Characterisation of Norwegian battery electric vehicle (BEV) owners by level of adoption

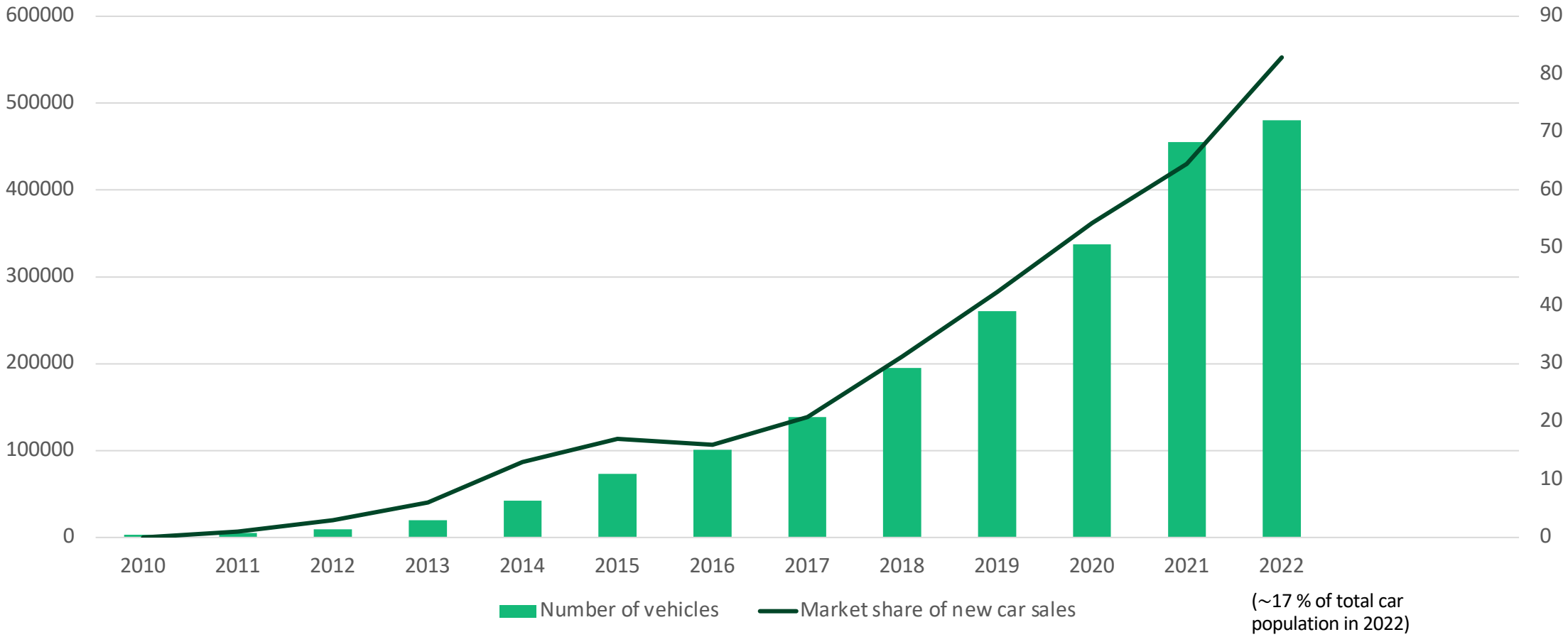
Nina Møllerstuen Bjørge, Odd André Hjelkrem & Sahar Babri

Session E3: Passenger cars, 2022-06-14, 11:00-12:30

Presenter: Odd André Hjelkrem, Research Scientist/PhD, SINTEF Energy Research
oddandre.hjelkrem@sintef.no

Technology for a better society

EV adoption in Norway, 2010 - 31.3.2022



(~17 % of total car population in 2022)

Which incentives do actually help to increase BEV adoption?

Norway

- Pricing incentives, such as purchase tax and VAT exemptions.
- Local policies for electric mobility in Oslo and Bergen: expansion of the charging infrastructure and access to bus lanes.

