

CHAPTER 1

INTRODUCTION

In recent days we hear talking about ‘Statistics’ from a common person to highly qualified person. It only shows how ‘Statistics’ has been intimately connected with wide range of activities in daily life.

Statistics can be used either as plural or singular. When it is used as plural, it is a systematic presentation of facts and figures. It is in this context that majority of people use the word ‘Statistics’. They only meant mere facts and figures. These figures may be with regard to production of foodgrains in different years, area under cereal crops in different years, per capita income in a particular state at different times, etc., and these are generally published in Trade Journals, Economics and Statistics Bulletins. Newspapers, etc. When statistics is used as singular, it is a science which deals with collection, classification, tabulation, analysis and interpretation of data.

Statistics as a science is of recent origin. The word ‘Statistics’ has been derived from a Latin word which means ‘State’ which in turn means ‘politically organised people’ i.e., government. Since governments used to collect the relevant data on births and deaths, defence personnel, financial status of the peoples, import and export, etc. Statistics was identified with Government. Recently, it pervades all branches of sciences, social sciences and even in Humanities like English literature. For example, in English literature the style of a particular poet or an author can be assessed with the help of statistical tools.

In the opinion of Fisher ‘Statistics’ has got three important functions to play (i) Study of statistical populations (ii) study of the variation within the statistical populations (iii) study of the methods of reduction of data.

P.C. Mahalanobis compares ‘Statistician’ with a ‘Doctor’ where Doctor prescribes medicine according to the disease of the patient whereas statistician suggests statistical technique according to the data in hand for proper analysis and interpretation.

Bowley defined statistics as ‘the science of measurements of the social organism regarded as a whole in all its manifestations.’ Another definition says that it is ‘quantitative data affected to a marked extent by a multiplicity of causes.’ Yet another definition says that it is a ‘Science of counting’ or ‘Science of averages’ and so on. But all these definitions are incomplete and are complementary to each other.

There are some of the limitations of 'Statistics' also when the data are not properly handled. People start disbelieving in statistics when the (1) data are not reliable (2) computing spurious relationships between variables (3) generalizing from a small sample to a population without taking care of error involved.

If one is ensured that data are reliable and is properly handled by a 'skilled statistician', the mistrust of statistics will disappear and in place of it precise and exact revelation of data will come up for reasonable conclusions.