



Can electric bikes replace motorized vehicles?

Background

Electric bikes (e-bikes) can be considered the fastest-growing means in the transport market in several regions of the world, e.g. China and Western Europe. E-bikes are considered a more environmentally friendly mode of transport than vehicles that consume fossil fuels. Compared to conventional cycling, e-bikes are equipped with a motor which facilitates the physical effort of riding, enabling riders to have long-distance trips. Consequently, the inclination of government and policymakers is increasing towards e-bikes due to being an environment-friendly substitute to motorized vehicles for medium-distance trips and their contributions to congestion reduction. However, knowledge about e-bike modal substitution is scarce.

Project description

In this project, students will conduct a survey which can be done within the campus with approximately 300 participants. Alternatively, students could work with the national travel survey and elicit information about the travel behavior of e-bike (non)users, such as their socio-demographic characteristics, travel habits and opinions about different transport modes. Participants will be categorized based on e-bike users (or owners), and nonusers and students will investigate how these two groups' socio-demographic characteristics and travel habits could be different. Students will also explore how different socio-demographic characteristics and travel habits could be related to various modal substitutions. This analysis gives some indication of how e-bikes could contribute to environment-friendly cities and society.

Method

The primary data collection method is the survey (or extracting travel data from the national travel survey) which could be conducted online or in person. The target group could be students, workers, and employees in different sectors. Students should be able to use different statistical models, such as regression and correlation analysis. Knowledge of statistical software programs such as STATA or programming languages (e.g. R) is an advantage, but not necessary.

Target group

Students from Global Systems (TKGBS) and Industrial economics (TKIEK). This project is appropriate for one or two groups of 3-4 students with preferably at least two global systems students. Students must be prepared to conduct a survey and do statistical analysis. Since supervision will happen in English, a high level of English skills is also necessary.

Supervisor and contact

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