Other countries

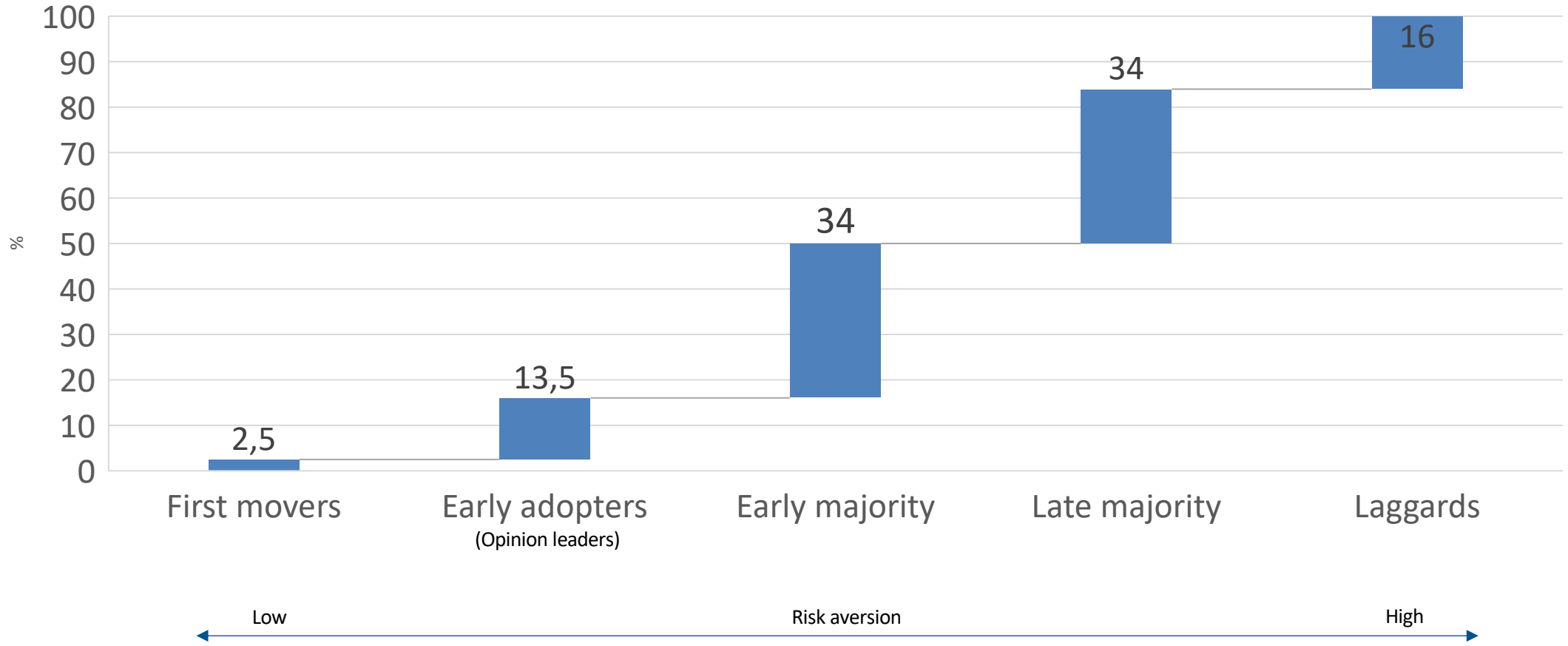
- The cost considerations found to be the most powerful incentives for adopting BEV in China
- Economic motives found to be most important in Korea.

Aim

The main aim of this study was to:

- Apply adoption theory on Norwegian BEV users.
- Investigate group characteristics, including incentives.
- Evaluate how the adoption experiences from Norway may be used in policy making for further BEV acceleration in other European countries.

Diffusion of innovations as a theoretical framework



Rogers, E.M., (2003). *Diffusion of Innovations*, 5th ed. Free Press, New York.

