

# De-biasing electric vehicle adoption with personalized nudging

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## **Abstract**

Replacing combustion engine vehicles with electric vehicles (EV) is an important component to realizing climate objectives and advancing sustainable transportation, aligning with the United Nations Development Goals and the Paris Agreement. In this project, we identify three perception biases that are linked to EV adoption and address them with personalized non-monetary information treatments to increase the adoption of EVs among owners of internal combustion engine vehicles. In a randomized controlled trial with car owners, we measured the extent of perception biases with regard to range anxiety, charging anxiety, and total cost of ownership. We addressed these perception biases with treatments based on respondents' stated car usage behavior and assessed their effect on EV adoption in a stated choice task. More specifically, in these treatments, we provide feedback on the actual compatibility of EVs based on respondents' driving and parking behavior to provide empirical evidence on the effectiveness of tailored communication treatments on EV adoption. Taken together, our results shed light on the extent of 1) misperceptions of EV compatibility, 2) the effectiveness of non-monetary treatments, and 3) personalized nudging for electrical vehicle adoption.

**Subject Areas:** *Consumer Behaviour, Decision-Making, Public Policy*

**Track:** Consumer Behaviour