands its scale of production. The most common reason for economies of scale is that some production costs are fixed (as production increases these costs stay constant) e.g. managerial, marketing and technical costs are paid for as a fixed amount. Therefore, since costs per unit (Average Costs) are calculated by dividing the cost by the number of units of output; AC= TC/Q.

Then any average involving Fixed Costs (Numerator) must decrease as quantity produced (Denominator) increases.

Economies of scale can be categorized into internal and external economies.

i) Internal economies of scale:

These are benefits enjoyed by a single firm as a result of increasing its scale of production. Or they are the unit cost advantages from expanding the scale of production in the long run. Internal economies of scale come from the long-term growth of the firm. Examples of internal economies of scale include:

- **Technical economies:** The large-scale firms can use modern machinery and get many advantages.
- **Financial economies:** The large-scale firms get financial assistance easily in the form of borrowings, loans, credits at a low rate of interest.

- **Marketing economies:** The large-scale firms get raw materials at a cheaper rate because they purchase raw materials or factor inputs in bulk or a large quantity at discounted prices.
- **Managerial economies**: The large-scale firms can manage their business more efficiently because they use division of labour and can use various strategies to manage their workforce effectively.
- **Risk bearing economies:** Large-scale firms have the greater ability to manage the business risks. If there are losses in one market, they can withstand because of the wider markets which the company has.
- **Research and development economies:** When a firm expands, it can raise funds to undertake research, develop new designs, invest new products and undertake trade missions which cannot be afforded by small scale firm.
- **Social and welfare economies**: As a firm expands its scale of production, it is in position to provide fringe benefits to its workers like better housing facilities, medical insurance and recreation which improve the efficiency of labour.
- **Storage economies:** A big firm is capable of hiring large stores that can store large stock, storage costs per unit of output decrease when commodities are stored in bulk

ii) External economies

External economies of scale occur outside of a firm but within an industry. For example, investment in a better transportation network servicing an industry resulting in a decrease in costs for a company working within that industry. Examples of external economies of scale include:

- **Transportation and communication economies:** Concentration of firms provides better communication system for all. Rail, road facilities become available to all, the transport system reduces costs.
- **Economies of skilled labor:** With the concentration of firms skilled labour is available to all the firms because people living in the nearby areas get technical training.
- **Facility of workshop economies:** Concentration of firms provides incentive for the technical persons to establish their workshops and hence, all the firms benefit from these, because they need not to incur costs in establishing the workshops.
- **Economies of helping industry:** In local industry it becomes possible to split up some of the processes which are taken over by specialist firms. For example, in an area where there is a textile firm, textile mills dying factories, designing centers, ginning factories and calendaring plants have been established.

- **Research and experiment economies:** An industry is in a better position to establish research centers and disseminate the research findings in form of new inventions to the member firms through scientific journals thereby increasing the production efficiency of individual firms and a reduction of cost production.
- **Banking facility economies:** In a localized industry or business centers bank opens their branches and all the firms benefit from banking and credit facility. The banking system helps in promoting trade and business.
- **Economies of cooperation:** Due to expansion of an industry there is more cooperation between firms which enables them to establish common services like research centers, organisation of trade fairs among others.
- **Economies of specialisation:** Due to the expansion of the industry, individual firms start specialising in different processes and in the end the industry benefits as a whole.
- **Transport economies:** When the industry expands, individual firms may benefit from the infrastructure networks set up by other firms or by the state.
- **Economies of security:** The firm enjoys joint security service.

b) Diseconomies of scale:

When a firm continues to expand beyond the optimum capacity, economies of scale will disappear and will give place to diseconomies. A given percentage increase in all the factors will be followed by less than a proportionate increase in the total output. Average and marginal product will diminish as a result.

Thus, **diseconomies are the disadvantages which a firm faces by expanding the scale of production beyond the point of optimal capacity**. Like economies, diseconomies are also of two types i.e. internal and external diseconomies.

i) Internal diseconomies

These are the disadvantages or problems faced by a firm which has increased its scale of production beyond the optimal capacity. These problems are only experienced by a single firm and they are not shared by other firms in the industry. These include:

- **Managerial diseconomies:** When a firm expands it faces the problem of supervision, coordination, control and communication of decisions, bureaucracy increases, time wastage and rigidity also increases which results into higher costs per unit of output.

- **Technical diseconomies:** A large firm realizes disadvantages of specialisation and incurs high costs of maintaining complicated machines and buying raw materials hence higher average costs of production.
- **Financial diseconomies:** A large firm may face financial disadvantages especially if funds are not secured in time which delays production and limits expansion of the firm.
- **Risk bearing diseconomies:** Due to expansion a firm faces more disadvantages in case of uninsurable risks like a war since it loses on a very large scale.
- **Marketing diseconomies:** A large firm faces the problem of scarcity of raw materials, changes in tastes and preferences of consumers, declining demand for its products etc. which may result into higher costs and more losses.
- **Limited availability of natural and human resources:** With expansion in the scale of production, workers may have to be recruited from other regions by offering them higher wages. Limited availability of natural resources also causes diminishing returns to scale.
- **Advertising diseconomies:** To get rid of extra output, large firms incur high costs of advertising.
- **Storage diseconomies:** Due to large scale production, output increases so the firm may lack adequate stores and the available may tend to be expensive hence increasing costs of production.

ii) External Diseconomies:

These are disadvantages realised by a firm from outside due to expansion of the industry. These problems are shared by the firms operating within the industry. These diseconomies arise due to much concentration and localization of industries beyond a certain stage. Localization leads to increased demand for transport and, therefore, transport costs rise. External diseconomies of scale occur when an industry growing in size causes negative externalities and rising long-run average costs. Examples of external diseconomies include:

- **Congestion diseconomies:** If an industry grows rapidly in size, it may cause traffic congestion.
- **Labour diseconomies:** As an industry expands it becomes more difficult to secure labour with the appropriate skills resulting into higher wages for labour and higher costs of production.
- **Marketing diseconomies:** As a result of expansion of an industry, competition for markets increases resulting into higher marketing costs and lower profits.
- **High demand for raw-materials:** The expansion of an industry

results into higher demand for raw materials hence higher costs of production.

