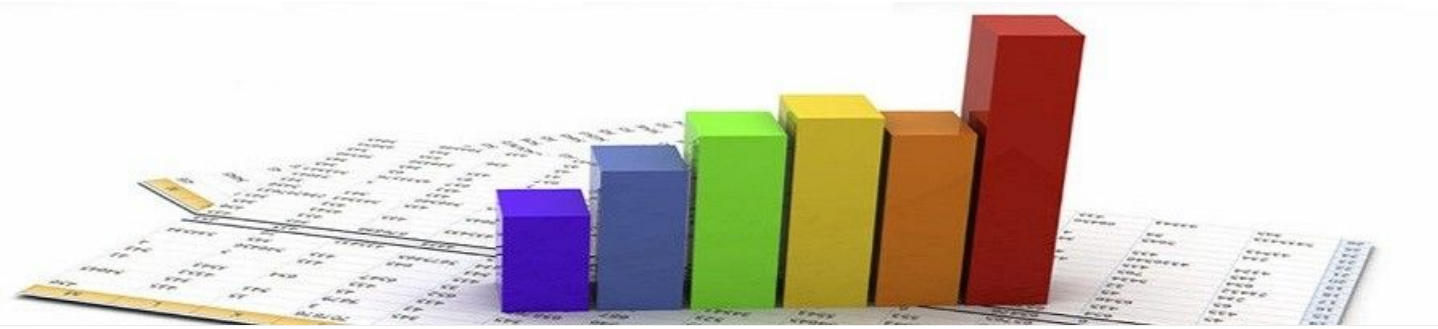
Statistics How To

Statistics for the rest of us!



Census in Statistics: Simple Definition

Census in Statistics: Overview

A **census** studies every member of a population. It results in a parameter for a population, as opposed to a statistic. Basically, a parameter contains information about everyone in the population while a statistic only tells you something about a small part of that population (How to tell the difference between a statistic and a parameter). Studying every member of a population is usually not practical because of finances or time constraints. With the exception of the U.S. Census, censuses are very rare.

Census in Statistics vs Sampling

A census is a way to find and record information about every member of a population. It's a term mostly connected with national information although the term *can* refer to well-defined, smaller populations. For example, you could take a census of dog owners, or Boy Scouts, or people aged 65 and above.

A census is the opposite of sampling: A census includes every member of the population in the results while sampling only includes a small percentage of the population. Instead of asking all dog owners which brand their dog prefers, you would ask *a sample* of them. Therefore, censuses tend to be more accurate than sampling. That said, a well-conducted survey using sampling can paint a fairly accurate picture of the entire population.

Census taking in The Netherlands, c. 1925.

Because of the possibility of error in sampling, confidence intervals are usually associated with sampling. For example, a national poll might give results as having a 98% confidence interval. Censuses don't have confidence intervals because there isn't a question about whether results are accurate or not.

The U.S. Census

The **U.S. Census** happens every ten years, for years ending in 0. For example, census years included 1990 and 2000. Historically, polling staff have contacted individual households via mail and direct contact. However, many households in future censuses will be able to fill out census information using the internet. Participation in the census is mandatory. Refusing to participate in the census can result in hefty fines.

The **Economic Census** happens every five years, for years ending in 2 and 7. For example, there was a U.S. Government Economic Census in 2007 and 2012. The Economic Census summarizes information about American businesses.

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