Characterisation of Norwegian innovators in the EV market

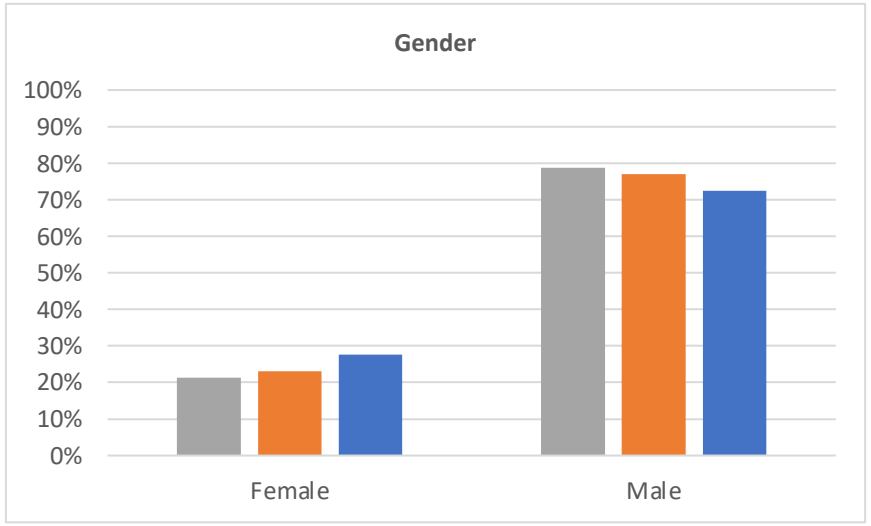
- The adoption theory is applied on **new car buyers** as the population

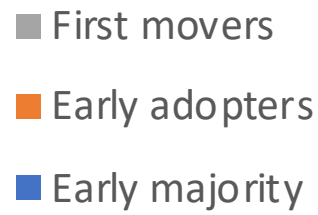
First movers	Early adopters			Early majority					Late majority
2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
1,5%	3,10%	5,8%	12,6%	17,1%	15,7%	20,8%	31,2%	42,3%	54,3%

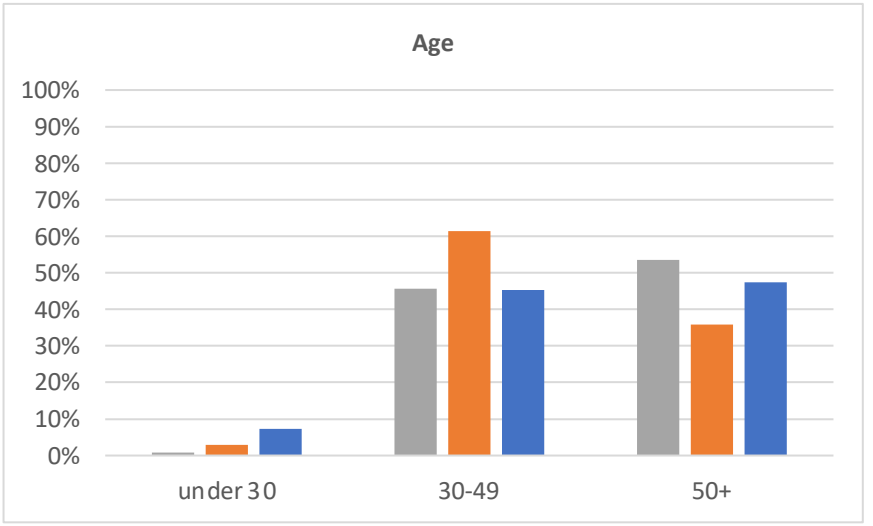
- To investigate differences between groups we use data from **Elbilisten**, a yearly survey held by the Norwegian EV association
- **BEV ownership history** is used to classify each respondent in adoption groups