- **Scarcity of land:** Expansion of an industry creates scarcity of land for expansion for individual firms which increase rent, congestion and transport costs hence higher average costs of production.
- **Competition diseconomies:** When an industry expands, firms will be challenged by the shortage of infrastructure facilities and social amenities. This will mean that the cost of transport and communication will be very high hence leading to high cost of production.
- **Pollution diseconomies:** The localization of industries in a particular place or region pollutes environment. The polluted environment acts as a health hazard for the laboratories

4.4.2. Revenues and profits of the business/firm

- **Revenue of the business**

Revenue of the firm refers to sum of money received from the sale of various quantities of output by the firm at a given price at a given time. In economics, there are different forms of revenue and can be classified into three categories such as:

a) Total revenue (TR)

This is the total sum of money received from all unit output sold by the firm at a given price in a given period of time. Total revenue = price × quantity (TR = P x Q)

b) Average revenue (AR)

This refers to the revenue per unit of output sold. It is obtained by dividing total revenue by output.

Average revenue= Total revenue / Total output

Since Total revenue is (P x Q), Then

This implies that the average revenue equals the price. (AR= P)

c) Marginal revenue (MR)

This refers to the additional revenue from an extra unit of output sold. Or it refers to a measure of the instantaneous rate of change of total revenue with respect to change in output (Q) sold. It is obtained by dividing the change in total revenue by the change in total product.

$$\text{Marginal Revenue} = \frac{Change\ in\ total\ revenue}{Change\ in\ total\ product\left(Output\right)}$$

MR=ΔTR/ΔQ

- **Relationship between AR and MR.**

The relationship between AR and MR can be seen through calculations and illustrations as below;

a) Calculations of revenues.

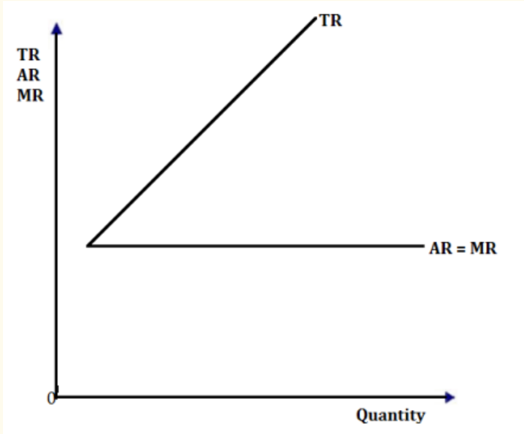
The revenue position of a perfectly competitive firm.

Price (P) FRW	Quantity (Q)	Total Revenue (TR)	Average Revenue (AR)	Marginal Revenue (MR)
30	1	30	30	30
30	2	60	30	30
30	3	90	30	30
30	4	120	30	30
30	5	150	30	30
30	6	180	30	30
30	7	210	30	30

In the above table total revenue (TR) is obtained by multiplying output (Q) and price (P). Average revenue (AR) is obtained by dividing total revenue (TR) by quantity (Q) while marginal revenue (MR) is obtained by dividing changes in total revenue by changes in quantities sold. The table above represents perfect competition market where average revenue is equal to marginal revenue. (AR=MR)

a) Relationship between average revenue (AR) and marginal revenue (MR) using curves.

From the above table we can represent the relationship between AR and MR as below.

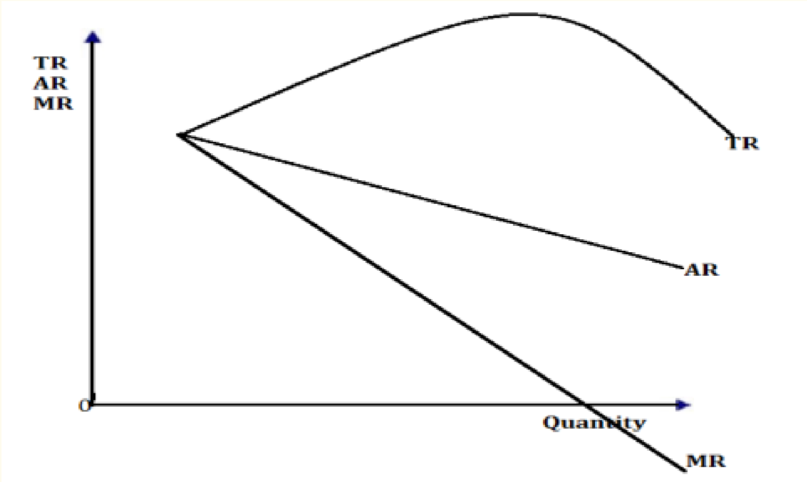


From the above figure, it can be concluded that, there was only one price that prevailed in the market. Each firm had to take the market price as given and sell its quantity at the ruling market price. The firm's demand curve is infinitely elastic. Therefore, the relationship is in such a way that, as the firm sells more and more at the given price, its total revenue will increase but the rate of increase in the total revenue will be constant, making AR = MR.

The revenue position of a firm operating under imperfect competition.

Price (P) FRW	Quantity (Q)	Total Revenue (TR)	Average Revenue (AR)	Marginal Revenue (MR)
20	1	20	20	20
18	2	36	18	16
16	3	48	16	12
14	4	56	14	8
12	5	60	12	4
10	6	60	10	0
8	7	56	8	-4
6	8	48	6	-2

In the table above, Total revenue first increases reaches maximum and then start to fall. Average and marginal revenues start off as equal but thereafter as the firm sells a higher level of output, marginal revenue falls further below the average revenue. Both the average revenue and marginal revenue decrease as more is sold. The MR reaches a point and becomes negative, but AR will never be negative. This relationship can be represented in a graph as below.



Under imperfect competition, average revenue is not the same as marginal revenue. It is always greater than marginal revenue at all levels of output. This is because the business persons want to sell more, they must reduce price, not only on the extra units sold, but also on the earlier units. This can be seen in the table of revenue position and curve above.

- **Profit of The Business / Firm**

Profit refers to the earnings to an entrepreneur as a factor of production. It can also be taken as the difference between total revenue received by the firm and the total costs incurred by the same firm. In economics, there are different forms of profits. These include:

a) Normal profit

This refers to the minimum level of profits which can maintain a firm in business. It is realised when average cost is equal to average revenue that is AC = AR. Normal profits are also known as the transfer earning or supply price of the firm. It is also called zero economic profits.

b) Abnormal/supernormal profit.

This refers to profits which are more and above the normal profits. They are earned if average revenue is greater than average cost. They are also known as monopoly rent if earned in the long run.

