

BUSINESS STATISTICS – UNIT 1

Introduction to Statistics

Nature, Scope, Importance & Data Collection

BY
DR. S. P. RATHOD

INTRODUCTION TO STATISTICS

- ✕ • Statistics deals with collection, classification, presentation, analysis and interpretation of data.
- ✕ • It helps in converting raw data into meaningful information.
- ✕ • Widely used in business, economics, government and research.

DEFINITIONS OF STATISTICS

- ✗ • A.L. Bowley: Statistics are numerical statements of facts.
- ✗ • Croxton & Cowden: Collection, presentation, analysis and interpretation of numerical data.
- ✗ • Webster: Science of collecting and analyzing numerical data.

KEY FEATURES OF STATISTICS

- ✗ • Deals with aggregates of facts
- ✗ • Numerically expressed
- ✗ • Collected for a definite purpose
- ✗ • Affected by multiple causes
- ✗ • Results are approximate

ORIGIN OF STATISTICS

- ✕ • Derived from Latin word 'Status' meaning State
- ✕ • Used by governments for census, taxation and administration
- ✕ • Earlier known as Political Arithmetic

HISTORY OF STATISTICS

- ✕ • Ancient period: Census in Egypt, China, India
- ✕ • 17th Century: John Graunt, William Petty
- ✕ • 18th Century: Term statistics by Achenwall
- ✕ • Modern period: Karl Pearson, R.A. Fisher

NATURE OF STATISTICS

- ✕ • Studies mass phenomena
- ✕ • Quantitative in nature
- ✕ • Based on averages
- ✕ • Useful for comparison
- ✕ • Depends on accuracy of data

SCOPE OF STATISTICS

- ✕ • Business and Commerce
- ✕ • Economics and Planning
- ✕ • Banking and Insurance
- ✕ • Industry and Production
- ✕ • Government and Administration

STATISTICS IN BUSINESS

- ✕ • Sales forecasting
- ✕ • Demand analysis
- ✕ • Production planning
- ✕ • Quality control
- ✕ • Market research

LIMITATIONS OF STATISTICS

- ✗ • Deals only with quantitative data
- ✗ • Not suitable for individual cases
- ✗ • Can be misused
- ✗ • Results are not exact
- ✗ • Requires expert interpretation

IMPORTANCE OF BUSINESS STATISTICS

- ✕ • Helps in decision making
- ✕ • Useful for planning and forecasting
- ✕ • Assists in control and evaluation
- ✕ • Reduces business risks
- ✕ • Improves efficiency

ROLE IN DECISION MAKING

- ✕ • Provides factual basis
- ✕ • Helps choose best alternative
- ✕ • Reduces uncertainty
- ✕ • Supports strategic planning

CONCEPT OF DATA

- ✕ • Data are raw facts and figures
- ✕ • Can be numerical or descriptive
- ✕ • Basis for statistical analysis
- ✕ • Must be accurate and reliable

TYPES OF DATA

- ✕ • Primary Data
- ✕ • Secondary Data
- ✕ • Classification depends on source

PRIMARY DATA

- ✕ • Collected first-hand by researcher
- ✕ • Original in nature
- ✕ • Collected for specific purpose
- ✕ • More reliable but costly

SECONDARY DATA

- ✕ • Already collected by others
- ✕ • Published or unpublished sources
- ✕ • Less costly and easily available
- ✕ • May be less reliable

TOOLS OF PRIMARY DATA COLLECTION

- ✕ • Questionnaire
- ✕ • Schedule
- ✕ • Interview

QUESTIONNAIRE METHOD

- ✕ • List of written questions
- ✕ • Respondents fill answers
- ✕ • Economical and wide coverage
- ✕ • Requires literacy

SCHEDULE METHOD

- ✕ • Questions filled by enumerator
- ✕ • Suitable for illiterate respondents
- ✕ • More accurate but costly

INTERVIEW METHOD

- ✕ • Face-to-face interaction
- ✕ • Direct and flexible
- ✕ • Time consuming and expensive

CONCLUSION

- ✕ • Statistics is vital for business decisions
- ✕ • Proper data collection is essential
- ✕ • Correct interpretation leads to success