

Economics

Year 1

SECTION

1

INTRODUCTION TO Economics



CONSUMERS' RATIONAL DECISION-MAKING

Introducing Economics

INTRODUCTION

This section focuses on the meaning of Economics and basic concepts that are commonly used in Economics. The section also highlights certain mathematical and statistical tools that are used to analyse economic issues. You are expected to define and explain Economics using your own life experiences and be able to identify how certain economic concepts apply to your day to day lives. The section will help you identify various job prospects that are available for Economists, as well as other reasons for studying Economics.

In our daily lives, we apply Economics in making several decisions. For example, farmers take decisions on whether to use a piece of land to cultivate food crops or cash crops. In the market, depending on the prices, buyers (consumers) decide on what quantities to buy and how much of their income will be spent on a particular commodity. All such decisions that involve the use and management of resources (land, money, time, etc.) are the fundamental principles of Economics.

At the end of this section, you should be able to:

- Everyday life experiences in defining Economics.
- Identify various career prospects in Economics.
- Describe the various tools used in economic analysis
- Relate the fundamental concepts of Economics to everyday life and societal challenges I&II

Key ideas

- Economics is defined differently but all the definitions talk mostly about the management of limited resources.
- Knowledge in Economics will benefit the individual, firms, and the state because these entities carry out economic activities in society.
- Economists make use of economic tools such as words, mathematics/statistics and graphs to analyse and explain economic issues.

MEANING AND DEFINITION OF ECONOMICS

Economics does not have only one definition. Different scholars have defined Economics differently based on their views and values. For example, Adam Smith, who is referred to as ‘the father of Economics’, defined Economics as an inquiry into the nature and causes of the wealth of nations.

Another Economist, Alfred Marshall, defined Economics as a study of mankind in the ordinary business of life.

However, the most used definition was given by Professor Lionel Robbins; *‘Economics is a science that studies human behaviour as a relationship between ends and scarce means which have alternative uses.’*

What do you notice about these definitions? Almost all of them stress the use and management of scarce resources (resources in small numbers or quantities).

Meaning: Economics is mainly about the study of how a society (individuals, firms, and governments) uses limited resources to satisfy their unlimited wants.

Starter task:

Assuming your parents have given you Gh¢ 50 to spend at school for a month. You have a list of items that you need.

- List any three items that you will need for the month.
- Arrange the three items in order of importance.
- What informed your arrangement of the items?

You would realise that the items you have listed are your personal needs and so they can be termed as social needs.

You would also realise that the Gh¢ 50 would not be enough to buy all the items. So, you have to use it wisely to satisfy the most needed items.

Learner, following the activities you have done, define Economics in your own words.

Branches of Economics

Economics can be grouped into the following branches:

- **MicroEconomics:** This is a branch of Economics that deals with the study of individual economic units. These units include consumers, producers, distributors, government agencies.

- **MacroEconomics:** This is a branch of Economics that deals with the study of the entire economy as a single entity. It deals with issues of national output, interest rates, unemployment, and inflation and their effects on the individual economic activities in the country.