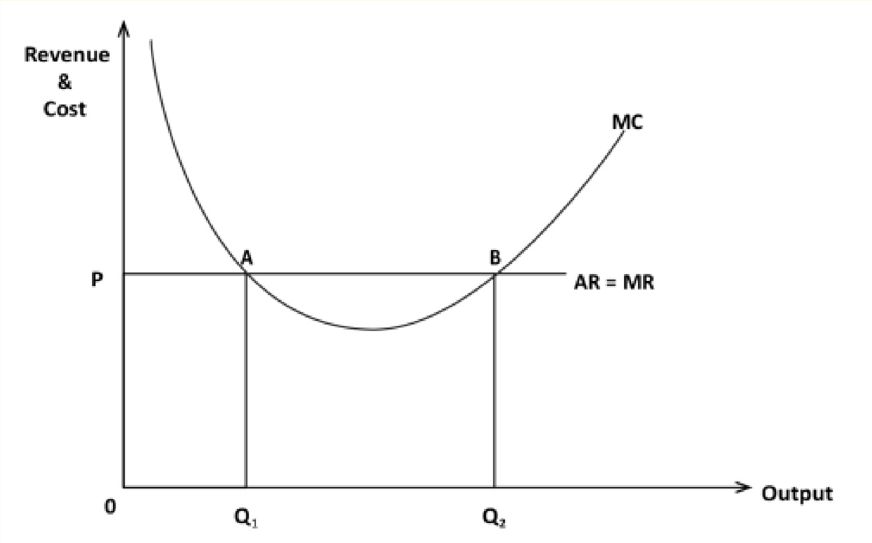
c) Subnormal profit

This refers to the profits which are lower than normal profits obtained where average cost is greater than average revenue but average revenue is greater than average variable cost that is AC > AR > AVC.

Condition for profit maximization:

The necessary and sufficient condition for maximum profit states that if the firm is to obtain maximum profit, it would have to equate its MR and MC (MR=MC), or, it would have to remain at the point of intersection between its MR and MC curves but the slope of the MR curve, should be less than the slope of the MC curve.

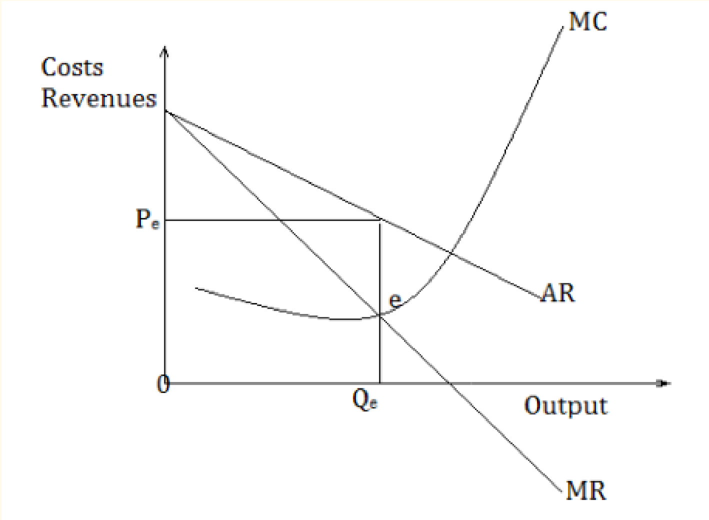
Condition for profit maximisation is illustrated as below:



a) Condition for profit maximisation under perfect markets.

From the above illustration the firm maximizes profits at point B where MC=MR but the slope of MC is greater than the slope of MR. The profit maximizing output is output OQ2 because it is greater than output OQ1 . The equilibrium price is Pe which is equal to average revenue (AR) and as well equal to marginal revenue (MR). i.e. (P=AR=MR).

b) Condition for profit maximisation under imperfect markets.



From the above illustration the firm maximizes profits at point "e" where MC=MR but the slope of MC curve is greater than the slope of MR curve; the profit maximizing output Qe (equilibrium output) is produced and sold at price Pe. (Equilibrium price).

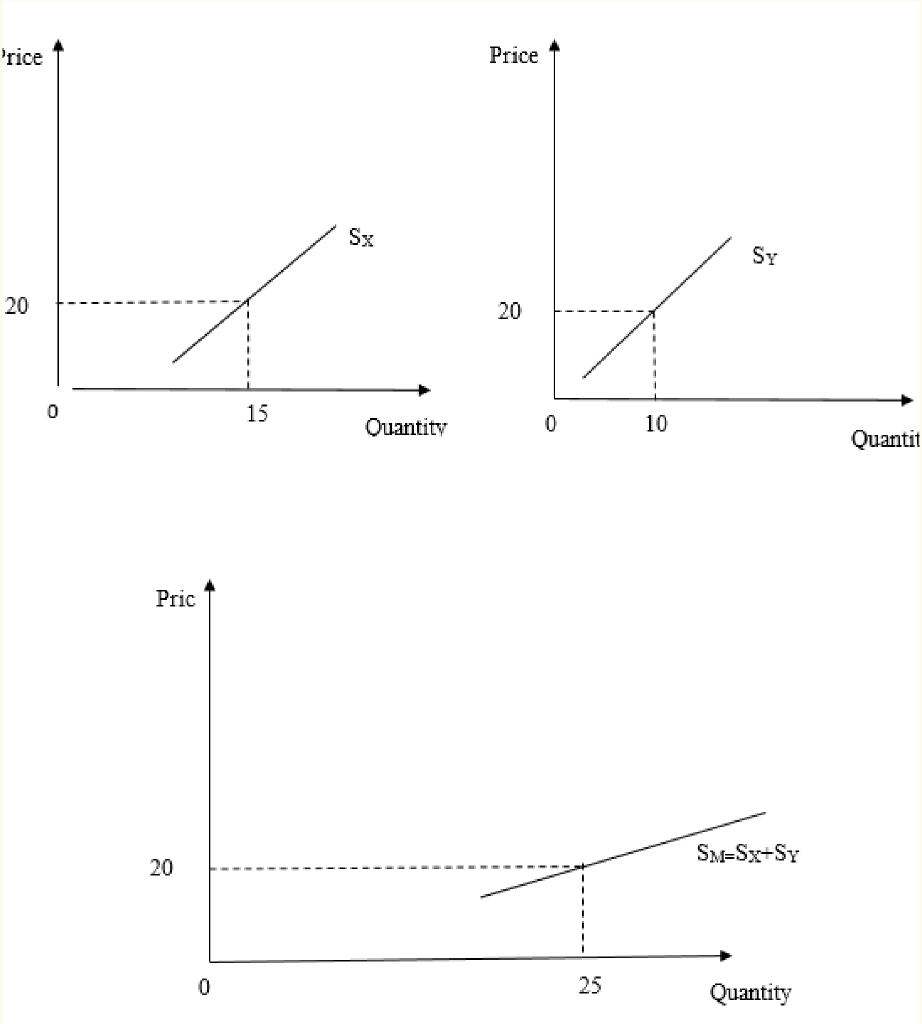
4.4.3. A firm, plant and industry,their location and localization

