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Workshop 1B (room 2208) – Households' energy demand

Title

Who is buying EVs in Switzerland and who could be next? Insights and policy lessons from SHEDS panel data

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Abstract

Electric vehicles (EVs) constitute a viable alternative to internal combustion engine (ICE) vehicles and are actively promoted by the Swiss government as a means to reduce carbon emissions from the transportation sector. Yet, the penetration of electric vehicles in Switzerland is still in its infancy, with high rates of growth from a limited base. Some information about EV owners begins to be captured in country-wide surveys of households, such as the Swiss Household Energy Demand Survey (SHEDS), an annual rolling panel of around 5,000 respondents running since 2016. A few hundreds of respondents within SHEDS are EV owners. By contrasting this subgroup with owners of ICE cars, we provide a ranking of the most distinguishing traits. This analysis can provide, beyond general statistics about EV owners' characteristics, guidance about the following issues. At which stage of the diffusion pathway are we in Switzerland? Which is the immediate potential for an expansion of the EV sales in population groups that share most of the traits with EV owners? What has to change in order to extend EV sales in other population segments? Thanks to the longitudinal dimension of SHEDS, the evolution in the behavior of recent EV purchasers can be observed. In this context, important questions as the following can be investigated: Which behavioral changes in mobility (e.g. distance traveled and modal choices) occurred after the purchase of an EV? Is there evidence of a rebound effect (with longer distances traveled after the purchase)? Preliminary answers to these questions can then be interpreted to design and provide support to national, cantonal and local policies.