Economic Statements

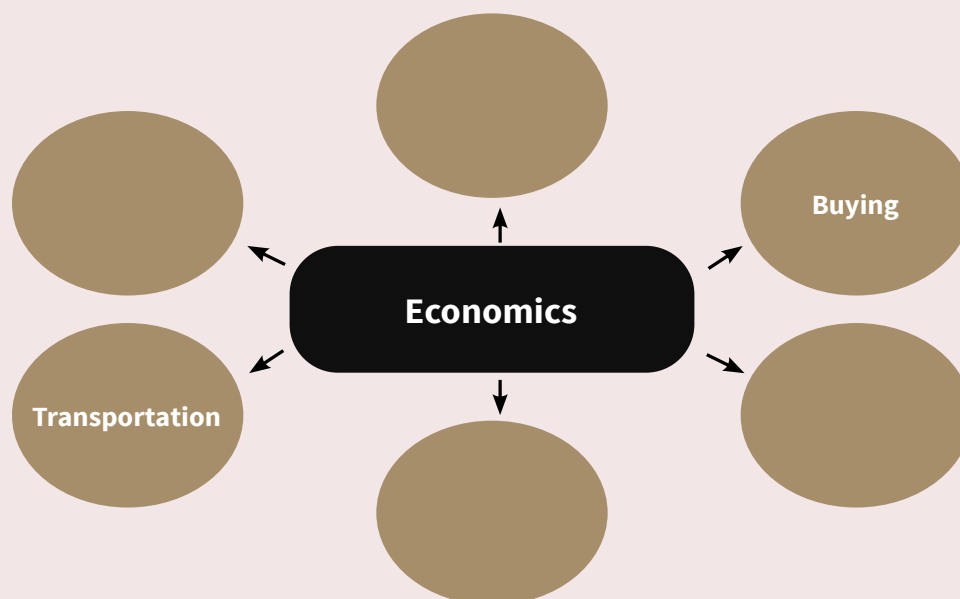
Economic statements are made based on facts or opinions. This presents us with two types of economic statements:

Positive economic statement: Positive Economics deals with objective statements based on facts and data analysis. It focuses on describing and explaining economic phenomena as they are, without expressing opinions or value judgements. An example of a positive economic statement is *'prices of food at the school canteen are high and because of that, some students cannot buy'*.

Normative economic statement: A normative statement in Economics conveys a value judgment or opinion about what ought to be. It reflects subjective beliefs, preferences, or opinions about what is considered desirable or undesirable regarding economic policies, outcomes, or behaviours. Such statements are not about factual claims that can be tested or proven. For instance, a normative economic statement could be: *'Prices of food at the school canteen should be lowered to encourage students to purchase more.'*

Activity 1.1

Below is a chart showing how the concept of Economics relates to your everyday life activities. Complete it by filling the empty spaces with appropriate everyday economic activities.



1. Which of the activities do you often practice at home or in school?
2. Discuss why you often engage in that economic activity with a friend.

Activity 1.2

The following statements are positive and normative economic statements. Identify and arrange them in their rightful spaces in the table below. Two (2) have already been done for you.

1. An increase in population will put pressure on social amenities.
2. People must be made to pay taxes based on their income levels.
3. High taxes reduce the profit levels of businesses.
4. An increase in the salaries of workers will make them buy more goods.
5. Transport fares must be reduced for school children, the aged and people with disability

Positive economic statement	Normative economic statement
Cost of living will rise when there is an increase in the general price levels.	The government ought to provide subsidies to farmers.

EVERYDAY ECONOMISTS VERSUS CAREERS IN ECONOMICS

The Economist

The aim of studying, among most high school students, is to make job prospects better. High school qualifications are the beginning of a pathway to a career. The study of Economics provides a wide range of career prospects as well as enables people to manage their limited resources.

Who is an Economist?

In your daily lives, your parents manage their resources to cater for the home. You also manage your pocket money when you are in school. Sellers and buyers also manage

their resources. The practice of managing their resources makes them Economists. A person can also become an Economist by studying Economics to higher degree levels. After their studies, they become professionals and apply their knowledge of Economics to solve problems in society.

What Job Prospects are there for Economists?

Studying Economics to higher degree levels enables individuals to develop different skills. Economics students develop the ability to read, write and communicate well, the ability to understand and work with figures, and how to think critically and solve problems.