People mistakenly use the terms firm, plant and industry interchangeably, yet they are different. These terms are clearly defined as follows:

- **A firm:** A firm refers to a single production unit or enterprise under one ownership, management and control. It may be small thus controlled by one man or through partnership, or a large-scale production unit e.g. public corporation. It may be private businessmen or joint stock companies or owned by the government or both government and private individuals.
- **A plant:** A plant refers to a place or establishment where goods are produced. For example, Coca-Cola, Inyange factory etc. So plant means a factory, shopping center, or any other establishment. Different firms have different plants. A plant includes not only the building and machinery, but also the workers employed therein.
- **An industry:** An industry is made up of several firms that compete in the production of the related product or service. It can also be defined as combination of different firms producing related products. E.g. sugar industry, Textile Industry, Cement Industry, Mining Industry, Entertainment industry, transport industry, soft drinks industry. An industry is normally known by the name of the commodity produced by the various firms in it.

Deriving the supply curve of an industry

Since the industry is a combination of firms, its supply curve can be derived by horizontal summation of supply curves of the various firms in the industry. This is illustrated graphically as follows:



Equilibrium of firms and equilibrium of an industry.

The term equilibrium refers to the state of stability where there is no tendency to change.

Equilibrium of the firm is the point of a profit maximization when the firm has no tendency to increase or reduce output. At this point, Marginal Cost (MC) is equal to the Marginal Revenue (MR). If the firm increases output and produces beyond this point, marginal cost would be greater than marginal revenue and hence the firm would be operating at a loss.

When the firm produces below the point where MC=MR, profits would be less because less units of output are produced. The condition for profit maximization (**MC=MR at the highest level of output**) applies to all firms.

Equilibrium of an industry: This is when there is no tendency for the output of the whole industry to increase or to reduce. At this point, there is no new firms entering the industry nor old firms leaving the industry. In other words, all firms are earning normal profits which neither attract new firms nor force firms out of the industry immediately.

Location and Localization of the firms

a) Location of firms.

Location of firms refers to establishment of a firm or industry in a particular geographical area. Or it is a site or place where a firm or industry is established or set up. The place might be convenient or economic to the entrepreneur irrespective of whether there are others or not. The basic principle behind location of a firm is cost minimization. The producer selects the location of a firm, where costs of production are at minimum.

Factors influencing location of a firm and an industry.

There are several factors that determine location of firms or industry. These factors may be geographical, economic or political. They may be having a bearing on costs of production or not depending on what circumstances are compelling a firm's set up. Some, among others include the following;

i) **Availability of raw materials:** A firm can be located in an area where raw materials are, especially when the raw materials are heavy and it would be costly transport them from distant places. Such firms are called rooted firms/industries e.g. cement firms.

ii) **Availability of the market:** Firms can be located in areas where the market for its finished products is available as this reduces the firm's expenditure to market its products and hence an increase in firm sales and profits. Such firms are called tied firms/industries.

iii) **Government policy:** The policy of the government concerning industrialisation influences location of firms. For example, government may have the goal of regional balance in development and therefore my dictate where to locate certain firms in order to realize this goal.

iv) **Transport and communication network:** Firms can be located in areas where the transport and communication infrastructure is developed. This eases transportation of the firm's products to market and the raw materials to the firm as well as keeping in touch with its partners through efficient communication network.

v) **Availability of power:** Firms can be located in an area where power is available and less costly. This is because every firms need power in the production process and therefore its absence implies that the firm cannot undertake production.

vi) **Availability of labour or skill base in the area:** A firm can be located in an area where there is availability of abundant labour, with the required skills that the firm can employ to facility its production process.

vii) **Availability of land**: Availability of enough land which the firm can acquire at a low cost and also where it can expand its scale of operations in future influences the location the firm.

viii) **Political stability/security:** Firms can be located in an area where there is political stability since it will be sure of the security of its investments.

ix) **Commercial institutions:** Presence of developed commercial institutions such as banks, insurance companies and advertising companies. They facilitate the firm to acquire credit and promote its products in case of advertising companies influence location of firms.

x) **Industrial inertia:** Industries tend to develop at the place of their original establishment, though the original cause may have disappeared. This phenomenon is referred to as inertia, sometimes as geographical inertia and sometimes industrial inertia. Industrial inertia refers to the tendency for an industry to remain in a location or keep attracted there even when the factors that attracted them before there no longer exist.

xi) **Climate**: Harsh climate is not much suitable for the establishment of industries. There can be no industrial development in extremely hot, humid, dry or cold climate. For example, Cotton textile industry requires humid climate because thread breaks in dry climate.

xii) **Water** is another important requirement for industries. Many industries are established near rivers, canals and lakes, because of this reason. Iron and steel industry, textile industries and chemical industries require large quantities of water, for their proper functioning.

b) Localization of firms

In today's economy, firms depend on one another. One firm's waste material may be used by another firm as a raw material. Due to this interdependency among firms, most entrepreneurs decide to construct their firms near the ones that may provide raw materials. Or it may be due to government policy. This helps in cutting down the transportation and disposal of waste costs for the firms. Localization of firms therefore, refers to the concentration of many firms in an area.

Localization is related to the territorial division of labour, that is, specialisation by areas or regions. A certain town or region tends to specialise in the production of a particular commodity. And a situation of transferring firms from the area of high concentration to areas of low concentration is known as delocalization. Localization can also lead to establishment of forward linkage and backward linkage.

Localization promotes linkages between or among firms in a localized area.

Forward linkage happens where the products of one industry are used as the raw material of another industry. For example, the development of forest resources for the export trade in raw timber leads to the development of a saw-milling industry using the same basic resource inputs.

