

Bachelor/Master Thesis

Discrete Choice Experiment for Energy Tariffs

■ Background

The energy transition in Europe is characterized by a dense ecosystem of players, that are suggested (IDDRI 2023) to focus on moving away from a short-term crisis management approach to a medium-term resilience-building approach, i.e. by moving away from the "French-style tariff shield" (price cap), which is unsustainable from a social point of view. Rather, the trend should go towards increasing investments in energy efficiency and fostering sustainable behaviour around energy use. However, available housing types, energetic renovation of the existing housing stock, tariff offers, and energy use patterns are all decisions that are inevitably influenced through the policy context! The optimal choice of tariff scheme is one main way to manage energy consumption, as the tariff can incentivize demand flexibility in the form of shifts, reduction or substitutions. While demand for energy is considered to be already flexible, we need to understand how to stir this flexibility make load management more efficient.

■ Objectives of the thesis

The goal of this thesis is to design a Discrete Choice Experiment (DCE) that will empirically examine preferences for different energy tariffs. Specifically, by employing the survey methodology of DCE, an online experiment will be created that examines which preference ranking can be established between the proposed energy tariff options. The acceptability of a particular tariff can also vary across different user groups depending on socio-economic characteristics and lifestyles. In a first step, you will analyze the existing literature in order to identify potentially relevant tariff options. Next, you will establish the efficient choice design for the experiment. If time allows, a first pilot study can be run online.

■ Requirements

- Interest in social science topics (especially energy tariffs and user behavior) and empirical research (e.g. decision making, surveys)
- Willingness to work independently
- Ideally existing skills in programming (Python) and/or statistical data analysis (e.g. R)

■ Start date/duration/language

Thesis can start immediately / 3-6 months / English required

■ Contact person

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