

STATISTICS XI

UNIT-1

INTRODUCTION

MEANING OF ECONOMICS

Economics is a social science of human behaviour which aims at allocation of scarce resources in such a way that consumers can maximise their satisfaction, producers can maximise their profits and society can maximise social welfare.



Some important terms :

- **Consumer** : Consumer is an economic agent who buys the goods and services to satisfy his wants.
- **Producer** : is one who produces goods and services for the generation of Income.
- **Production**: Production is the process of converting raw material into useful things .Things become useful as they acquire utility value in the process of production.

Saving : It is the part of income which is not consumed . It can act of abstinence from consumption.

$$S=f (Y)$$

Investment : It is expected by the producers on the purchase of such assets which helps to generate income.

Service Holder: A person who is in job and gives his services as a factor of production and getting paid for it . E.g. Govt. Teacher.

Service provider : A person who provides services to other for payment e.g. Transporter, auto driver.

ECONOMIC ACTIVITIES


Activities related to ordinary business of life which are performed with the objective of earnings or monetary gain are called economic activities.

TYPES OF ECONOMIC ACTIVITIES



Non – Economic activities :

Those activities which are not related to earn money and wealth .These activities neither generate income nor increase the flow of goods & Services . For example a teacher teaching his own son.



SCOPE OF ECONOMICS : In the old days the use of statistics was restricted to deal with the affairs of the state . But now a days the scope of statistics has spread to all those areas where numerical facts are used such as economics ,business industry , Medicine, Physics, Chemistry and numerous other fields of knowledge.



Production : Producers also have limited means while they have a wide range of goods and services to choose from for their firms and Factories.

Consumption : Here ,we as students of economics , study behaviour of human beings as consumers or buyers of different goods and services for the satisfaction of their wants.

Exchange: Refers to the process of give and take of goods and services among the economic agents in exchange of money.

Distribution: We are also interested in knowing how income (generated in the process of production) is distributed among those who have worked as agents of Production.

PRODUCTION – Refers to increase in flow of goods and services.



CONSUMPTION-use of goods and services by a consumer to satisfy his wants.

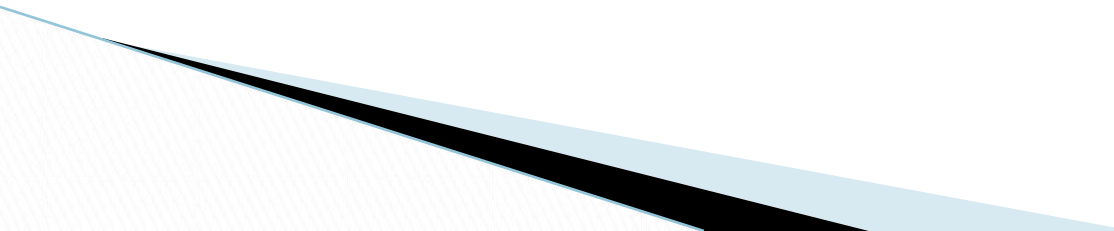


EXCHANGE- refers to the process of give and take of goods and services among the economic agents in exchange of money.

Evaluation of payment system and banking



SCARCITY AND ECONOMIC PROBLEMS

- ❑ Scarcity means acute shortage of a certain commodity but in economics, it means insufficient supply of a commodity in relation to its demand.
 - ❑ The problem of making choice is called economic problem.
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CAUSES OF ECONOMIC PROBLEMS

