

Presentation of data

There are two main method of presenting data:

a) Tabulation

A most common way of presenting data in the tables is known as frequency distribution table. Frequency is the no. of units belonging to group of the variable. The variable characteristics such as age has a range from lowest to highest, the age for example ranges between 4-----12. This range is divided into subgroups called classes (4 - 6 , 7 - 9 , 10 - 12). The class limits are the lowest and highest values that can be included in the class. The difference between the upper and lower limit of a class is known as class interval.

Age subgroups	Gender		
	Males	Females	Both
4-6	16	18	34
7-9	15	16	31
10-12	21	14	35

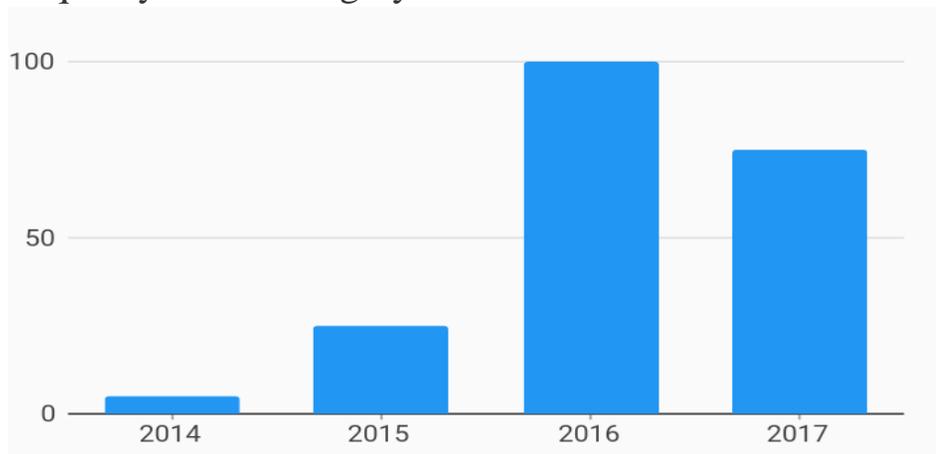
b)Diagrams

By arranging data into tables, we simplify the entire mass of data. But sometimes it is difficult to understand and compare two or more tables. Diagrams and graphs are extremely useful because they are attractive to the eyes, give a bird's eye view of the entire data, have a lasting impression on the mind of the layman and they facilitate comparison of data.

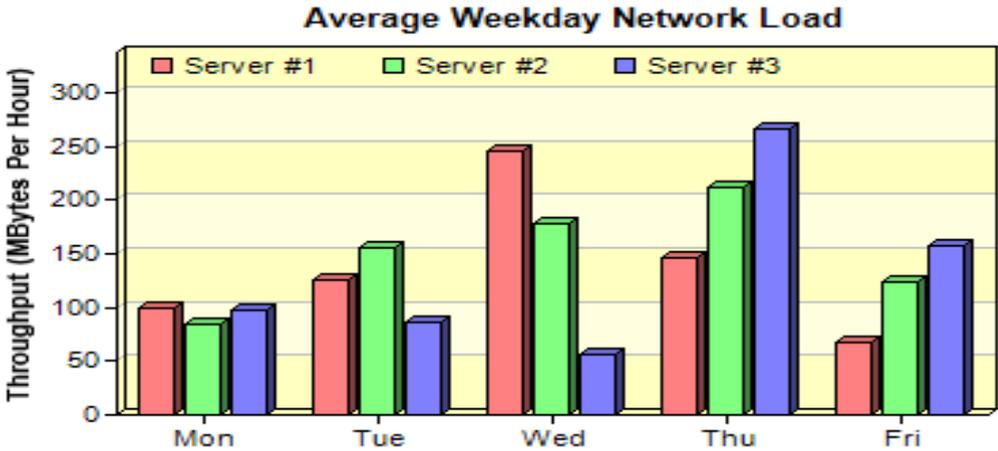
Types of diagrams:

Depending on the nature of data, any one of the following diagrams may be chosen.

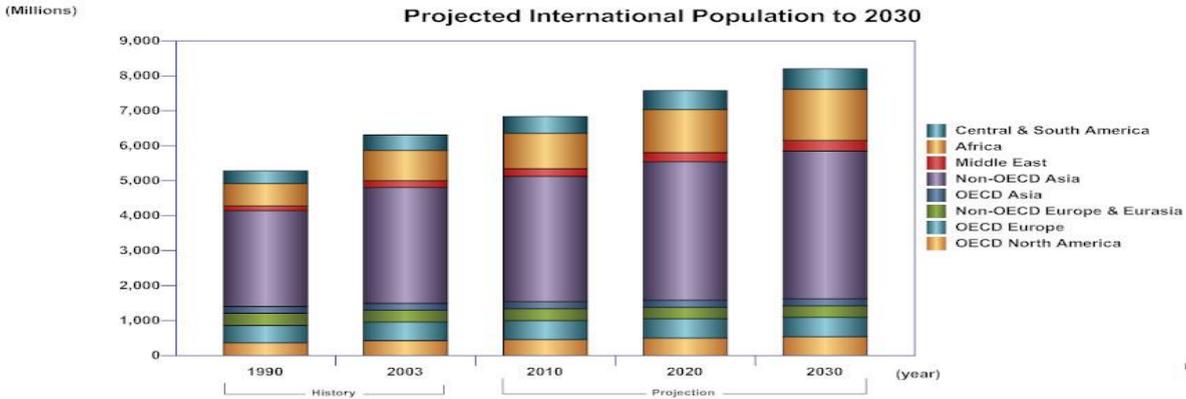
a) Bar Diagram: This diagram is used to represent qualitative data. It represents only one variable. For example, the number of people with dental caries in a particular age group may be shown by a bar diagram. The width of the bar remains the same and only the length varies according to the frequency in each category. The bars can be either vertical or horizontal.