Therefore, Economists have diverse career prospects across sectors such as government agencies, financial institutions, educational institutions, insurance companies, and governance, as well as in academia as researchers. Specific job roles for Economists include:

- **Policy analysts:** They are responsible for studying how economic activities are conducted in a country and advise the government about the best practices to achieve effective policy implementation.
- **Entrepreneurs:** Economics prepares people to become entrepreneurs who combine factors of production to create business.
- **Business reporter:** This is a journalist who specialises in covering news stories which are related to economic activities and business enterprise.
- **Teaching:** Some teachers and lecturers teach Economics in secondary schools and at tertiary institutions. An example is your Economics teacher.
- **Financial Manager:** These people include accountants, treasurers budget officers, etc. help organisations (like companies or schools) manage their money. They plan budgets and make sure there is enough money for important projects.
- **Banker:** Bankers work in banks and help people and businesses with their money. They might help you save money, get loans or invest for the future.
- **Economic Data Analyst:** Economic Data analysts look at lots of numbers and information to find patterns and trends. They help businesses make smart decisions by using data to understand what is happening.
- **Civil and Public Servant:** These workers help run government services, like schools, hospitals and other organisations such as Ghana Revenue Authority (GRA). They focus on making sure the economy runs smoothly and everyone has access to important services.

Activity 1.3

Complete the table below by filling the spaces provided with appropriate career prospects for an Economist. You can visit your school library to research on jobs

for Economists or talk to the career guidance teacher or use the internet search for 'Jobs for Economists' to help you do activity.

Institution	Career prospects for Economists	Roles and responsibilities
Market place	Sellers/Producers	Create goods and services and sell them in the market.
Schools and colleges		
Financial institutions		
Hospital		
Church		
Agriculture		

Activity 1.4

Visit any of the institutions in your community as listed and find out about individuals whose activities relate to the job of an economist. Dress neatly and be polite and respectful.

1. Municipal/District assembly
2. Company or Firm
3. Education office
4. Health centers

You can also visit any other institution in your community and share your findings in class (Remember to respect and tolerate others' views). Respectfully seek help from your parents, opinion leaders and other people in the community to guide you.

TOOLS OF ECONOMIC ANALYSIS

The farmer uses a hoe, the nurse uses clinical thermometer while the carpenter uses a saw and plane to undertake tasks related to their jobs. In the same way, the Economist uses certain tools to present and analyse economic issues. These tools include words, mathematical/statistical tools (mode, mean and median, models, variables, functions) and graphical tools (tables, graphs, diagrams). These tools are used to present, measure, and explain economic theories, laws, and financial trends.

Words: Words, unlike graphical tools or statistical models, are tools to communicate, persuade and shape economic outcomes.

They are used by Economists, policymakers, advertisers, journalists, educators, and individuals to convey economic concepts, formulate policies, influence behaviour, and facilitate economic transactions.

They shape economic ideas, economic behaviour, and influence economic outcomes. The effective use of words can impact market sentiment, consumer choices, investment decisions, policy debates, and public understanding of economic concepts.

Graphical tools: Graphical tools in Economics provide visual representations that simplify information and make it easier to comprehend and analyse. They enable Economists to communicate ideas, theories, and findings more effectively and assist learners in understanding economic concepts. For example supply and demand curves, production possibility curve, market structure diagrams and cost curves.

