Sampling Methodology Document

1. Introduction

This document outlines the sampling methodology for the **2024 Consumer Satisfaction Survey**. The objective is to detail the approach used to obtain a representative sample and ensure accuracy and reliability in the survey results.

2. Population and Sampling Frame

The target population comprises individuals aged 18 and above, residing in urban locations nationwide. The sampling frame is a compiled list provided by the 2023 Census Bureau, containing verified residential addresses.

3. Sampling Technique

A stratified random sampling technique has been chosen to ensure representation across different age groups and regions.

1. **Strata Definition:** Population divided by age (18-29, 30-49, 50+) and regions (North, South, East, West).
2. **Sample Allocation:** Proportional to the size of each stratum based on census data.
3. **Random Selection:** Within each stratum, individuals are randomly selected using computer-generated numbers.

4. Sample Size Determination

The required sample size is calculated using a 95% confidence level with a 5% margin of error. The formula applied is:

$$n = (Z^2 \times p \times (1\text{-}p)) / E^2$$

- **Z:** Z-score (1.96 for 95% confidence)
- **p:** Estimated proportion (0.5 used for maximum sample size)
- **E:** Margin of error (0.05)

The final sample size after accounting for a 10% non-response rate is **440** individuals.

5. Data Collection Procedure

1. Selected individuals are contacted via email and phone.
2. Survey responses collected online or through telephone interviews.
3. Reminders sent after 5 and 10 days to improve response rate.

6. Quality Control

- Verification of respondents' eligibility before inclusion.
- Regular review of response data for completeness and consistency.
- Duplicate entries identified and removed.

7. Reporting and Documentation

All steps in the sampling process are documented and retained, including sample selection, contact attempts, and non-response tracking, ensuring full transparency and reproducibility of methodology.

Important Notes

- Clearly defines the population and sampling frame to avoid bias.
- Sample size calculations must match the study's confidence and margin requirements.

- Details of sampling and data collection steps enhance transparency and reproducibility.
- Documentation ensures compliance and aids in future audits or studies.
- Regular quality checks are crucial to maintain sample integrity.

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