# Chapter 1: Introduction

## Exercises — Introduction

Q1 Mark the following statements as true or false.
(i) Statistics can only deal with quantitative data.
(ii) Statistics solves economic problems.
(iii) Statistics is of no use to Economics without data.

SOLUTION

(i) FALSE. The chapter states that, in addition to quantitative data, Economics also uses qualitative data. Qualitative data describes attributes of a person or group — such as gender, skill level, or health status — that cannot be measured in quantitative terms but are still collected and stored systematically. Statistics deals with both types.

(ii) FALSE. Statistics is an indispensable tool that helps economists understand and analyse economic problems, identify causes, and formulate policies. However, the chapter explicitly notes that 'statistical methods are no substitute for common sense.' Statistics assists in solving problems; it does not solve them on its own — appropriate policy action and human judgement are also required.

(iii) TRUE. The chapter establishes that no analysis of an economic problem would be possible without data on the various factors underlying it, and therefore no policies can be formulated to solve it. Data (economic facts) are the raw material on which statistical methods operate. Without data, statistics has nothing to work with and is of no use to Economics.

Answer: (i) False — Statistics deals with both quantitative and qualitative data. (ii) False — Statistics helps analyse problems and formulate policies, but is not a substitute for common sense. (iii) True — without data, statistical methods cannot be applied and economics analysis is impossible.

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Q2 Make a list of activities in a bus stand or a market place. How many of them are economic activities?

SOLUTION

Some activities observed at a bus stand or market place include: buying and selling of goods (vegetables, fruits, clothes, food items), porters carrying luggage for a fee, auto-rickshaw or taxi drivers transporting passengers for fare, ticket booking and collection by bus staff, vendors selling snacks and beverages, mechanics repairing vehicles for payment, and money changers or ATM transactions.

According to the chapter, economic activities are those that are undertaken for a monetary gain — the 'ordinary business of life' as described by Alfred Marshall. Applying this definition, almost all the activities listed above are economic activities because they involve the exchange of goods or services for money. The chapter notes that whether one is a consumer buying goods, a seller, a producer, or an employee earning wages, all are engaged in economic activities.

An activity such as a person simply waiting for a bus, or friends chatting at the bus stand, would NOT be an economic activity because no monetary gain is involved. Thus, the vast majority of activities at a bus stand or market place are economic activities — only those done purely for personal or social reasons without any monetary exchange fall outside this category.

Answer: Almost all activities at a bus stand or market place (buying, selling, transporting goods for fare, porter services, vending) are economic activities because they are undertaken for monetary gain. Only non-monetary activities like waiting or casual conversation are not economic activities.

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Q3 'The Government and policy makers use statistical data to formulate suitable policies of economic development'. Illustrate with two examples.

SOLUTION

The chapter explains that analysis of economic problems requires data, and without data no policies can be formulated. Statistical methods help find the causes of problems and enable planners to predict future trends, which form the basis of policy decisions. Two illustrations from the chapter are as follows.

Example 1 — Oil Import Policy: The chapter specifically states that in the context of rising global oil prices, the government must decide how much oil India should import. This decision depends on the expected domestic production of oil and the likely demand for oil in a future year (the chapter uses 2025 as an example). Without statistical methods, it cannot be determined what the expected domestic production and likely demand would be. Thus, the import decision — a key government policy — can only be made by using statistical data and techniques.

Example 2 — Population and Family Planning Policy: The chapter states that it can be ascertained using statistical techniques whether a policy such as family planning is effective in checking the problem of ever-growing population. Governments collect data on birth rates, death rates, and population growth over time. Statistical analysis of this data tells policy makers whether the existing policy is working and what adjustments are needed — making statistics essential for evaluating and reformulating development policies.

Answer: Two examples: (1) The government uses statistical data on domestic oil production and projected demand to decide how much oil to import. (2) Statistical techniques help evaluate whether family planning policies are effectively controlling population growth, enabling policy makers to adjust them accordingly.

Q4 "You have unlimited wants and limited resources to satisfy them." Explain this statement by giving two examples.

SOLUTION

The chapter teaches this as a basic principle of Economics. It uses the story of Aladdin's magic lamp to contrast a fictional world of unlimited fulfillment with the real world, where wants are unlimited but the resources available to satisfy them are limited and scarce. Scarcity is described as 'the root of all economic problems.' Because resources are scarce and have alternative uses, people and producers must choose among competing wants.

Example 1 — Pocket Money: The chapter uses this directly. A student receives a fixed amount of pocket money each month. The student has many wants — perhaps a new mobile phone, books, food, entertainment, and clothing — but the limited pocket money means not all wants can be satisfied simultaneously. The student must choose which wants to prioritise, demonstrating that unlimited wants clash with limited resources.

