

What is the difference between a parameter and a statistic?

Both the terms parameter and statistic are statistical terms that are used to characterize different groups in study. Although both terms are used to describe the populations being studied, it's crucial to know [what is the difference between a parameter and a statistic?](#) since it affects the conclusions.

To put it simply, a statistic is a sample taken from the population under study, whereas a parameter is the complete population being investigated. For example, researchers are interested in polling data to learn what the general population of probable voters thinks about the candidates. Since it is difficult to survey every registered voter in a state, a sample of 2,000 voters will be chosen, and the results will be extrapolated to the rest of the population. In this article we will check out the definition of parameter and statistic along with **what is the difference between a parameter and a statistic?**

What Is a Parameter?

A population's fixed characteristic that sums up or describes the population is called a parameter. It is a number that is constant for a particular demographic and represents the entire population. Parameters are used in statistical analysis to characterize significant characteristics of the population, such as the mean, variance, proportion, or distribution of a particular attribute.

For instance, if we are analyzing the height of adult males in a certain nation, the average height of all adult males in the nation would be a parameter. The average height value would be reflective of all adult males in the nation and would remain constant for that group. Keep reading to know about the statistic and **what is the difference between a parameter and a statistic?**

What Is a Statistic?

A statistic is a sample that has been taken from the parameter or population. Depending on the population size and the degree of accuracy the researchers are looking for, different sample sizes will be used.

The range of 2,000 to 3,000 people makes up the majority of samples used in polling and surveys since it has a respectably high level of dependability and can be planned. In general, statisticians like to have a big sample size because there is less chance of error when there is a larger sample size. Read below to check **what is the difference between a parameter and a statistic?**

Difference Between Parameter And Statistic

- An attribute of a population with a descriptive value is called a parameter. That is the exact value.
- A statistic is a numerical representation of a population sample. It is a population parameter estimate.
- It is frequently impossible to calculate parameters, particularly in the wild where there are too many individuals and it is impossible to locate them all.
- In order to estimate the population parameters, a sample is employed with statistics.

- An example of a parameter would be the total United States population of students in high school.
- An example of a statistic would be 2,000 students in high school from the midwest.
- A parameter or population is a large group of whatever it is that you are investigating, be it people, things, places, nations, creatures, plants, or organizations.
- A statistic is a sample taken depending on what the parameter is. This indicates that it is a subset of the people, nations, organizations, creatures, things, or plants that you are researching.
- To know **what is the difference between a parameter and a statistic?**, several symbols are used in statistics.
- For instance, the statistic mean is denoted by \bar{x} ., whereas the parameter mean is denoted by μ .