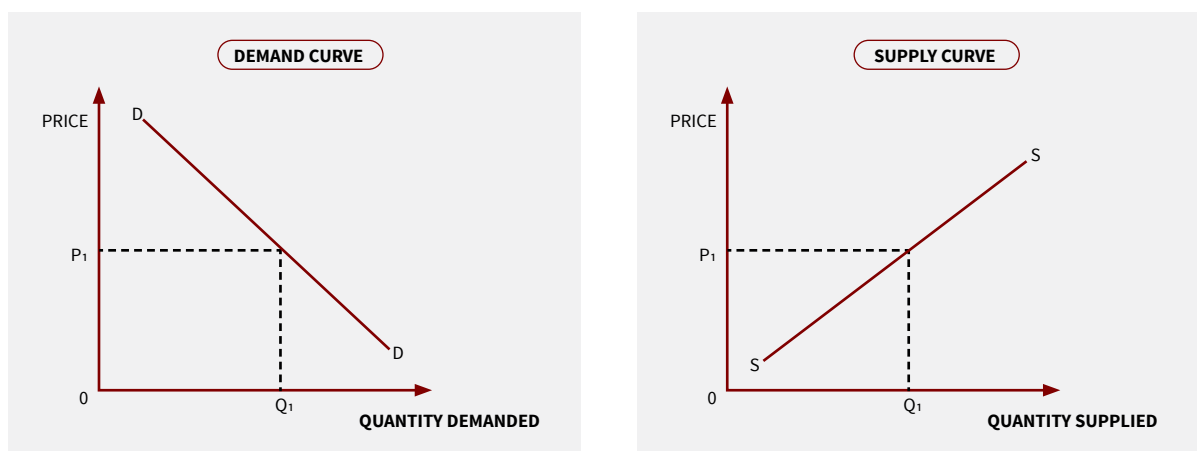


Fig 1:1 Graphical tools used in economic analysis

Statistical tools/Math: Statistical tools play a crucial role in Economics as they help Economists analyse data, test hypotheses, and make informed decisions.

These tools allow Economists to identify patterns, relationships, and trends in economic variables. They provide Economists with information to draw meaningful conclusions.

They allow Economists to make informed policy recommendations, forecast economic trends, and evaluate the effectiveness of interventions.

SOME DEFINITIONS OF CONCEPTS UNDER VARIOUS ECONOMICS TOOLS

Statistical/Mathematics Tools

Variables: Variables are quantities or factors that have values which can change. Trends in variables are how Economists track the changes in the variables. Examples of variables in Economics are price, quantity demanded, cost, income, savings, and spending.

Functions: Functions are mathematical representation that describe the relationship between different economic variables. Functions are used to model how one variable depends on one or more of other variables, allowing Economists to analyse and predict economic behaviour and outcomes. These relationships can be shown as a mathematical expression or formula.

For example, the linear function $Qd = 20 - 3P$ shows the relationship between price (p) and quantity demanded (Qd) of a commodity. In this expression '20' is the quantity demanded at zero price (where the demand curve cuts the x-axis on a graphical presentation). The '3' is a constant that represents the slope of the graph. So, what will the quantity demanded be when price is Gh¢6? The answer is 2 units but make sure you know your rules of algebra to check the working.

Central tendency values: These are statistical units/values that are used to represent the entire distribution of data. They measure the average unit of the distribution. The commonest among them are arithmetical mean, mode, and median.

- **Mean:** This is an average value and represents the mid-value of series of values. It is calculated by adding all the values ($\sum x$) and dividing the total by the number of values (N).

$$\bar{X} = \frac{\sum x}{N}$$

For instance, output of cocoa in tons from 2010 to 2019 is given as follows: 25, 28, 30, 30, 32, 35, 30, 24, 27, 29.

$$\text{The mean output is } = \bar{x} = \frac{\sum x}{N} = \frac{25+28+30+30+32+35+30+24+27+29}{10} = \frac{290}{10} = 29 \text{ tons}$$

- **Median:** This is the middlemost value when all the values are arranged from the lowest to the highest. It is estimated mathematically as $\text{Median} = \frac{N+1}{2} \text{th value}$.

The median output of data above is estimated by first arranging them from the lowest to the highest: 24, 25, 27, 28, 29, 30, 30, 30, 32, 35.

$$\text{Median} = \left(\frac{10+1}{2}\right) \text{th position} = \frac{11\text{th}}{2} \text{ position} = 5.5^{\text{th}} \text{ position.}$$

Counting from the front or from the back, 5.5th position falls between 29 and 30. The median is therefore the mean of those two values.

- **Mode:** This is a value item that appears most in a distribution. The modal value from the data above is 30 tons since it is the most common value, occurring three times.