Backward linkage happens where an existing industry encourages investment in the earlier stage of production. For instance, the development of sugar industry creates demand for sugarcane growing to provide sugar canes as inputs in the sugar industry.

Advantages of localization of firms:

Localization of firms has the following merits to the localized area or the entire economy as below.

i) **Creation of employment:** Localization leads to creation of more employment opportunities because as many firms are established in a given area more jobs are created.

ii) **Development of infrastructure:** Localization results into improvement of infrastructure by the government such as roads and telecommunications to cater for the firm's needs.

iii) **Urbanization:** Concentration of firms in a particular area results into urbanization with its advantages like improvement of cultures and attitudes, encouraging hard work hence promotion of economic development.

iv) **Improved quality:** Concentration of firms in area results into production of high quality products due to competition among many firms.

v) **Improved reputation:** localization enables the area to gain reputation and the same will apply to the goods produced from that area which creates wider markets for its products.

vi) **Supply of skilled labour:** Concentration of firms in an area attracts skilled labour to that area which in the long run promotes specialization and division of labour in the production process with its associated advantages.

vii) **External economies:** Concentration of firms in an area results into generation of various external economies like transport economies, marketing economies, labour economies, research economies and many others which reduce the production costs of the different firms.

viii) **Industrial expansion:** Localization of firms results into growth of subsidiary industries to supply raw materials, machine tools, component parts etc. hence expansion of the industrial sector.

Disadvantages of localization of firms:

Localization of firms has the following demerits to the localized area or the entire economy as below:

i) **Regional imbalances**: As a result of localization, the localized region grows faster than others leading to regional imbalances in development.

ii) **Development of slums**: Localization results into development of slums and its negative effects due to lack of adequate housing facilities to house the large number of people in the localized area.

iii) **Social problems**: Concentration of firms in an area results into social problems like congestion, overpopulation, traffic jam and accidents which reduce labour efficiency and industrial production.

iv) **Rural-urban migration:** Due to Localisation, many people move to urban centers in search of employment. This results into high crime rates and other social problems in urban areas.

v) **Over-straining infrastructure:** As a result of Localisation, infrastructures like roads are excessively used which increases wear and tear, costs of replacement hence constraining the government budget.

vi) **Diseconomies:** Due to concentration of many firms in an area, diseconomies of scale arise such as high cost of labour, transport problems, failure to secure credit, competition for raw materials resulting into high costs of production.

vii) **Increased cost of living:** Concentration of firms in an area results into shortage of essential commodities in the area due to increased demand for those products, hence resulting into increased cost of living.

viii) **Increased dependence:** Localization results into overdependence on a particular area for a particular product which is dangerous in case of war, natural disasters or in an economic crisis. ix) Exhaustion of resources: Concentration of firms in an area leads of over exploitation of resources in the area resulting into quick exhaustion of the resources which deprives the future of access to those resources.

- **Classification of firms**

Firms or industries are usually grouped or classified according to the factors that tend to influence their locations as follows:

i) **Rooted industries**

These are firms or industries, which must be located, near the sources of raw materials. They cannot be located anywhere else apart from the raw materials sources e.g. cement factory which has to be located near limestone source.

ii) Tied industries

These are firms or industries which are located near their markets i.e. they are industries whose location are tied to the market for their finished products e.g. bakeries furniture workshops etc.

iii) Foot loose industries

These are industries that can be located anywhere without any negative effects on the private costs of production. They are the types of industries that have no specific factors dictating them to be located in any areas.

iv)Bulk reducing or weight losing industries

These are firms or industries that use bulky raw materials to produce light products. Such firms are usually located at the source of the bulky raw materials in order to reduce the cost of transporting the bulky raw materials. Since the products are less bulky, they can easily and cheaply be transported to the markets e.g. copper processing plant, sawmills.

v) Bulk increasing or weight gaining industries

These are firms or industries that produce bulky finished products out of relatively light raw materials. These industries are usually located near the market because of the bulk nature of the finished product e.g. furniture workshop.

Application activity 4.4

1. Distinguish between the long run and the short run periods of production.
2. Explain the different economies of scale clearly indicating whether they are internal economies or external economies
3. Discuss the factors that influence the firms location

Skills Lab 4

In your respective teams, evaluate and analyze the expenses incurred by your business club as per your respective product teams and determine:

a) Variable Costs
b) Fixed Costs and
c) Total Costs

Illustrate the VC, FC and TC for your respective product and provide advice to the entire class on how your team intends to minimize the expenditures.

End of unit assessment

1. **Case study:**

Nyirangarama enterprise is a firm that produces a variety of products. In order for the firm to meet its obligations it makes a number of expenditures. At its inception it incurred initial expenditures which included; Land for 5,000,000 FRW, registration for 50,000Frw, construction of firm buildings for 20,000,000Frw and advertising expenditure 2,000,000Frw. The proprietor had earlier borrowed 100, 000,000Frw for which the firm will be paying 18% interest annually. After beginning operations, the firm incurred expenditures on raw materials for 4,000,000Frw, salaries for staff for 1,500,000Frw monthly and for administration 2,000,000Frw, transport for 1,000,000Frw.

Required:

a) After studying the case study, discuss the concept of costs and identify the types of costs in the case study.
b) Explain which of the above costs are implicit and which ones are explicit.

Present your ideas to the rest of the class.

2. Construct the difference between the economies of scale and diseconomies of scale.

3. Analyse the table below and answer the questions that follow.

Output	Total Cost	Fixed Cost	Variable Cost	AFC	AVC	AC	MC
0	40						
1	60						
2	70						
3	72						
4	74						
5	76						
6	78						
7	80						
8	96						
9	120						
10	180						

Required:

a) Calculate and fill up the blank spaces.

b) Illustrate AFC, AVC, AC, and MC on a graph.

Unit 5

VALID BUSINESS CONTRACTS

Key unit competence: To be able to make valid business contracts in business operations

Introductory activity

Sam met with a business person at a football ground. The business person requested Sam to supply him beans at a price of 500Frw per kilogram. When Sam delivered 200Kgs, he was not paid the full amount of money they had agreed upon.

a) Has such a situation ever happened to you or anyone you know? When and what happened?

b) What mistake did Sam make?

c) Assume you were the one in such a situation, what would you do have done?

d) What advice would you give to Sam and the businessperson?

e) What lessons do you learn from the above situation?