Human wants/ ends
Resources/means

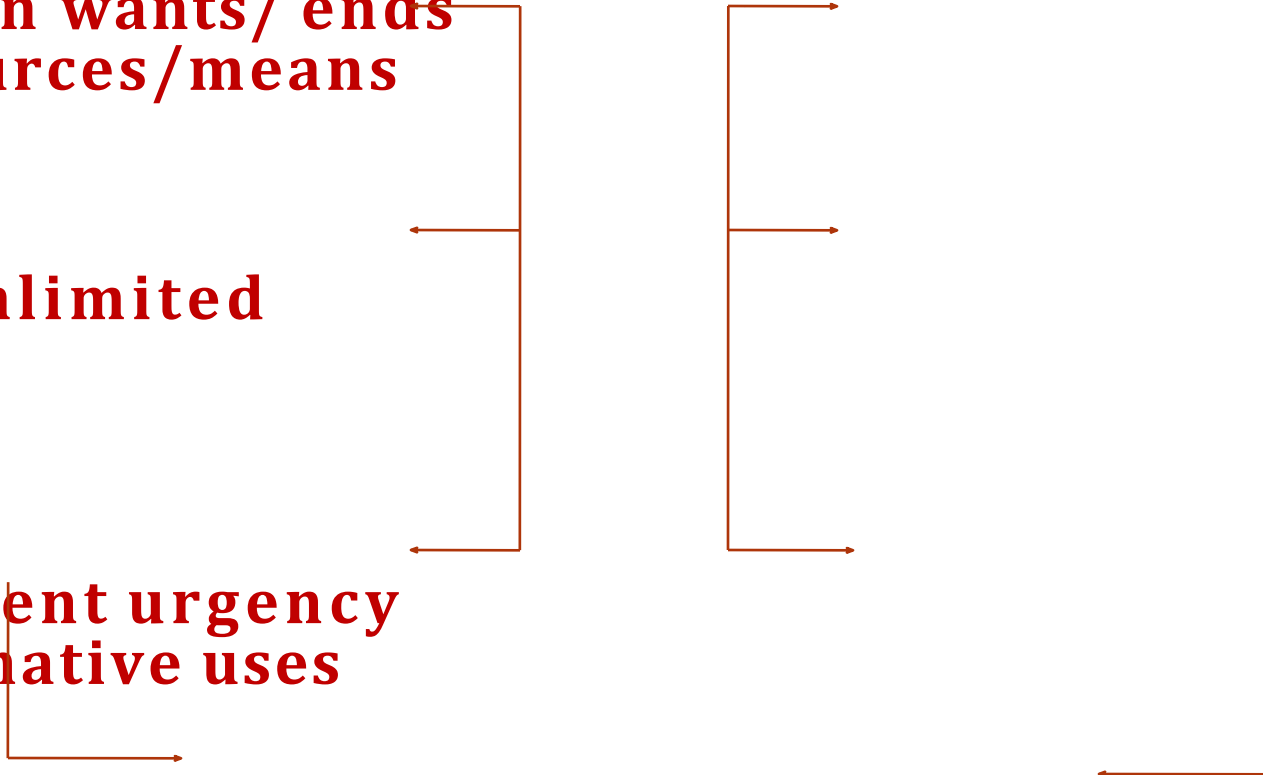
Unlimited

Limited

Different urgency
Alternative uses

Problems of making choice

Economic problems



DEFINITION OF ECONOMICS

“Economics is the study of how people and society choose to employ scarce resources that could have alternative uses in order to produce various commodities that satisfy their wants and to distribute them for consumption among various persons and groups in society”.



ADAM SMITH
THE FATHER OF
MODERN
ECONOMICS



MEANING OF STATISTICS

In simple language, quantitative statement of facts is called statistics. At the present time statistics is used in two senses- Plural sense and Singular sense.

**Grottfried
Achenwale**



STATISTICS :

Statistics means quantitative information or Quantification of the facts and findings.

But ,how do we get quantitative information?

There must be a system ,Method or technique to collect quantitative information .

STATISTICS IN PLURAL SENSE

In plural sense statistics simply means data.

Quantitative data: Measured in numerical terms like
Price and income

Qualitative data: Not measured in numerical terms
like beauty and intelligence.

Statistics means quantitative information or quantification of
the facts and findings relating to different phenomena.

STATISTICS IN SINGULAR SENSE

- ❑ **In singular sense statistics means ‘statistical methods’.**
Collection of data.
- ❑ **organisation of data**
- ❑ **Presentation of data.**
- ❑ **analysis of data .**
- ❑ **interpretation of data .**

Features Of Statistics in the plural Sense or as Numerical Data

- **Main Features of statistics in terms of numerical data are :**
- **Aggregate of facts** : A single number does not constitute Statistics . No conclusion can be drawn from it.
- **Numerically Expressed** : Statistics are expressed in terms of Numbers . Qualitative aspects like small or big ,rich or poor etc. are not called statistics.

Multiplicity of causes : Statistics are not affected by any single factor; but are influenced by many factor.

