toluna

Target Groups, Quotas and Sample Sizes

Cheatsheet

At a glance

There is no 'one size fits all' approach to target group definition, quotas and sample sizes, however there are a few factors we always need to consider when defining them:

1. **Ensure no assumptions are being made** when defining who should and shouldn't be included in your target group.
2. **Nationally representative quotas** should only be applied to studies that try to represent a nation (country) in whole. All other studies require custom quotas.
3. **Quotas** should target those attributes of respondents that impact their behaviors, attitudes, or habits.
4. **Sample size** should be planned carefully. Think about the subgroups you want to analyze and ensure each has enough respondents (ideally at least 100) to allow for robust analysis. Also consider the margin of error and how your study design choices may affect the confidence level.

Target groups

There are two main elements to consider when defining who to interview for your study: Who to include in your target group and who not to include in your target group.

They are equally important aspects in achieving an inclusive and representative sample while ensuring only relevant respondents are included in your data. A key element while defining your target group is to try reducing assumptions you may have about who does and doesn't do, have, or believe certain things, otherwise your target group may be biased from the beginning.

Who to include

- To achieve a representative sample of respondents, it is important to include everybody who may be relevant for your research.
- At this stage, it's easy to accidentally forget including certain sub-groups of respondents due to assumptions that are being made about the profile of people

who do, believe, or have certain things. Often, these assumptions are gender-based; an example for this is:

- **Example: Only including women in a study about breast cancer – men can get breast cancer too.**

Who not to include

- To ensure only relevant respondents are included in your sample, it is important to consider whether there are any respondents who may not qualify for your survey.
- At this stage, it's easy to accidentally include certain sub-groups of respondents due to assumption that everybody follows a certain behavior or buys a certain product.

Some examples for this are:

- **Not everybody brushes their teeth or uses toothpaste – there are people who don't have teeth or use alternatives products.**
- **Just because somebody consumes a product doesn't mean they also buy it – somebody else in their household may be buying it or they may consume it in a different location where it's provided for them, such as at work.**

These two elements show us that often we need to challenge our stereotypes when defining a target group and we should target based on respondents' behavior, attitudes, and experiences rather than stereotyped gender, age, or generalized assumptions.

Quotas

Quotas are a way of controlling certain aspects of your target group to ensure it's representative of the population you're trying to represent. These aspects can be demographics (e.g. age, gender, region, income), behaviors (e.g. frequency of buying certain products), or other attributes like psychographics (e.g. extraversion, environmental consciousness).

Quotas help ensure that the distribution of these elements is the same in the target group as in the overall population. For example, if the population the study is supposed to represent has 51% females and 49% males, then the sample should also have 51% females and 49% males. However, it's important to note that extensive

quota requirements can make it harder to reach specific target groups and may slow down fieldwork. For this reason, quotas should only be applied where they are truly necessary and expected to have a meaningful impact on the study results.

There are two different types of quotas to choose from:

Nationally representative (nat rep) quotas

- These quotas should only be used where the research study is trying to represent an entire country, e.g. nationally representative of the UK, Canada, Thailand.
- Nat rep quotas should not be used when respondents are being excluded from the survey based on their answers. At this point respondents are being filtered out and a nationally representative structure of gender, for example, may not be representative of the gender structure of the actual target group.

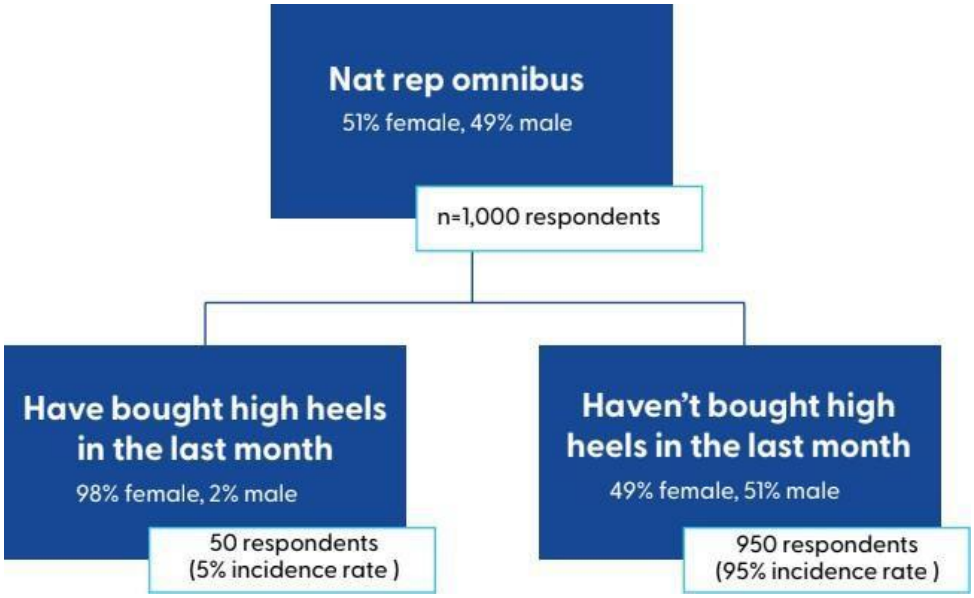
For example:

- **The actual gender distribution of high heels buyers is heavily skewed towards females. Adding nationally representative quotas to this target would greatly inflate the contribution male respondents who buy high heels have to the survey. Their purchasing behavior may be different, so the data would be skewed and not representative.**

Custom quotas

- Custom quotas are applied to all studies that aren't nationally representative.
- To determine the quotas that should be applied, an omnibus study can be fielded to determine what the structure of the population looks like that falls within the target group.