5.1. Meaning and forms of a business contract

Learning activity 5.1:

Bayingana operates a small medium enterprise in Huye and wants Ishimwe to supply his business with goods. Bayingana tells her to start right away and supply the goods as they will discuss other issues later. She insists that she needs an agreement between the two especially on issues of price, mode of payment, delivery period, quantity and quality, among others.

a) How do you call an agreement that Ishimwe insists to be made between them?

b) Do you think she is right to have the agreement before starting the supply of goods? Give reasons to support your answer.

c) In which way/form may the agreement be made between the two? Support your answer

d) What do you understand by the terms "contract" and "business contract"?

5.1.1. Meaning of business contract

Figure 5.1: A contract is very important in business operations.

A contract is a legally binding agreement between two or more parties which can be enforced by law.

Example:

- In marriage, the woman and man make a contract during civil marriage. The three parties are woman, man and witness who comes to testify before the law represented by Executive secretary of sector.
- Before starting a job, the employer and employee make a contract. In this case, there are two main parties and the law is now represented by official labour law because it is not possible to make a job contract which is against the labour law.

A business contract is a legal binding agreement between two or more persons/ entities to perform an agreed business transaction and can be enforced by law. Today, running a business involves making contractual obligations with suppliers, buyers, consultants, etc.

Example: A farmer can make a contract of supplying chicken to the hotel. In most cases, this contract is written and two parties should sign it. This contract should follow the official law like the right person who represents the hotel and the farmer should have maturity age. The two parties should sign with free consent. Once signed, it becomes a document which binds the two parties.

5.1.2. Forms of business contracts

- **Oral contract** is an agreement between two or more parties by use of words of mouth (verbally). They are non-written contracts. They rely on the good faith of the parties but can be difficult to prove. Once the contract is verbal, the wittiness is mandatory and provides evidence.
- **Written contract** is a contract documented on paper, signed by the contracting parties and witnessed by a third person (the witness).

Application activity 5.1

Read the following statements and answer the questions that follow:

i) Nkusi wants to lend his car to Niragire for 20,000Frw per day for five days.

ii) Niragire agrees with a handshake to borrow the car from Nkusi and pay the money in eyewitness of Rukundo.

iii) Ntezimana promises to take his girlfriend Bagirishya for an outing to Lake Kivu.

iv) Niyokwizerwa promises to pay 10,000Frw to whoever finds her lost phone.

v) Gato puts on paper his commitment to provide printing services to Umutoni on agreed terms.

vi) Mutesi promises to pay for her brother's school fees and puts it in writing.

Which of the above statements are:

a) Contracts?
b) Not contracts?
c) Business contracts?
d) Written contracts
e) Oral contracts

5.2. Parties to a contract and importance of contracts in business

Learning activity 5.2:

6. Analyse the figure below and answer the questions that follow.

Contract for the sale of used car

This is a contract made between the seller, **Muhire John**, and the buyer, **Umugwaneza Nadine**, for the sale of the seller's car **Benz 2000, C-Class**.

The vehicle is a **4-seater, black in color,** year of make **2007**

The VIN number is **0984536222TG**, and the odometer reads **102345** as 14/ Feb/2018

Buyer agrees to pay seller the purchase price of **2.000.000Rfw** to be paid in two equal instalments not more than 30 days of sale.

The car is sold **"AS IS"**. Seller makes no warranties about the condition of the car.

Seller will provide the buyer with the vehicle's logbook and any other required documents, inspection report, etc after completion of payment

……………………………………………

Seller Date

MUHIRE John

……………………………………………

Buyer Date

MUGWANEZA Nadine

Figure 5.3: Example of a contract

a) Do you agree that the above sample is a contract?

Give reasons to support your answer.

b) Do you think the sample above is a valid contract? Support your response by mentioning the elements of a valid contract from the sample provided. (If any?)

2. Describe different parties to a valid contract.

5.2.1. Parties to a valid contract

Figure 5.4: Parties to a valid contract

Parties to contract are persons who can sign the contract. For **a contract** to be considered valid, it should include three parties. These are; **Offeror/promisor** who makes an offer, **Offeree/promisee** to whom an offer is made and **Witness** who sees an event happening.

For example, in the above template Mr. John Muhire **Offeror/promisor** agrees to sell his car to Umugwaneza Nadine **Offeree/promisee** at 2 million.

Two parties to contract **Offeror/promisor and Offeree/promisee** must have "capacity", legal ability to make valid contract. Assent of parties is a must. If either party is deprived use of his understanding or deemed by law not have attained consent, then such an agreement shall not bind him. All parties should be mature, sound mind and qualified for contract by law.

The information of two parties in contract should be clear, complete and concise. In any case, the names are not enough, it should be better to include other information like number of identification card, the location where those documents are issued. Ensure that all information is well reflected on the contract. For example, in the above contract there is a mistake in writing names. Umugwaneza Nadine who sells the car is not the same Mugwaneza Nadine who signs the contract. These slight mistakes can disqualify the contract.

Witness is a person who sees an event happening. In a legal contract, a witness is someone who watches the document be signed by the person they are being a witness for and who verifies its authenticity by signing their own name on the document as well. However, if you have a legal document such as a mortgage or a Will the chances are that you will want a witness to attest to your signature. Generally, the person you choose to witness a document should have no financial or other interest in an agreement. A neutral third party is the best choice.

5.2.2. Importance of contracts in business

In business life, contracts are important because they outline expectations for both parties and protect them when expectations are not met. There are so many relationships that affect the way the business operates such as customers or clients, employees, suppliers, government, financiers. Contracts are then important in the following ways:

- Contracts reduce business risks by compelling business partners to perform what they have agreed to as per contract.
- Business contracts specify terms and conditions of business transactions including price, quantities, quality, date of delivery, etc. which avoids misunderstandings.
- Contracts help entrepreneurs to get the goods on credit because the suppliers are aware that the entrepreneur is bound by contract and therefore will make effort to pay the agreed amount.
- Written contracts act as evidences. They are important because it is easy to forget details you have agreed upon verbally and therefore provide a permanent record.
- Contracts may be used by entrepreneurs to convince bankers that the entrepreneur has a business that will generate income so as to obtain loans.