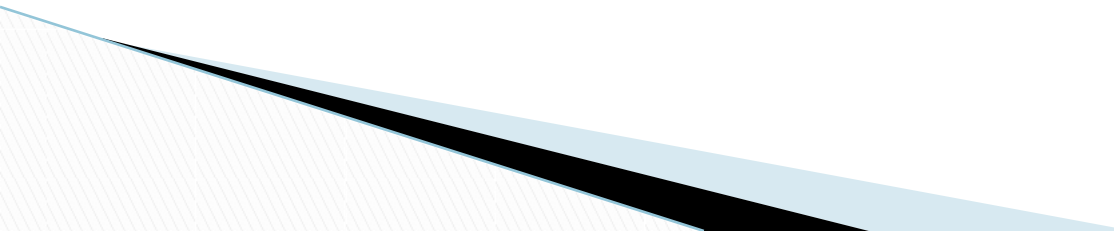
Reasonable Accuracy: A reasonable degree of accuracy must be kept in view while collecting statistical Data. **This accuracy depends on the purpose of investigation ,its nature size and available resources.**

Pre- determined Objective: Statistics are collected with some pre –determined objectives. Any information collected without any definite objective will only be a numerical value and not Statistics

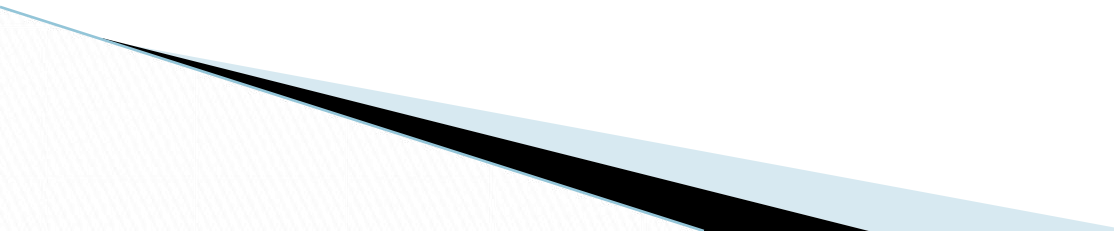
Enumerated and Estimated : Statistics may be collected by enumeration or are estimated . **If the field of investigation is vast , the procedure of estimation may be helpful .** For example , 1 lakh people attend the rally addressed by the Prime Minister in Delhi and 2 lakh in Mumbai . **These statistics is based on estimation.**

Collected in a systematic Manner.: Statistics should be collected in a systematic manner. **Before collecting them . A plan must be prepared.** No conclusion can be drawn from statistics collected in haphazard manner.

FUNCTIONS OF STATISTICS

- ❑ Presentation of facts in precise and definite form.**
 - ❑ Simplification of complexities.**
 - ❑ Facilitating comparisons.**
 - ❑ Facilitating the formulation of policies.**
 - ❑ Widening of human knowledge.**
 - ❑ Facilitates the forecasting.**
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IMPORTANCE OR USE OF STATISTICS IN ECONOMICS

- **Formulation of Economic Laws** . Statistics also helpful in construction of economic laws and theories.
 - **Helps in understanding and solving an economic problem.** It is also helpful to solve economic Problem .
 - **Studies of market structures.** With the help of statistics we easily understand about market structure of any country.
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Importance Of Statistics

- **Helpful in Inter-sectoral comparisons** :Economist do not stop merely at the quantitative expression of the Problems.
- **Working out cause and effect relationship** : Economists try to find out cause and effect relationship between different set of data.
- **Quantitative Expression of Economic Problems** : Consider any economic problem , be it the problem of unemployment , the problem of price . The first task of the economists is to understand its magnitude through its quantitative expression.

LIMITATIONS OF STATISTICS

1. Statistics does not study qualitative phenomena. Or Study of numerical facts only.
2. Statistics does not deal with individuals. Or Study of aggregate only.
3. Statistics can be Misused.(Statistics are like a clay of which you can make a god or devil as you please.)



4. Statistical results are true only on average.

5. Only experts can make the Best Possible use of statistics.

6. Statistical data should be uniform and homogeneous. Or Homogeneity of data an essential requirement.

Conclusion : Statistics ,as such ,do not prove anything . They are simply tools in the hand of the statistician. If a statistician misuse the data ,then the blame lies squarely on him and not the subject matter. A competent doctor can cure a disease by making good use of the medicine , but the same medicine in the hand of an incompetent doctor becomes a poison . The fault in this case is not of the medicine but of the unqualified doctor. In the same way , Statistics is never faulty but the fault lies with the users.