

Research Project

Research proposal for the analysis of the SHEDS for Zurich

Third-party funded project

Project title Research proposal for the analysis of the SHEDS for Zurich Principal Investigator(s) Burger, Paul ; Co-Investigator(s) Schubert, Iljana ; Sohre, Annika ; Organisation / Research unit Departement Gesellschaftswissenschaften / Nachhaltigkeitsforschung (Burger) Department Project start 15.07.2019 Probable end 15.03.2020 Status Completed

The project aims at a comparative analysis of the Swiss Household Energy Demand Survey (SHEDS) from Zurich's perspective. SHEDS is an online survey designed and implemented by researchers from SCCER CREST. In phase I, an exploratory study compares patterns of differences in energy demand and consumption behaviour between households living in Zurich city with other parts of Switzerland, namely 1) Households in Zürich canton (KZH), excluding SZH and Winterthur; 2) Households in the 8 major Swiss cities other than SZH namely, Geneva, Lausanne, Bern, Basel, Luzern, Winterthur, Biel/Bienne, and St. Gallen; and 3) Households from the rest of Switzerland, i.e. all excluding groups 1-3 above. The analysis is based on group mean comparisons and generic OLS regressions applied to a panel data set extracted from four waves of the SHEDS from 2016 to 2019, including around 1'200 households in Zurich City and in total about 22'000 observations across the German and Frenchspeaking parts of Switzerland. The objective is to analyse a wide scope of variables characterizing household demand in three main energy fields (electricity, mobility and heating) as well as a selection of related psychological factors such as intentions and norms. Phase II builds on the exploratory findings of Phase I. The main objective of Phase II is to identify meaningful differences that characterize the energy demand of households in Zurich compared to other cities/cantons. The econometric methods allow to: 1) decompose potential differences according to four groups of determinants thus linking them to various underlying mechanisms, and 2) identify the distribution of these differences across a selection of relevant population segments based on a selection of moderating factors. The project's focus is on two primary energy domains namely, electricity and private mobility. In order to provide an adequate comparative inference, it is required that the Zurich subsamples (treatment groups) are "matched" and compared with their comparable counterparts (control groups) in the rest of Switzerland. Therefore, in Phase II, we conduct a Propensity Score Matching (PSM) approach to identify the optimal matching groups that can be compared with each household in Zurich. The "Zurich" effect will then be estimated as the Average Treatment Effect on the Treated (ATET).

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