

Group Project 2: Analyzing Recycling Behavior at NUS

Objective:

Your group will analyze a dataset from the first field trial conducted at the National University of Singapore (NUS). The goal is to evaluate whether the new recycling bin designs introduced during the trial were successful in improving recycling behavior, specifically by reducing contamination rates across different types of recyclable materials.

Using the provided dataset, **Project2Data.xls**, assess whether **shaped openings** (Phase 2) and **informational banners** (Phase 3) led to meaningful improvements in recycling behavior at NUS.

Key Considerations:

- **Data and Variables:** You are provided with contamination rates for paper, plastic, and can recyclables at two different locations (ENGINE and UTOWN). The trial is divided into three phases:

- **Phase 1:** Baseline (before intervention).
- **Phase 2:** Introduction of shaped openings.
- **Phase 3:** Introduction of informational banners.

- **Intervention Strategies:**

- *Shaped openings* were designed to guide users toward correct recycling behavior by modifying the bin openings to match the recyclables.
- *Informational banners* were added to further encourage proper recycling by providing clear instructions and visual cues above the bins.

General Guidelines:

- **Report Length and Tools:** The maximum length of your report is **four pages**, excluding appendices. You may use Excel, SPSS, SAS, R, Python, or Stata to conduct your analysis. If you utilize Large Language Models (LLMs) in your project, please include the exact prompts used.

- **Incorporating Additional Data:** If you believe additional data will enhance your analysis, you are welcome to include it. However, ensure that any new data is properly integrated with the provided dataset, and make sure to cite all data sources clearly.
- **Writing for Your Audience:** Your future audience, such as colleagues or business partners, will focus on how your analysis benefits them. Make sure your **executive summary** highlights the value of your findings right away. Use clear visuals (tables, charts) to present your results, avoiding unnecessary complexity.
- **Professionalism and Clarity:** Your report should reflect both technical competence and professionalism. Ensure your findings are well-organized and connect to real-world applications. Think about how your analysis might inform decision-making in a business setting.
- **Collaboration:** Since this is a group project, effective collaboration is essential. The final report should be cohesive and reflect a well-coordinated effort from all group members.
- **Creativity and Flexibility:** There is no single correct approach to this project, so feel free to be creative and explore different methods in your analysis. While the focus should remain on practical implications, your approach should still reflect rigorous analytical thinking.

Submission Details:

- The report and code should be submitted via Canvas, with one submission per group.
- Ensure that the **names and student numbers** of all group members are included on the cover page.