

Supporting Information

Saiga horn user characteristics, motivations, and purchasing behaviour in Singapore

Doughty et al. 2019

S1 File: Survey Size Power Calculation

Using nested analyses as a gauge, we conducted a power calculation for performing a three-tiered nested proportion statistical test with three of our most integral questions.

Example three nested proportion questions we hoped to analyse:

Highest level question: Saiga use -> 13% for usage -> $202.5/0.13 = 1558\text{pp}$

Second level question: Reasons for use -> est40% for recommendation -> $81/0.4 = 202.5\text{pp}$

Third level question: Recommenders for use -> est30% for family -> 81pp

Margin of error = 10% at the lowest level

Equation Used:

$$n = N * X / (X + N - 1),$$

“where, $X = Z_{\alpha/2} - *p*(1-p) / \text{MOE}^2$, and $Z_{\alpha/2}$ is the critical value of the Normal distribution at $\alpha/2$ (e.g. for a confidence level of 95%, α is 0.05 and the critical value is 1.96), MOE is the margin of error, p is the sample proportion, and N is the population size.” (<https://bit.ly/2qMON7Z>)