Application activity 5.2

Demonstrate the importance of valid business contracts to the school business club

5.3. Elements/components of a valid contract

Learning activity 5.3:

What key elements of a written contract do you identify in figure 5.2

For a contract to be valid and therefore enforceable by law, it must have the following elements:

- **Intention to be bound by the contract:** The two parties should have intended that their agreement be legal. Domestic agreements between husband and wife are not taken as valid

- **Offer and acceptance:** There must be an offer and the two parties must lawfully come to acceptance leading to a valid contract. Until an offer is accepted, it's not a valid contract
- **Consideration/price:** This is the price agreed upon by the parties to the contract and paid by one party for the benefit received or promise of the other parties
- **Capacity of the parties:** The parties to the contract must have contractual capacity for the contract to be valid, i.e. should be sober, above 18years, not bankrupt, not insane, and properly registered.
- **Free Consent:** Parties to the contract must agree freely without any of the parties being forced to accept or enter the contract.
- **Legality/lawful object:** The object and the consideration of the contract must be legal and not contrary to the law and public policy.
- **Possibility of performance:** If the contract is impossible to be executed in itself either physically or legally, then such contract is not valid and cannot be enforced by law.
- **Certainty:** The terms of the contract must be clear and understandable for a contract to be valid. If the terms are vague or ambiguous, where even the court may not be able to tell what the parties agreed, then it will be declared invalid.

Application activity 5.3

Read the following paragraph and answer the questions that follow:

Musoni started a business selling general merchandise in his community. He buys his goods from a nearby town through a fellow business person. He says he trusts his friend, so they never write down anything when sending for goods but just gives him the money. He always sells goods to his customers on credit but rarely make any record of such transactions. Recently, after some advice from a friend, he contracted a construction company to build for him a two-roomed building where he will shift his shop to.

a) Mention some of the mistakes Musoni is doing in his business activities?

b) What are the likely consequences of Musoni's actions mentioned above?

c) What advice would you give to Musoni to avoid the consequences above and why?

d) What key elements do you think Musoni has incorporated in his contract with the construction company?

5.4. Designing a contract

Learning activity 5.4:

Read the case study below and answer the questions that follow:

Shine Business club

Shine business club wanted 3crates of soda to sell to their school on a visiting day. Chantal an active member of the club having been close to Bizimungu an entrepreneur dealing in retail business convinced the club to deal with him. The club paid him and he agreed to deliver the sodas to the club after three days, but unfortunately after the agreed time, he didn't deliver the sodas as expected. When the club contacted him for the sodas, he denied to have entered into any dealing with them that if he did, he would be having at least a formal document to prove that. The club reported the matter to the school administration, but it couldn't help them since it was not notified of that deal.

a) Was there a valid contract in the above case study? Support your answer
b) What advice do you give to shine business club?
c) How would you approach the situation or the above problem if it was your business club

5.4.1. Employment contract

An employment contract is an agreement that regulates the employment relationship between a company and an employee. It allows both parties to clearly understand their obligations and the terms of employment.

Employment contract template:

This contract, dated on the ____ day of ______________ in the year 20____, is made between [***company name***] and [***employee name***] of [***city, country***]. This contract constitutes an employment agreement between these two parties and is governed by the laws of [***state the law***].

WHEREAS the employer desires to retain the services of the employee, and the employee desires to render such services, these terms and conditions are set forth.

IN CONSIDERATION of this mutual understanding, the parties agree to the following terms and conditions:

Employment

The employee agrees that he or she will faithfully and to the best of his/her ability to carry out the duties and responsibilities communicated to him/her by the employer. The employee shall comply with all company policies, rules and procedures at all times.

Position

As a [***job title***], it is the duty of the employee to perform all essential job functions and duties. From time to time, the employer may also add other duties within the reasonable scope of the employee's work.

Compensation

As compensation for the services provided, the employee shall be paid a wage of __________ [***per hour/per annum***] and will be subject to a (n) [***quarterly/annual***] performance review. All payments shall be subject to mandatory employment deductions (***taxes for instance***).

Benefits

The employee has the right to participate in any benefits plans offered by the employer. The employer currently offers [***list benefits, if any***]. Access to these benefits will only be possible after the probationary period has passed.

Probationary period

It is understood that the first [***time frame***] of employment constitutes a probationary period. During this time, the employee is not eligible for paid time off or other benefits. During this time, the employer also exercises the right to terminate employment at any time without advance notice.

Paid time off

Following the probationary period, the employee shall be eligible for the following paid time off:

- [length of time for vacation]
- [length of time for sick/ personal days]
- Bereavement leave may be granted if necessary.

The employer reserves the right to modify any paid time off policies.

Termination

It is the intention of both parties to form a long and mutually profitable relationship. However, this relationship may be terminated by either party at any time provided [***length of time***] written notice is delivered to the other party.

The employee agrees to return any employer's property upon termination.

Non-competition and confidentiality

As an employee, you will have access to confidential information that is the property of the employer. You are not permitted to disclose this information outside of the company.

During your time of employment with the employer, you may not engage in any work for another employer that is related to or in competition with the company. You will fully disclose to your employer any other employment relationships that you have and you will be permitted to seek other employment provided that **(a)** it does not detract from your ability to fulfill your duties, and **(b)** you are not assisting another organization in competing with the employer.

It is further acknowledged that upon termination of your employment, you will not solicit business from any of the employer's clients for a period of at least [***time frame***].

Entirety

This contract represents the entire agreement between the two parties and replaces any previous written or oral agreement. This agreement may be modified at any time, provided the written consent of both the employer and the employee.

Legal authorization

The employee agrees that he or she is fully authorized to work in [***country name***] and can provide proof of this with legal documentation. This documentation will be obtained by the employer for legal records.

Severability

The parties agree that if any portion of this contract is found to be void or unenforceable, it shall be removed from the record and the remaining provisions will retain their full force and effect.

Jurisdiction

This contract shall be governed, interpreted, and construed in accordance with the laws of [***Country***].

In witness and agreement whereof, the employer has executed this contract with due process through the authorization of official company agents and with the consent of the employee, given here in writing.

Employee's signature:

Date:

Company's official signature:

Source: www.betterteam.com/employee-contract-template

5.4.2. Sales contract

A contract of sale is a legally binding document between a buyer and seller. The document contains the details of the exchange, the terms of sale, clear product or service descriptions, and more. A good sales contract should leave both parties in no doubt as to their rights and responsibilities during a transaction. Employment contract template:

Example of a sales contract:

This Sales Agreement (the "Agreement") is entered into ____________________ (the "Effective Date"), by and between ________________________, with an address of ___________________(the "Seller") and _________________, with an address of ____________, (the "Buyer"), also individually referred to as "Party", and collectively "the Parties."