For example:



At this stage, it is important to ensure all factors that may bias the data are controlled via quotas. It is important to think in detail through the elements that may impact respondents' behavior and answers, as otherwise results may be biased.

Some examples include:

- **Income may impact what brand of product respondents are aware of or buy regularly, e.g. car brands.**
- **Age may impact what brand of product respondents are aware of or buy regularly, e.g. awareness for or usage of period products.**

Equally, some factors that are traditionally included as quotas may not actually have an impact on respondents' behavior.

Examples:

- **Region may not impact what brands respondents are aware of.**
- **Age may not impact what products respondents buy.**

Sample Sizes

When planning a study, it's important to think not only about who you want to talk to, but also how many people you need to hear from. This is called sample size.

Sample size matters because it directly affects how reliable, representative, and precise your results will be. If the sample is too small, findings may be unstable or misleading; if it is large enough, results can better reflect the population.

Some key details to consider are: confidence level, margin of error, and subgroup analysis.

Confidence Level

When you collect survey data, you're looking at a sample of people, not the entire population. Because of this, there's always a degree of uncertainty in the results.

The confidence level tells you how certain you can be that your survey results reflect the true values of the whole population.

- **Most research uses a 95% confidence level.**
- **What this means:** If you ran the same survey 100 times, about 95 of those surveys would produce results within the margin of error. In the other 5, the results could be further off.

In short, the confidence level provides a measure of reliability, helping you understand how much trust you can place in the results.

Margin of Error (MOE)

The margin of error is the range around your survey result that likely contains the true population value. It reflects the level of uncertainty that comes with working with a sample instead of the entire population.

Example:

- Suppose 35% of respondents say "yes" to *Would you buy this product?*
- With a ±5% margin of error, the true percentage in the population is likely between 30% and 40%.

In short, the margin of error helps you understand how close your survey results are likely to be to the real-world values.

How Confidence Levels and MOE Work Together

With a **±5% margin of error at a 95% confidence level**, you can be 95% sure that the true population value falls within 5 percentage points of your survey result. For example, if 35% of respondents say "yes," the true percentage in the population is likely between **30% and 40%**. There's still a small 5% chance the actual value could fall outside that range.

Why It Matters in Practice

A smaller margin of error means more precision in your results:

- With n = 400 respondents, MOE ≈ ±5%.
- With n = 1,000 respondents, MOE shrinks to ≈ ±3%, so results are more exact.

Important notes:

- These are general examples, assuming a large population and a 95% confidence level.
- The exact margin of error depends on both the sample size and the percentage result being measured.
- For smaller populations, the MOE can be even smaller since the sample covers more of the group (this is called the finite population correction).

Rule of thumb: The larger the sample size, the smaller the margin of error and the more reliable and representative your results will be.

Subgroups

Sometimes you want to look at results for smaller groups inside your study, for example:

- Men vs. Women
- Different age groups
- Heavy vs. light buyers

Each of these is a subgroup. To get reliable insights, each subgroup should also have enough respondents.

Our recommendation: aim for **at least 100 respondents per subgroup** if you want to report their results separately. Smaller groups can still provide useful insights, but their findings should be seen as directional only and not representative of the population.

It is also important to define your subgroups *before* you launch the study – otherwise you may not collect enough respondents in each group to analyse them properly.

Once subgroups are defined, you can calculate the overall sample size:

- If you only need results for the total target group, around 400 respondents is often enough to achieve a margin of error of about ±5% at the 95% confidence level.
- If you also want to analyze subgroups, the total sample size must be larger so that each subgroup is adequately represented.

Example #1:

If you want to compare Men vs. Women and need about 100 respondents in each subgroup, your total sample should be at least 200 respondents. But if you want the total population estimate to still have around ±5% MOE, you'd need closer to 400 respondents in total (≈200 per gender group).

Example #2:

Imagine you want to study pet ownership and plan to analyze results separately for men and women, and within each gender also compare dog owners versus cat owners. This gives you four subgroups:

- Women with a dog
- Women with a cat
- Men with a dog
- Men with a cat

If the subgroups are equally distributed and each subgroup requires at least 100 respondents, you will need a minimum of 400 respondents in total. If you also want to compare other attributes, such as age groups, the sample size would need to increase further to ensure each subgroup has enough people to give reliable insights.

If the expected incidence of some groups is smaller (e.g., only 10% own a cat), then the rarest group becomes the base for your calculation, and the total sample size must increase to ensure at least 100 respondents in that subgroup.