Graphical Tools

Tables and schedules: These are orderly arranged lists in rows and columns which show the relationship between two or more economic variables.

The information that is presented in the table below were generated from the demand function above.

Table 1.1

Price Gh¢	Quantity demanded
1	17
2	14
3	11
4	8
5	5

Using graph paper, plot the graph of price (y-axis) against quantity demanded (x-axis). Describe what happens when price rises.

Graphs and charts: These are pictorial or visual presentations of the relationship between two or more economic variables. Some common graphs that are used in Economics include pie charts, bar charts and curves (demand and supply curves).

- **Simple bar graphs:** They consist of a number of bars that are drawn side by side from a common base in length to the value or weight which each bar represents.

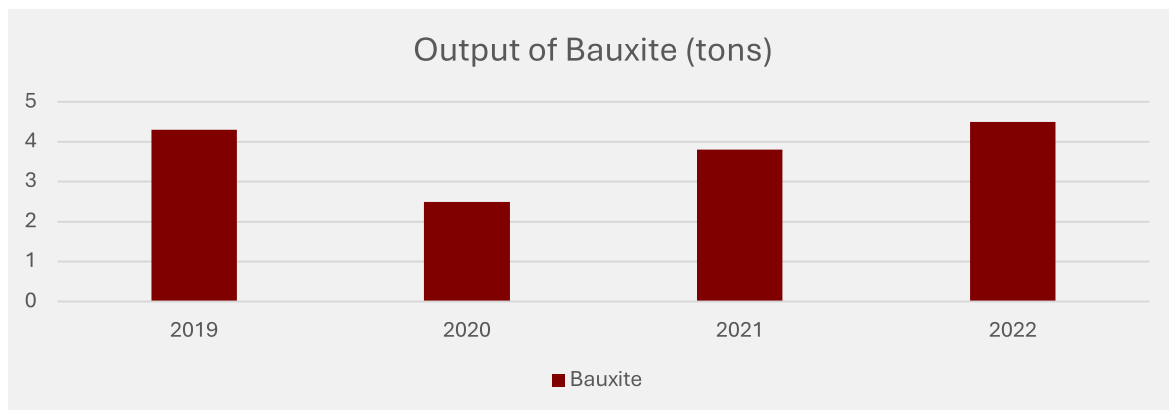


Fig 1.2 Simple bar graph

- **Pie chart:** They consist of circles that have been divided into sectors with each sector representing the values of individual items measured in degrees.

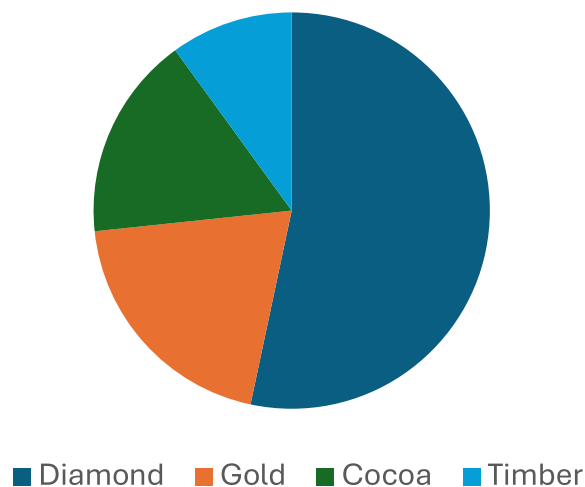


Fig 1.3 Pie chart

Importance of Graphs and Charts

Economists use them to analyse data. They are useful because:

- Data can be visually represented, making it easier to identify patterns, differences, or trends.
- They show clear distinctions between different variables.

Activity 1.5

Look at this table below which shows how different fruits were shared in an SHS 1 class of 40 learners.

