

## Understanding Your Survey Sample Size

If you are designing a survey or study for your company, sample size is one of the first questions you will encounter. Your sample size can have a big impact on the accuracy of your results. Whether you are just analyzing trends, or gathering data to support a big merger, it pays to know your numbers. So, let's talk about sample size.

**Understand Sample Size** – The sample size is the number of responses you will gather to reach your conclusions. Understanding your sample size will give you the confidence to know how closely your survey responses match the target population. A larger sample size will give you more accuracy, but a larger sample size also takes more time and resources to collect. It's important to determine the most appropriate sample size for your needs so you aren't wasting resources or drawing incorrect conclusions.

**Determine Your Objective** – To design an appropriate survey or accurate trend report, you need to understand your goal. What are you trying to measure? Do you want to see whether your customer satisfaction level has changed, or do you want to test potential interest in a new product? Once you know your goal, you can determine your target population.

**Determine Your Target Population** – Here we are talking about the group of people you want to understand. For any study or survey, you are trying to determine the opinions or behaviors of a specific group. For example, if you would like to find out how many US families vacation in June, your population is all US families. It's important to consider your population size before determining your sample size.

**Determine Your Confidence Level and Confidence Interval** – These two concepts correspond to determine the accuracy of your survey. Remember, that more accuracy isn't always necessary.

- **Confidence Level** indicates how confident you want to be in the results, and is written as a percentage. From 90%-99% are generally accepted confidence levels. 95% is a good standard. Going below 90% is not recommended in most cases.
- **Confidence Interval (Margin of Error)** indicates how accurately these responses reflect the true opinions of the population. This is generally represented as a  $\pm$  followed by a percentage. For example, let's say you want to know what number is the best between 1-100. You have gathered a sample of 100 people to survey, and have asked them to select their favorite number. The mean response is 65. If you have a confidence interval of  $\pm 5\%$ , then you can say that you expect the true population responses to be between 60-70. You will need to determine what confidence interval/margin of error you are comfortable with. 5% is standard, but you may choose to go with 1% to 10%, depending on how accurate you need to be. Above 10% is generally not recommended.
- **How do they work together?** In the above example, if you selected a confidence level of 90% and an interval of  $\pm 5\%$ , then you can say that you are 90% sure that the true population responses would fall between 60-70. That is, that 90% of the time any random selection of that population would yield responses within the confidence interval.

# AFTERWORDS

So now you understand the concepts involved in selecting your sample size. We don't blame you if you don't want to do the math yourself. There are actually a few different calculations that can be used depending on which type of study you are doing and how much information you have about the population. It can get a bit complicated. To simplify things, you may want to use a sample size calculator like the one found [here](#), or check out the reference chart below.

		Population and Sample Size					
Confidence Level	Margin of Error	200	500	1000	2500	5000	10000
95%	±10%	65	81	88	93	95	96
	±5%	132	218	278	333	357	370
	±1%	195	475	905	1983	3288	4899
99%	±10%	91	125	143	156	161	164
	±5%	154	285	399	525	586	623
	±1%	197	485	943	2172	3842	6239

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