

Rethinking urban space: The demand for green infrastructure

Master Project Environmental Planning, 3rd semester

Supervision:	Landscape Economics Julian Sagebiel (sagebiel@tu-berlin.de)
Duration:	Winter semester 2018/2019
No. of participants:	approx. 15 students
First meeting:	Thursday 18.10.2018, 14:00 (s.t.) in EB 416

Background

Cities all over Europe face challenges related to transportation and mobility as well as to urban green and climate change. Especially increased motorized traffic has a strong impact on urban green and climate change, and concepts to restructure urban transportation systems are part of a larger political and scientific debate. For a successful environmental and urban planning process, an understanding of potential conflicts, challenges and opportunities are of crucial importance.

While a large knowledge base regarding new mobility concepts and technical feasibility (sharing, e-mobility, free public transportation) already exists, little is known about the corresponding demand side. "Which mobility concepts will be adapted by urban dwellers? Which factors make people switch from motorized individual transportation to more climate friendly modes of transportation? How "much" urban green do residents want? These are questions that are hardly answered, yet highly significant to develop concepts for the future of European cities. New concepts can only become viable if people will adapt them.

Aims

In this study project we investigate the demand for new concepts of urban mobility and urban green (or more general: urban space). Thereby, students will learn how to use population surveys to answer research questions such as those mentioned above. Students will work in groups on case studies in Berlin, and, based on the results, develop and conduct their own empirical study. The overall aim of the study project is a paper (in form of a scientific journal article) that presents the results of the survey.

Organization

The project consists of a) lectures, b) group work c) excursion d) data collection e) lab sessions.

The project starts with lectures on the concept of economic valuation methods. Here, students get acquainted with the necessary toolbox to conduct a survey for economic valuation. In parallel, small groups of students (2-4 students per group) work independently on selected case studies to get an overview of existing concepts. The students can thereby select a case from Berlin in one of the following areas: Public transportation, bicycle infrastructure, motorized individual transport, integrated concepts, sharing economy, and green corridors. The results of the group work will be shared with the whole class in form of PowerPoint presentations and short reports. To complement the case studies in the excursion week, we will visit an archetype city such as Copenhagen (tbd) to get an idea how concepts are put into practice. The excursion week will consist of several meetings with experts as well as visits to existing projects and mere observations e.g. of how a bicycle-friendly infrastructure affects daily commuting.

In the second half of the semester, the students will conduct their own economic valuation study, inspired by the case studies. Here, a survey will be carried out and the collected data will be analysed using statistical methods. The results of the data analysis will be prepared as an article which then serves as the course achievement. Prerequisites such as a basic knowledge on discrete choice models and the Software RStudio will be acquainted during the semester, partly via online learning platforms such as DataCamp.

Requirements and literature

Basic knowledge in microeconomic theory and statistics is recommended but not compulsory. Basic knowledge of the Software RStudio is of advantage. As an introductory text to economic measurement, I recommend Hensher et al. (2015). To get a more detailed overview on how to conduct a survey for economic valuation please look into Bateman et al. (2002). There is a large range of literature on urban green and urban mobility. For an example of a similar study see Gundlach et al.(2018). Background on Europe's urban mobility policies are found here: https://ec.europa.eu/transport/themes/urban/urban_mobility_en For examples of applied projects and further information on mobility in Berlin see:

innoz.de, neue-mobilitaet.berlin, changing-cities.org, interaktiv.tagesspiegel.de/radmesser/

Literature

- Bateman, I.J., Carson, R.T., Day, B., Hanemann, M., Hanley, N., Hett, T., Jones-Lee, M., Loomes, G., Mourato, S., Özdemiroglu, E., others, 2002. Economic valuation with stated preference techniques: a manual. Edward Elgar, Cheltenham.
- Gundlach, A., Ehrlinspiel, M., Kirsch, S., Koschker, A., Sagebiel, J., 2018. Investigating people's preferences for car-free city centers: A discrete choice experiment. *Transportation Research Part D: Transport and Environment* 63, 677–688.
<https://doi.org/10.1016/j.trd.2018.07.004>
- Hensher, D.A., Rose, J.M., Greene, W.H., 2015. Applied Choice Analysis, 2 edition. ed. Cambridge University Press, Cambridge.