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Applying nudging techniques to promote fuel-efficient car purchases – State of the field analysis

- Transport sector emitting more than 1/3 of Swiss CO_2 emissions,[1] the share of fuel-efficient cars has to increase to fulfill national climate goals.
- Nudging techniques might represent an alternative to current support measures, despite of which their share remains only 5,1%.[2]
- Joint research project has been outlined, investigating and testing the potential of nudging techniques to promote fuel-efficient car purchases.
- First phase analyzing the current state of the field concludes that plurality of actors and alternative support measures are involved.
- To better support fuel-efficient car purchases, cooperation with the plurality of stakeholders involved and concentrated focus on electric mobility is recommended.

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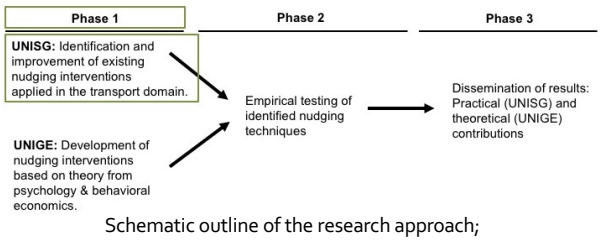
Introduction

With more than one third of Swiss CO2 emissions resulting from the transport sector (individual mobility being responsible for almost two thirds of them)[1], the purchases of fuel-efficient cars have to significantly increase to fulfill national climate and energy goals. Despite their increasing supply and numerous support measures in place, their limited share of 5,1% within the total Swiss fleet[2] suggests that more effective tools are needed for their successful penetration. One such possibility is represented by nudging techniques, aspects of choice architecture that alter people's behavior without limiting freedom of choice or significantly changing economic incentives.[3]


Electric vehicle, 88th Geneva International Motor Show, 2018.

Research approach

To understand the potential of nudging techniques to promote fuel-efficient car purchases, a joint, three-stage research project between the University of St.Gallen (UNISG) and University of Geneva (UNIGE) has been outlined. The first phase analyzes the current state of the field, investigating stakeholders involved and interventions implemented (UNISG) and studying relevant theory (UNIGE). Thus obtained results will inform the following stages of the project, namely the testing of identified nudges (Phase 2) and results dissemination (Phase 3).



Schematic outline of the research approach; Highlighted part – presented results.

Research question and methodology

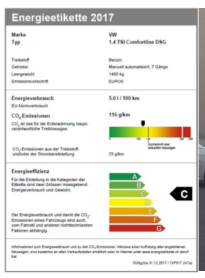
To deliver its goals, the first phase of the project conducted by UNISG has asked the following questions:

1. What is the current state of the field of the fuel-efficient car sector, i.e. what actors are involved and what type of support measures are mainly implemented?
2. What lessons can be learned from these findings to better promote fuel-efficient car purchases in Switzerland?

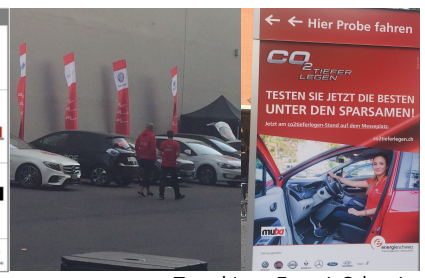
To answer these questions, a mixed-method research consisting of semi-structured interviews with relevant stakeholders, ethnographic observation at events and qualitative analysis of appropriate documents (online and print) was undertaken.

Results

1. Support of fuel-efficient vehicles is significantly increasing. Electric cars experience special momentum, with the majority of measures and car manufacturers focusing on this technology.
2. Besides regulatory and market-based instruments, the promotion of fuel-efficient cars mainly merges marketing and nudging techniques. The most common interventions are provision of information and test drives.



Energieetikette, 2017, BFE



Test drives, EnergieSchweiz, "CO2 tieferlegen", MUBA, 2018

3. A plurality of stakeholders (public as well as private) is involved, ranging from traditional transport sector actors (car manufacturers, importers and dealers) to actors from related fields. This is particularly relevant for electric mobility, with actors from energy (electric utilities), finance (insurance companies), real estate (property owners) and many other fields active.

Sector of activity	Type of actor	Sub-type
Public governance	Public	Federal level
		Cantonal level
		Municipal level
Transport	Private	Car manufacturers
		Car dealers
		Car importers
		Charging stations operators
		Associations
	Public	Associations
Research	Public	Academia
Energy	Private	Electric utilities
Appliances	Private	Electric hardware providers
Finances	Private	Banking and insurance
Property market	Private	Property owners

Actors involved - schematic outline

Recommendations

For more effective support of fuel-efficient car purchases, consideration of the plurality of stakeholders involved and recognition of their diversified interests is necessary. Furthermore, taking into account the momentum electric cars currently experience, further measures to promote fuel-efficient car purchases could focus primarily on this technology.

The identification of information provision and test drives as main non-regulatory, non-market based support measures of fuel-efficient car purchases provides information for the second phase of the project, in which selected nudging techniques will be empirically tested. Thus obtained results will shed light on the effectiveness of individual measures, namely which ones would prove the most effective to successfully promote fuel-efficient car purchases in Switzerland.

References

1. Bundesamt für Umwelt (BAFU). (2018). *Emissionen von Treibhausgasen nach revidiertem CO_2-Gesetz und Kyoto-Protokoll, 2. Verpflichtungsperiode (2013-2020).*
2. EnergieSchweiz. (2018). *Energieeffiziente Fahrzeuge, Markttrends 2018.*
3. Thaler, R. H., & Sunstein, C. R. (2008). Nudge: Improving decisions about health, wealth, and happiness. London: Penguin Books.

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