To buy or not to buy: Results so far

Rob Hart
Tingmingke Lu (Ting)
Efthymia Kyriakopoulou (Efi)

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1. Car ownership and policy

So far we have, with the help of SCB, combined data on vehicle ownership in Sweden with socioeconomic data about the vehicle owners. Note that all the data is strictly anonymized, for each individual in the dataset we only know the postcode within which they live. We are currently exploring the many possibilities for fruitful research that this data opens up.

- We have noted that there is a divergence between the largest towns in Sweden (Greater Stockholm, Gothenburg, Malmö, Uppsala), where car ownership is low and declining, and the next set of towns, where it is higher and increasing. What is the cause of this divergence?
- We can see large effects of green car subsidies in the data. We aim to quantify the effect on demand for different cars as a function of green-car subsidies and the bonus–malus system.

2. EV adoption and urban development

According to the plan, we have built a spatial general equilibrium model that is suitable to deal with policy issues associated with traffic-induced pollution. The paper "On the design of sustainable cities: local traffic pollution and urban structure" has been presented in conferences and workshops (and will be submitted soon). We are currently working on policy simulations and an extension to a two-vehicle model (electric and conventional vehicles). Preliminary results:

- The optimal environmental policy is a **site-specific tax** that will be imposed on the worker living at x and increases with the distance to the city center (working location).
- This implies that workers who live far away pay a higher tax when commuting to work by their private vehicles.
- This policy design is in line with the new transport policy that was introduced in June 2019 in Olso (European Green Capital 2019): **additional toll stations** $\rightarrow$ 83 toll stations in three **different toll rings**.
  - Lower prices on each toll but more toll crossings per trip
  - Congestion charge and **environmentally differentiated rates** in all toll rings.
  - Long-distance drivers will cross more rings and pay a higher price.