BACKGROUND:

The Seller is the manufacturer/distributor of the following product (s):_____________________________________;

AND

The Buyer wishes to purchase the aforementioned product(s).

THEREFORE, the parties agree as follows:

Sale of goods. The Seller shall make available for sale and the Buyer shall purchase ____ _____ (the "goods").

Delivery. The Seller shall deliver the goods to the Buyer at ______________ (Location). The goods shall be deemed delivered when the Buyer has accepted delivery at the above-referenced location. The shipping method shall be determined by the Seller, but the Buyer will only be responsible for shipping costs up to ______________(Frw)

Purchase price & payments. The Seller agrees to sell the goods to the Buyer for ______________ (Frw). The Seller will provide an invoice to the Buyer at the time of delivery. All invoices must be paid, in full, within thirty (30) days. Any balances not paid within thirty (30) days will be subject to a five percent (5%) late payment penalty.

Inspection of goods & rejection. The Buyer is entitled to inspect the goods upon delivery. If the goods are unacceptable for any reason, the Buyer must reject them at the time of delivery or within five (5) business days from the date of delivery. If the Buyer has not rejected the goods within five (5) business days from the date of delivery, the Buyer shall have waived any right to reject that specific delivery of goods. In the event the Buyer rejects the goods, the Buyer shall allow the Seller a reasonable time to cure the deficiency. A reasonable time period shall be determined by industry standards for the particular goods, as well as the Seller and the Buyer.

Risk of loss. Risk of loss will be on the Seller until the time when the Buyer accepts delivery. The Seller shall maintain any and all necessary insurance in order to insure the goods against loss at the Seller's own expense.

Title. Title to the goods will remain with the Seller until the Buyer accepts delivery.

Excuse for delay or failure to perform. The Seller will not be liable to the Buyer for any delay, non-delivery or default of this agreement due to labor disputes, transportation shortage, delay or shortage of materials to produce the goods, fires, accidents, acts of God, or any other causes outside of the Seller's control. The Seller shall notify the Buyer immediately upon realization that it will not be able to deliver the goods as promised. Either Party may terminate this Agreement upon such notice.

Termination. This agreement may be terminated at any time by either party upon written notice to the other party. The Buyer will be responsible for payment of all goods delivered and accepted up to the date of termination.

Disclaimer of warranties. The goods are sold 'as is'. The Seller expressly disclaims all warranties, whether express or implied, including, but not limited to, any implied warranty of merchantability or fitness for a particular purpose.

Limitation of liability. Under no circumstances shall either party be liable to the other party or any third party for any damages resulting from any part of this agreement such as, but not limited to, loss of revenue or anticipated profit or lost business, costs of delay or failure of delivery, which are not related to or the direct result of a party's negligence or breach.

Severability. In the event any provision of this agreement is deemed invalid or unenforceable, in whole or in part, that part shall be severed from the remainder of the agreement and all other provisions should continue in full force and effect as valid and enforceable.

Waiver. The failure by either party to exercise any right, power, or privilege under the terms of this agreement will not be construed as a waiver of any subsequent or future exercise of that right, power, or privilege or the exercise of any other right, power, or privilege.

Remedies and legal fees. In the event of a dispute, the Buyer's sole remedy for any and all losses or damages resulting from defective goods or from any other cause will be for the purchase price of the particular goods with respect to which losses or damages are claimed, plus any shipping costs paid by the Buyer. In the event such dispute results in legal action, the successful party will be entitled to its legal fees, including, but not limited to its attorneys' fees.

Legal and binding agreement. This agreement is legal and binding between the parties as stated above. This agreement may be entered into and is legal and binding both in the United States and throughout Europe. The parties each represent that they have the authority to enter into this agreement.

Governing law and jurisdiction. The parties agree that this agreement shall be governed by the country in which both parties do business. In the event that the parties do business in different countries, this agreement shall be governed by ____________________ law.

Entire agreement. The parties acknowledge and agree that this agreement represents the entire agreement between the parties. In the event that the parties desire to change, add, or otherwise modify any terms, they shall do so in writing to be signed by both parties.

The parties agree to the terms and conditions set forth above as demonstrated by their signatures as follows:

Seller	Buyer
Signed: ______________________ ______________________	Signed:
Name: ______________________ ______________________	Name:
Date: ______________________ ______________________	Date:

Source:https://www.signwell.com/contracts/sales-contract-template

Application activity 5.4

Assume, your parents have houses to rent at home, help them design a rental contract that will be signed by the tenants.

Skills Lab 5

With reference to the knowledge of Business contracts, design valid contract templates to be used by your school business club when dealing with:

a) Suppliers,
b) Customers,
c) Employees of the club,
d) Club members

End of unit assessment

Analyse the scenario below and answer the questions that follow:

NNkusi and Mukarutesi are capable adults. Nkusi is in the need for a new car. It is on a budget, so he scans the classified advertisements and finds Mukarutesi who is selling an old Toyota Carina for 2,000,000Frw. Nkusi calls Mukarutesi and offers 1,800,000Frw. Mukarutesi accepts Nkusi's offer and they decide to meet. At the meeting, Nkusi hands over 1,800,000Frw and Mukarutesi hands over the keys for the Toyota Carina.

a) . Is there a valid contract in the above scenario?
b) Referring to the elements of a valid contract, support your response;
c) Which form of business contract would you advise Nkusi to sign with Mukarutesi?

Read the following passage and answer the questions that follow.

Ntwali started a business selling general merchandise in his community. He is renting the place where his business operates. Ntwali paid his property owner three months' rent in advance but never asked for receipt. After two months, his property owner says he wants the rent for the two months. Ntwali is frustrated and tries to remind the property owner that he paid his rent for three months. The property owner denies and asks Ntwali for proof of the payment which he does not have. Ntwali is stuck, does not know what to do while the property owner threatens to evict him if he does not pay his rent.

a) What is the cause of the conflict in the example above?
b) Advise Ntwali on how he can resolve the conflict with the property owner.
c) What are the disadvantages of the form of contract between Ntwali and the property owner?
d) Help Ntwali design a written contract that he can sign with his property owner to avoid such conflicts again.

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