Edunotes
WHERE PASSION MEETS EDUCATION

LEARN KWNIY
Where passion meets with educations

Chapter 7

Graphical Presentation of Data

MEANING

Graphic presentation of data is another method of presentation of data. Under this method, all the statistical data are shown on graph paper in the form of lines or curves. Graphic presentation is a technique of presenting data on a graph paper.

ADVANTAGES OF GRAPHICAL PRESENTATION

The advantages of graphical presentation of data will be clear from the following points:

(i) Graphs represent the complex and unorganised data in a simpler or understandable form.

(ii) The values of median, mode, quartiles, etc. can be ascertained with the help of graphs.

(iii) With the help of graphs we can study the variations in the values of variables.

(iv) Graphs create long lasting effect on people's mind as they are attractive to look at.

(v) Less time is required to plot point and to draw many bars.

DISADVANTAGES OF GRAPHICAL PRESENTATION

The following are the limitations/disadvantages of graphical presentation of data:

(i) The graphs are based on brief information, so they do not show precise values.

(ii) Graphs may sometimes suggest wrong conclusions.

(iii) Graphs show only measurable tendency of the data. Actual values are not always clear from the graphs.

(iv) Graphs are not of equal significance to all the people.

DIFFERENCE BETWEEN DIAGRAMS AND GRAPHS

The following points of difference between diagrams and graphs may be noted :

(i) A diagram is generally constructed on plain paper while a graph is constructed on graph paper.

(ii) Graphs are used to obtain the values of median, mode etc. but the determination of these values is impossible through diagrams.

(iii) A graph represents mathematical relationship between two variables whereas a diagram does not.

(iv) Diagrams are more attractive and impressive than graph.

RULES OF CONSTRUCTING GRAPHS

The following general rules and directions should be observed while constructing graphs:

(i) Heading. There should be a proper heading for every graph. The heading should be simple, clear and self-explanatory.

(ii) Construction of Graph. Graphs are prepared on graph-papers. Before drawing a graph on the graph paper, one should see the nature

and size of data. Keeping in mind the size and nature of data a suitable point in the graph paper is fixed as a Point of Origin. Horizontal and vertical lines intersecting through this point are shown as bold lines.

(iii) Scale. Graphs are always drawn with reference to some scale. The choice of scale would depend upon the values and volume of data.

(iv) False Base Line. One of the basic rules while constructing graphs is that the scale on the y-axis should begin from zero. If the values in a series are very large and the difference between the smallest value and zero is high and if these values are to be indicated on y-axis of the graph, then the OY-axis is started somewhere above the point 'O'.

(e) Drawing a Line. Data should be plotted on the graph paper on the basis of values of X and Y variables. If many lines appear on the same graph paper, different kinds of crossing, dotting or colouring should be used. Lines may be of the following types:

(a) Simple Line

(b) Dotted Line

(c) Broken Line

(iv) Index. When different lines are drawn they must be accompanied by an index in which it should clearly be shown that which line represents which variable.

(vii) Presentation of Tables. Along with the graphic presentation of data it is necessary that tables should be presented so that the full knowledge of data may be obtained.

TYPES OF GRAPHS

Generally graphs are of the following two types:

I. Graphs of Time Series

II. Graphs of Frequency Distribution

I. Graphs of Time Series. When we observe the values of a variable at different points of time, the series so formed is called time series. The technique of graphic presentation is helpful in analysing change at different points of time. Graphs are the simplest to understand, easiest to make and most adaptable to many uses. Many attributes can be drawn on the same graph and a comparison can be made.

II. Graphs of Frequency Distribution. These graphs can be constructed in any of the following ways:

1. Line Frequency Diagram

2. Histogram

3. Frequency Polygon

4. Smoothed Frequency Curve

5. Cumulative Frequency Curve or Ogive