

Significance of normal distribution

[Business](#)



In most cases, it is not feasible to gather data on the whole target population. Supposed an entrepreneur plans to invest in a shopping mall in a certain locality and decides to sell more items of clothing. He might be interested to know the body sizes of the people within the perimeter from the store, however, he finds it impossible to collect all the data about the residents. Then, if the data subset or sample size of the population of interest can be considered instead of including the entire population. Hence, repeating the data gathering procedure would most likely lead to a different group of numbers. A framework or representation of the distribution is used to provide some sort of consistency to the results.

Using normal distribution is very important since it provides an appropriate description of the measures of the variables (height, weight, age, economic profile, reading ability, job satisfaction, work performance, memory, life span, and many others) precisely and normally distributed. The normal distribution can be effectively used to describe with accuracy, any factor or variable which tends to clump or agglomerate surrounding the mean. For example, the heights of children ages 6 in the United States are just about to be normally distributed, with a mean of about 4 ft. Most children have a height that is close to the mean, although there is a small number of "outliers" in which height is significantly higher or below the mean. Through the use of a histogram, heights of children will appear the same as a bell curve, with the correspondence that is becoming closer if and when more data is used.

In addition, the normal distribution is so significant due to the fact that it is so easy to prepare and work with it. The approximations are beneficial and faster to estimate or compute by hand. Students can do it by themselves

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with minimum instruction, besides, several types of statistical tools can be derived out of using normal distributions. Fortunately, these tests derived from normal distribution work very well although the distribution is only more or less normally distributed.