Fruits	Frequency
Orange	4
Mango	5
Banana	4
Pear	5
Pawpaw	5
Coconut	5
Watermelon	5
Pineapple	5
Sheanut	2
Total	40

1. Try to calculate the mean, median, and mode, and show your working.
2. Can you explain why the mode and the median are the same value?
3. Using MS Excel, plot a graph to show how the fruits have been shared among the learners.

Activity 1.6

1. Measure and record the height (in metres) of five (5) of your friends in your class. It should include your male and female friends where applicable.
2. Present your data in a table using MS Word. Column 1 represents names and column 2 represents heights

Names of friends	Height (metres)

3. Calculate the mean, median and mode for the heights of the group.

Use the following formulae:

$$\text{Mean } (X) = \frac{\Sigma x}{N}$$

$$\text{Median} = \frac{N+1}{2} \text{ th value (data set is odd)}$$

Mode is the the most common value

4. What can you say about the mean, mode and median? Are they the same or are there some differences? Explain your findings.
5. Using your table above, choose an appropriate chart and plot the names of your five (5) friends against their heights on a graph sheet and also reproduce it on MS Excel to represent the data. Explain your reason for choosing that particular graph or chart.

Activity 1.7

Use the data below to draw a linear curve on a graph sheet.

Price Ght	Quantity
1	22
2	18
3	14
4	10
5	6

As a guide, plot the values of quantity on the x-axis while the values of price on the y-axis.

BASIC ECONOMIC CONCEPTS

Concepts can be described as ideas, thoughts, views, and opinions. Economic concepts are the main principles upon which the subject of Economics is built. These concepts are used to analyse and explain how individuals, businesses and governments make choices, allocate scarce resources among unlimited wants and interact with economic systems. The concepts are therefore the foundations or pillars upon which Economics firmly stands. Some basic Economics concepts are wants, needs, scarcity, choice, scale of preferences and opportunity cost.

Needs: These are basic goods and services that individuals and society depend on for survival. Humankind cannot exist without these needs. Examples of needs are food, water, clothing, and shelter.

Wants: These are the desires or preferences that individuals have for goods, services, or experiences that they believe will satisfy their needs or provide them with utility and satisfaction. Human wants include tangible things such as cars, tables, books, and other services such as health care, entertainment, and security. These wants are unlimited.

Means: These are resources that are used to satisfy human wants. They are also referred to as **factors of production**. Examples of means are money, time, and labour. Means are limited in supply.

Scarcity: This is when there are not enough resources to meet everyone's needs and wants in every society at every point in time. Individuals and societies are therefore faced with the challenge of scarce resources and have to economise (making best use of resources).

Choice: This is the act of selecting from among alternative wants to use the available resources to satisfy the most pressing want(s) and to leave the other wants unsatisfied.

Scale of preference: This refers to a list of individual or societal wants that are arranged in order of importance (priority).

Opportunity cost: Opportunity cost is the alternative wants that an individual/society has to give up when the available resources are used to satisfy a more pressing want. It is often described as what you lose when you choose one thing over another.

For example, if you choose to study towards a pending examination, rather than using your time to watch a football match, the opportunity cost of studying will be the football match you missed. Opportunity cost is also referred to as the real cost to the Economist. It will be zero when resources are so plentiful that one alternative use will not affect the other uses or the resource has only one use.

Activity 1.8

In pairs or small groups prepare a role play which explores the concepts of want, means, choice, scale of preference and opportunity.

To help you do this, you might want to research the concepts and think about how you can communicate them in a conversation between characters.

Activity 1.9

1. In the same groups, make a list of as many societal problems as you can think of collaboratively (in Ghana, West Africa or the world).
2. Rank them in order of importance and explain what limited resources should be allocated to them.
3. Justify why one issue deserves resources over another.

Activity 1.10

As a student, you have the following needs and wants: school sandals, textbooks, transportation, mobile phone, wristwatch, food, sleep, health insurance, water, school bag, laptop, calculator, and SRC T-shirt. Group the items under **needs** and **wants** in a table.