b) Multiple Bar: This diagram is used to compare qualitative data with respect to a single variable, like sex. This diagram is similar to the bar diagram except that for each category of the variable we have a set of bars of the same width corresponding to the different sections without any gap in between the width and the length corresponds to the frequency.



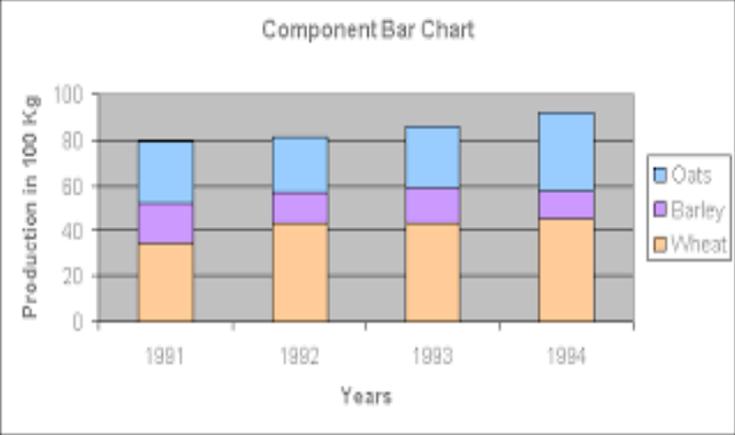
c) Proportional Bar Diagram: This diagram is used to represent qualitative data. When it is desired to compare only the proportion of sub-groups between different major groups of observations, then bars are drawn for each group with the same length, either as I or I00%. These are then divided according to the sub-group proportion in each major group.



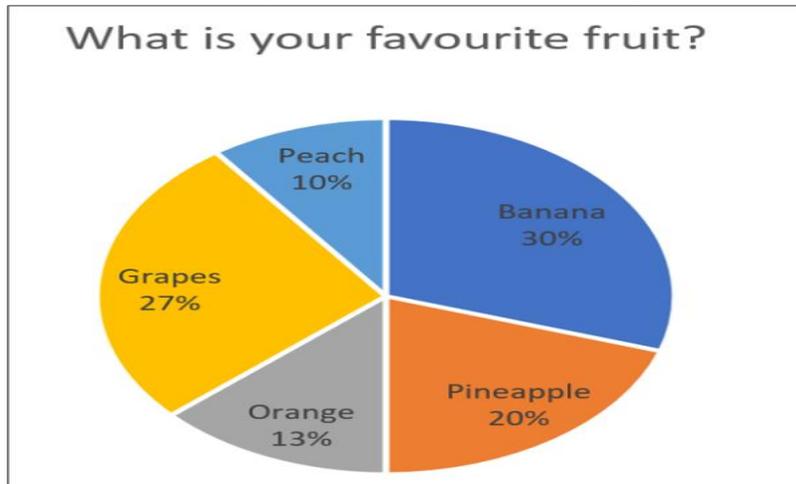
Source: Energy Information Administration. www.eia.doe.gov

d) Component Bar Diagram: This diagram is used to represent qualitative data. When it is desired to represent both, the number of cases in major groups as well as the subgroups at the same time, we use the component bar diagram.

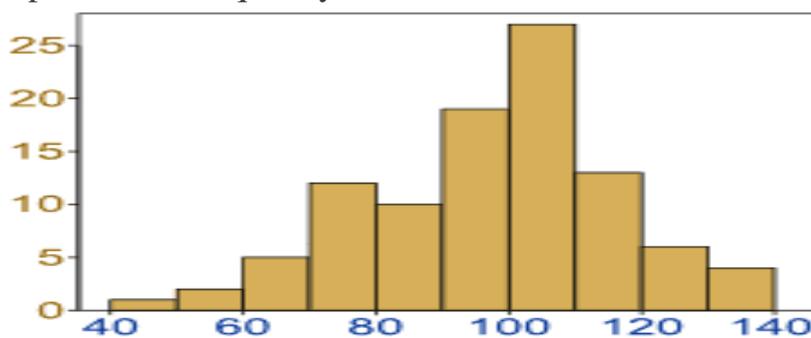
First, we draw rectangles proportional to the number of cases of the major group. Then each rectangular is divided according to numbers in the subgroups.



