

DID CONSUMERS RESPOND TO ENERGY PRICE SURGES IN THE AFTERMATH OF THE WAR? EVIDENCE FROM SWISS SMART METER DATA

Farina Farmanbar¹, Reinhard Madlener^{1,2}

¹Institute for Future Energy Consumer Needs and Behavior (FCN), School of Business and Economics / E.ON Energy Research Center, RWTH Aachen University, Aachen, Germany.

²Norwegian University of Science and Technology (NTNU), Trondheim, Norway

Extended Abstract

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Abstract Summary

This study investigates how Swiss households with heat pumps adjusted their electricity consumption in response to sharp and persistent increase in energy prices following Russia's invasion of Ukraine. Using high-frequency electricity consumption data from 1,408 households with heat pumps and smart electricity meters in the canton of Zurich, Switzerland, we estimate short-run, hourly price elasticity at the household level. We use instrumental variable (IV) method and employ wind and solar generation in Switzerland and neighboring countries as sources of exogenous price variation.

The results show that Swiss households with electric heat pumps did adjust their electricity use in response to the energy price surges. We find that one euro per kilowatt-hour increase in the day-ahead price is associated with a reduction of roughly 0.32 kilowatt-hours in average hourly household consumption, holding weather conditions, time effects, and crisis status constant. Further results show additional reductions in consumption during the crisis period.

Presenting Author Biography

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