Note that, needs are things you cannot do without. For example, water. Wants are things you desire to have but you can live.

Needs	Wants

Activity 1.11

Scarcity refers to a situation where resources are limited in supply. Choice is the act of selecting from among alternative wants, while opportunity cost is wants that you could not satisfy because you choose to use your resources to do something else. In your school or at home, people have different wants. For example, they want books, a calculator, mobile phones, education, and many others.

Read the following conversation that took place between two friends:

- A:** “I really want a new school uniform, an Economics textbooks and a school bag.”
- B:** “I understand but you can’t have all of them at the same time because you don’t have enough money.”
- A:** “You are right but I also need all of them. So what should I do?”
- B:** “Well, my advice is that, use your resources wisely to buy the most important ones that you can afford and leave those you cannot buy for now.”

After reading the conversation above, carry out the following activities.

1. Identify the wants mentioned in the conversation.
2. Explain why friend B made the comment “*but you cannot have all of them at the same time*”. What economic concept can you deduce from that statement?
3. What two economic concepts can you deduce from the advice given by friend B to A?

ECONOMIC SYSTEMS

Resources are always **scarce** in every society at every point in time, but human **wants** are unlimited. It is therefore necessary to manage the limited resources wisely to satisfy the unlimited nature of human wants. To achieve this requires a line of action through which scarce resources are fairly and efficiently allocated. This process of allocating scarce resources (owned and controlled) is known as an economic system.

What are economic systems? Economic systems refer to the structure through which production, distribution, and consumption of goods and services are organised within a society or a country.

Economic systems are very important and help society to make decisions such as:

- What to produce
- For whom to produce
- How to produce
- How to distribute
- Achieving full employment of resources
- Achieving economic growth and development

Types of Economic Systems

There are three types of economic systems and they can be identified by the following criteria: ownership of resources, motive for production and how decisions are made.

1. Capitalist/Free Market Economic System

This refers to any economic system where greater percentage of resources are owned and controlled by private individuals instead of the state. In such a system, owners of resources aim mainly at maximising profit (making the highest profit) such that goods and services are produced to suit the consumer's taste and preferences (demand). The consumer is therefore the main factor that determines all decisions which are made through the market forces of demand and supply (price mechanism). Examples of countries that practise capitalist economic system are USA and Canada.

2. Socialist/Controlled/Planned Economic System

This refers to an economic system where a greater percentage of resources are owned and controlled by the state instead of by private individuals. Socialism aims at promoting social welfare (welfare of the people), and decision making is done by a committee called the Board of Directors on behalf of the state. Examples of countries that practise controlled economic system are China and North Korea.

3. Mixed Economic System

This refers to any economic system where resources are partly owned and controlled by the state and partly owned and controlled by private individuals. Decision making is done by both the state through the board of directors as well as by the private individuals through price mechanism. Examples of countries that practise mixed economic system include Ghana, Nigeria, South Africa, and Egypt.

Activity 1.12

Welcome to the school fair. There are two friends (Capitalist and Socialist) and each of them has Gh¢100.00 to spend on books, sports equipment, fast food and drinks. They planned to use their money wisely at the fair

Capitalist: I love reading books and I want to buy as many books as possible.

Socialist: I like books but I want buy football and some drinks yet I do not have enough money. What should I do?

Capitalist: If I buy books, what will be my opportunity cost?

Socialist: I think I can buy the football and save some money for drinks since I can borrow books from the library.

Capitalist: I will get a couple of books and few drinks so that I can get a bit of both.

Questions:

Dear learner,

1. What did the capitalist and the socialist want to buy at the fair?
2. How did scarcity affect their decisions?

3. What is the opportunity cost for the capitalist and the socialist?
4. If the two friend decide to combine their resources (money) to buy what they needed most, how will this system be called?
5. Use your understanding from the decisions made by these two friends to explain the three economic systems.
6. Share your answers with a friend. Remember to respect and tolerate others and their views as well.