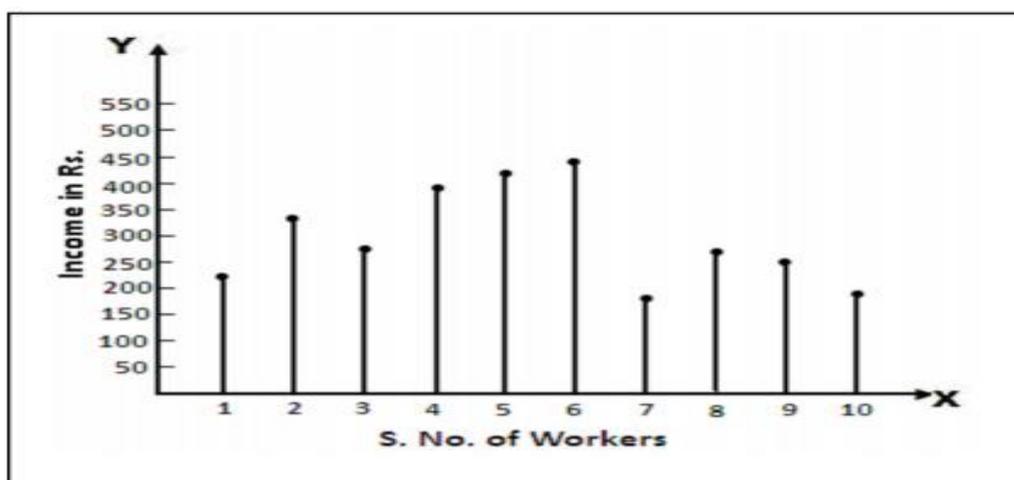
e) Pie Diagram: These are popularly used to show percentage breakdowns for qualitative data. It is so called because the entire graph looks like a pie and its components represent slices cut from a pie. A circle is divided into different sectors corresponding to the frequencies of the variables in the distribution. The total at the center of a circle is equal to 360° and it represents the total frequency. However, this diagram cannot be used to represent two or more data sets.



f) Histogram This diagram is used to represent quantitative data of continuous type. A histogram is a bar diagram without gap between the bars. It represents a frequency distribution.

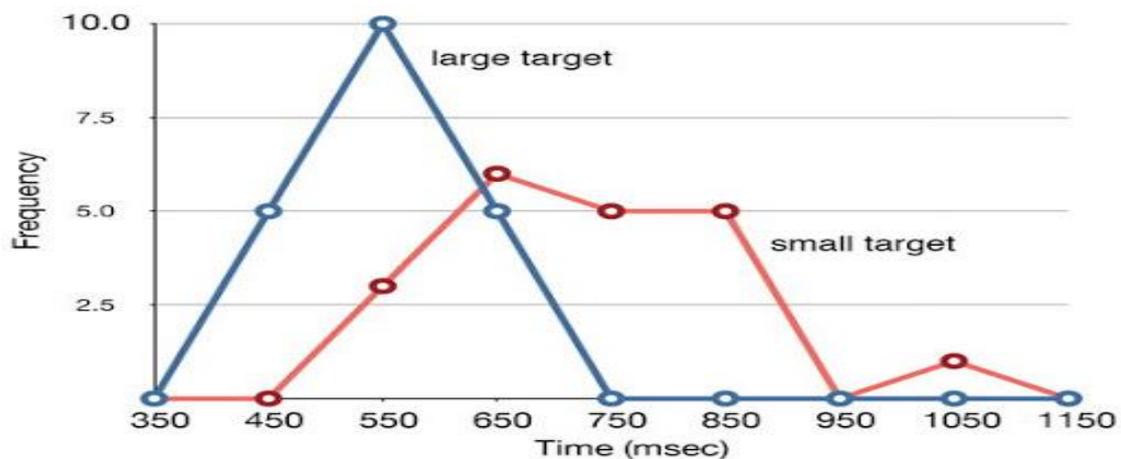


g) Line Diagram: This diagram is useful to study changes of values in the variable over time and is the simplest type of diagram. On the X-axis, the time such as hours, days, weeks, months, years are represented and value of any quantity data is represented along the Y-axis.



Line Diagram of Income of 10 workers

h) Frequency Polygon: This is used to represent frequency distribution of quantitative data and is useful to compare two or more frequency distributions. To draw a frequency polygon, a point is marked over the mid-point of the class interval, corresponding to the frequency. Then, these points are connected by straight lines. To compare two or more frequency distributions, lines of different types are drawn on the same graph.



i) Cartograms or Spot Map: these maps are used to show geographical distribution of frequencies of a characteristic. The coverage of geographic area through dental clinics may be represented through this diagram and dot or point may be used to indicate one such camp for that area.

