Tiger

Summary:

This project aims to address the environmental impact of last-mile delivery in the e-commerce industry in Shanghai. In order to address this problem, the authors seek to answer the question: “How can policy interventions reduce the carbon footprint of last-mile logistics?” Using data from the LaDe dataset covering 50 districts in Shanghai (2022-2023), the authors set out to answer this question by analyzing delivery times, logistics efficiency, and energy consumption in different supply chain stages. They find that transportation, warehousing, packaging, and returns are key contributors to carbon emissions, and interpret this as evidence that targeted policies in these areas could reduce environmental impact. Given that, they argue that improvements in delivery efficiency, EV adoption, and packaging standards can help mitigate the carbon footprint of last-mile logistics.

High-Level Reflections:

- **Document Organization:** The report is well-structured but isn’t divided into sections like executive summary, context, strategy, results, and conclusion as required. The placement of some figures feels abrupt.
- **Problem Motivation:** The authors highlight the e-commerce industry's carbon footprint, citing rapid growth and logistical challenges, but they could expand on why this issue is critical for Shanghai specifically and the WTO ESG head.
- **Alignment of Questions:** The questions align with the problem, supported by data like the WEF’s 32% emission increase projection by 2030 and McKinsey’s 50% emission estimate for last-mile delivery.
- **Analysis:** The analysis is underwhelming; it lacks detailed statistical tests, robustness checks, and comparative analysis across regions. Merely presenting percentages without hypothesis testing limits the credibility.
- **Answers:** Answers are incomplete and not fully supported by data analysis. More thorough examination and validation are necessary.

Detailed Suggestions:

- Provide statistical tests such as t-tests or ANOVA to strengthen findings.
- Include visualizations comparing different districts with clear labels.
- Expand the analysis to include regression models or correlation analyses.
- Highlight strengths such as using real-world data but note the lack of depth in analysis and suggest improvements for a more rigorous approach.
- Add a more thorough discussion of the data cleaning process, specifying any assumptions made.
- Provide detailed explanations for why specific districts performed differently in delivery times and carbon emissions.

- Include recommendations for policy interventions based on data insights, such as promoting EV adoption or optimizing delivery routes.
- Discuss the limitations of using Shanghai data and suggest how similar analyses could be extended to other regions.
- Offer actionable suggestions for improving last-mile logistics, such as implementing technology solutions or standardizing subcontractor data collection.
- reorganize the structure of this report based on Writing to Stakeholders reading and include context, strategy, results, and conclusion.