

CONCEPT OF PARAMETER AND STATISTIC

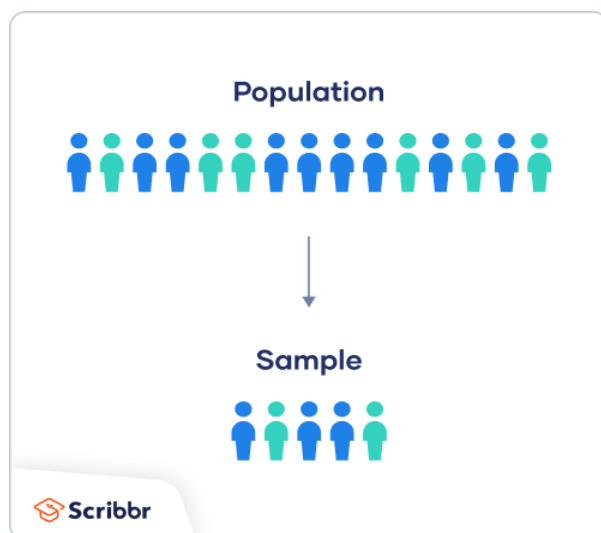
Parameters are numbers that describe the properties of entire populations. Statistics are numbers that describe the properties of samples. For example, the average income for the United States is a population parameter. Conversely, the average income for a sample drawn from the U.S. is a sample statistic. Both values represent the mean income, but one is a parameter vs a statistic.

Remembering parameters vs statistics is easy! Both are summary values that describe a group, and there's a handy mnemonic device for remembering which group each describes. Just focus on their first letters:

- Parameter = Population
- Statistic = Sample

Population versus sample

Figure 1.



In research, a **population** is the entire group that you're interested in studying. This may be a group of people (e.g., all adults in the US or all employees of a company), but it can also mean a group containing other kinds of elements: objects, events, organizations, countries,

species, organisms, etc.. A **sample** is a smaller group taken from the population. The sample is the group of elements that you will actually collect data from.

TABLE 1

The given table shows the difference between parameter and statistics

PARAMETER	STATISTICS
1.Any function of the population values is called the parameter	Any function of the samole observation is called statistics.
2.The parameter is an unknown constant	The statistics does not contain unknown constant.
3. Parameters are not used to estimate population characteristics.	Statistics are used to estimate population characteristics.
4. Parameters are free from sampling and other errors.	Statistics are subject to sampling and non-sampling error.
5 .There is no distribution of parameters.	Statistics have distribution, which is called sampling distribution..

REFERENCE

- <https://www.statisticshowto.com/what-is-a-parameter-statisticshowto/>
- <https://www.google.com/search?q=symbol+of+parameter&oq=&aqs=chrome.2.0i66i357i362i394i439i452i468i523l6j35i39i362i523l2.5640j0j4&sourceid=chro>