Example 2 — Agricultural Resources: The chapter explains that at any point of time, resources in agriculture such as land, labour, water, and fertiliser are fixed in quantity. Yet these resources have alternative uses — the same land can grow food crops (to satisfy the want of nourishment) or non-food crops like rubber, cotton, or jute (to satisfy other wants). Because the resources are limited and cannot be multiplied at will, society must choose which wants to satisfy and in what proportion, giving rise to the economic problem of choice.

Answer: Two examples: (1) A student's pocket money is limited, but wants are many — food, entertainment, books — so choices must be made. (2) Agricultural land is limited but can grow either food crops or non-food crops; choosing one means sacrificing the other, illustrating the conflict between unlimited wants and scarce resources.

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Q5 How will you choose the wants to be satisfied?

SOLUTION

The chapter explains that because resources are limited and have alternative uses, while wants are unlimited, one must make a choice about which wants to satisfy. This is the central teaching of Economics.

The basis of this choice is priority. Given a limited income or limited resources, a person (or a society) will satisfy those wants that are most urgent or most important to them first. The chapter illustrates this through the example of pocket money: since pocket money is limited, a student has to choose only those things that he or she wants the most. Wants that are less urgent are left unsatisfied.

In the context of Economics, consumers decide which goods to buy given their income and the current prices of goods. The chapter also notes that Economics is about 'how people and society choose to employ scarce resources that could have alternative uses in order to produce various commodities that satisfy their wants.' Thus, wants are ranked by importance, and the most urgent wants are satisfied first with the available resources. Lower-priority wants are

either deferred or left unsatisfied when resources run out.

In practice, this means giving up the satisfaction of one want to fulfil another — a concept closely related to opportunity cost, which will be studied further in Economics.

Answer: Wants are chosen based on their urgency and importance. Given limited income or resources, the most pressing wants are satisfied first and less important ones are left unsatisfied or deferred. This process of ranking and choosing is central to Economics.

Q6 What are your reasons for studying Economics?

SOLUTION

The chapter offers several reasons that make the study of Economics worthwhile and important.

First, Economics helps understand how people and society make choices in the face of scarcity. Since resources are limited and wants are unlimited, every individual and society must make decisions about what to produce, consume, and distribute. Understanding these decisions makes a person better informed in daily life.

Second, Economics covers the three key areas of consumption, production, and distribution — understanding these helps one know how prices are determined, how goods are produced, and how national income is shared among people in society.

Third, the chapter emphasises that Economics helps understand and address major social problems such as poverty, unemployment, and inequality. Knowing the facts behind these problems — expressed in statistical terms — enables one to understand why they exist and what policies might solve them. If one wants to do something about the ills of society, the chapter argues, one must first know the facts.

Fourth, studying Economics, particularly Statistics for Economics, provides analytical skills. It helps one collect data, find relationships between economic variables, predict future trends, and evaluate whether policies are working. These are valuable skills for understanding news, government decisions, and planning one's own future.

Answer: Economics is studied to understand how choices are made under scarcity, to learn about consumption, production and distribution, to understand social problems like poverty and inequality, and to develop analytical skills using statistical data that help in understanding economic events and policies.

Q7 Statistical methods are no substitute for common sense. Comment with examples from your daily life.

SOLUTION

The chapter makes this point explicitly through the story of a family trying to cross a river. The father calculated the average depth of the river and the average height of his family members. Since the average height of the family was greater than the average depth, he concluded it was safe to cross. However, some members — the children — drowned because the river had varying depths at different points, and the average masked these variations. The fault lay not with the statistical method of calculating averages itself, but with the misuse of that average and the absence of common sense in applying it.

This illustrates a key limitation: statistical results must always be interpreted with judgement and an understanding of the actual situation.

Example from daily life 1 — Average temperature: If the average temperature of a city over a week is reported as 25 degrees Celsius, one might conclude the weather is pleasant throughout. But if some days were extremely cold (10 degrees) and others extremely hot (40 degrees), the average conceals this variation. A person relying only on the average statistic without thinking critically might dress inappropriately for the actual day's weather.

Example from daily life 2 — Average income: If the average monthly income in a neighbourhood is reported as a comfortable figure, one might assume everyone is doing well. But if a few very wealthy households pull the average up while most households earn far less, the statistic is misleading. Common sense would prompt one to also look at how incomes are distributed, not just what the average is.

In both cases, statistical data provides a useful starting point, but sound judgement and common sense are essential to interpret it correctly and avoid wrong conclusions.

Answer: Statistical methods are tools that aid analysis but can mislead if applied without judgement. For example, an average temperature of 25 degrees can mask extreme cold and hot days; an average income can hide wide inequality. The chapter's river-crossing story shows that misapplying an average can lead to disastrous results. Common sense must guide how statistics are used and interpreted.