Review questions

1. As a student, you are faced with how to spend your day (6am to 12 noon) on studying towards an examination that has been scheduled for the next day, attending a wedding ceremony of a friend, or going to the stadium to watch a football match.
 - a) Using the case study above, which of the activities would you spend your time on?
 - b) Give at least one reason for selecting that activity.
 - c) How does the case study relate to opportunity cost?
2. Group the following under positive and normative Economics statement:
 - The government ought to provide subsidies to farmers.
 - An increase in population will put pressure on social amenities.
 - Cost of living will rise when there is an increase in the general price levels.
 - Rich people must be made to pay more taxes than the poor.
 - High taxes reduce the profit levels of businesses.
3. Distinguish between microEconomics and macroEconomics.
4. Who is an Economist?
5. Identify at least two (2) career paths for the professional Economist in private and public agencies.
6. Identify two (2) ways Economists have contributed to the development of Ghana.
7. The table below shows the exports of cocoa from four (4) West African countries in the year 2018. Study it and answer the questions that follow.

Exports of cocoa	Quantity in metric tons
Ghana	800
Nigeria	650
Cote d'Ivoire	950
Togo	220

- a. Calculate the total exports of cocoa in 2018.
 - b. Estimate the mean export of cocoa from West Africa in 2018.
 - c. Present the information from the above table on a pie chart.
8. State two uses of graphs as tools of economic analysis.
 9. In your own words, distinguish between needs and wants.
 10. The table below shows how a student's wants are arranged according to his/her priorities or importance. Use it to answer the questions that follow:

Items	Prices Gh¢
Textbooks	140
School uniform	110
Provision	130
Calculator	180
Mosquito net	70
School sandals	50
Toilet roll	30

- a. What economic term is used to describe the table above?
- b. If the student has an income of Gh¢1000.00 as his/her only resource, which of the following statement(s) will be true?
 - i. He/she has to forgo some of his important items.
 - ii. He/she will buy all his wants.
 - iii. He/she will make choice.
 - iv. He/she will be faced with the problem of scarcity.
 - v. Opportunity cost will be zero.
- c. If the student's income is Gh¢ 250.00.
 - i. What item(s) will he/she buy? Explain.
 - ii. What is the opportunity cost of buying the item(s) at (c)? Explain.
- d. If the student's income reduces to Gh¢140.00,
 - i. What item(s) will he/she now buy? Explain.
 - ii. What is the real cost of buying the item(s) in (e)? Explain.
11. In the Republic of Bankukrom, people are engaged in various businesses. They employ others to work for them in order to make a profit. Their government makes laws to regulate the activities of businesses and also collects taxes from them.
 - i. Identify the type of economic system practiced in Bankukrom.
 - ii. Give reason(s) for your answer in 11 (a) above.
 - iii. What are the possible motives of the owners of businesses in Bankukrom?
 - iv. State at least one (1) advantage you will enjoy as a buyer in Bankukrom.

Extended Reading

- <https://youtu.be/LofY4SkKJtU>
- <https://youtu.be/TWR1JUO-C8w>
- https://youtu.be/_qmGxgjzdiY?si=NyDImJ9Cdpkia8l2
- <https://youtu.be/ETPuyZosfyQ?si=QFuMSQHQDo9aUQhm>
- https://youtu.be/CjiW_tY0yJs?si=Fkn14PqzGBt5e-Pg
- <https://youtu.be/08l3j5y3Qnc?si=c20JAwKz6lb8zAZe>
- [Economics Textbooks in school library](#)
- <https://articles.outlier.org/economics-definition>
- <https://bscholarly.com/tools-for-economic-analysis/>

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Glossary

- **Limited:** Refers to resources that are scarce or finite in supply
- **Unlimited:** Describes resources or wants that are endless or infinite
- **Theories:** These are frameworks for understanding and predicting economic events

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