

APPENDIX 2-3. Sample Error.

The proposed sample size was “ $n = \frac{N \cdot Z_a^2 \cdot p \cdot q}{d^2 \cdot (N-1) + Z_a^2 \cdot p \cdot q}$ ”, where: p= is the expected frequency of the factor to study. If not known, use p=0.5 (50%) that maximizes the sample size; d= precision or error admitted; q= 1-p; N= total population; $Z_a = 1.962$ for a confidence level of 95%.

With values of d=5.0%, p=0.5 and a confidence level of 95%

$$n = \frac{54173 \cdot 1.962^2 \cdot 0.5 \cdot 0.5}{0.05^2 \cdot (54173 - 1) + 1.962^2 \cdot 0.5 \cdot 0.5} = 382.24$$

Thus, the workers to study will be 383. During the field work, 2,000 interviews were carried out, the response rate being 25.10%; that is, 502 questionnaires were completed. For this reason, the admitted error (d') was less:

$$n = \frac{54173 \cdot 1.962^2 \cdot 0.5 \cdot 0.5}{d'^2 \cdot (54173 - 1) + 1.962^2 \cdot 0.5 \cdot 0.5} = 502$$

So, d'= 0.04358, which is equivalent to an accuracy of 4.36%.