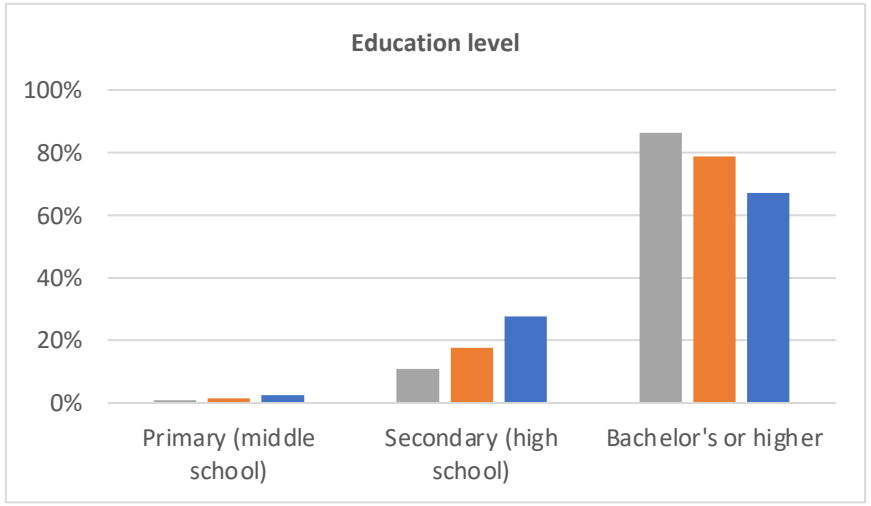
Group	Definition of each group from the dataset	No. of observations
Early majority	Dataset 2020: Those who has owned BEV for 1-4 years.	6784
	Dataset 2019: Those who has owned BEV for 0-4 year	7997
	Dataset 2018: Those who has owned BEV for 0-3 year	6766
	Dataset 2017: Those who has owned BEV for 0-2 year	7183
Early adopters	Dataset 2018: Those who has owned BEV for 4-5 years	718
	Dataset 2017: Those who has owned BEV for 3-5 years	1547
	Dataset 2016: Those who has owned BEV for 2-4 years	914
	Dataset 2015: Those who has owned BEV for 1-3 years	3107
First movers	Dataset 2016: Those who has owned BEV for more than 5 years	139
	Dataset 2015: Those who has owned BEV for more than 4 years	423

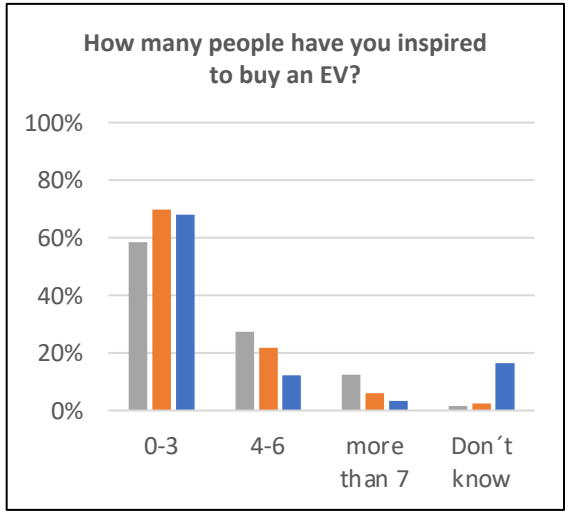
Differences between groups

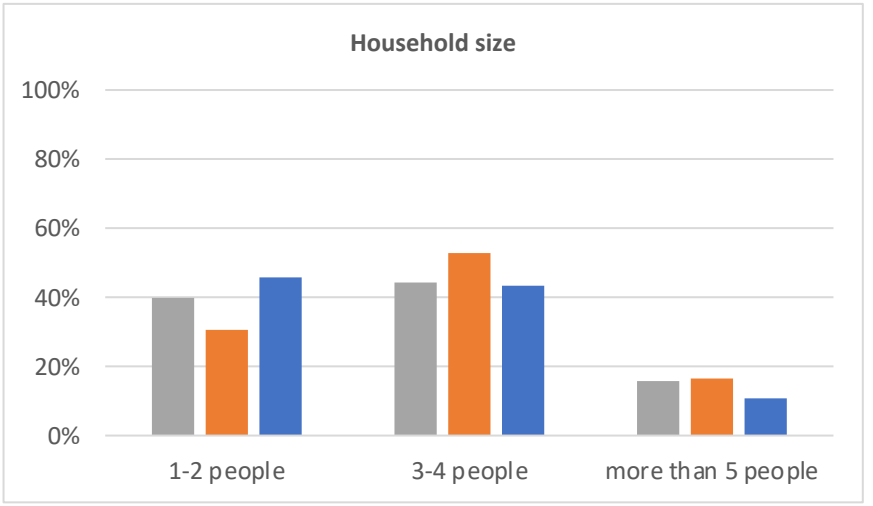




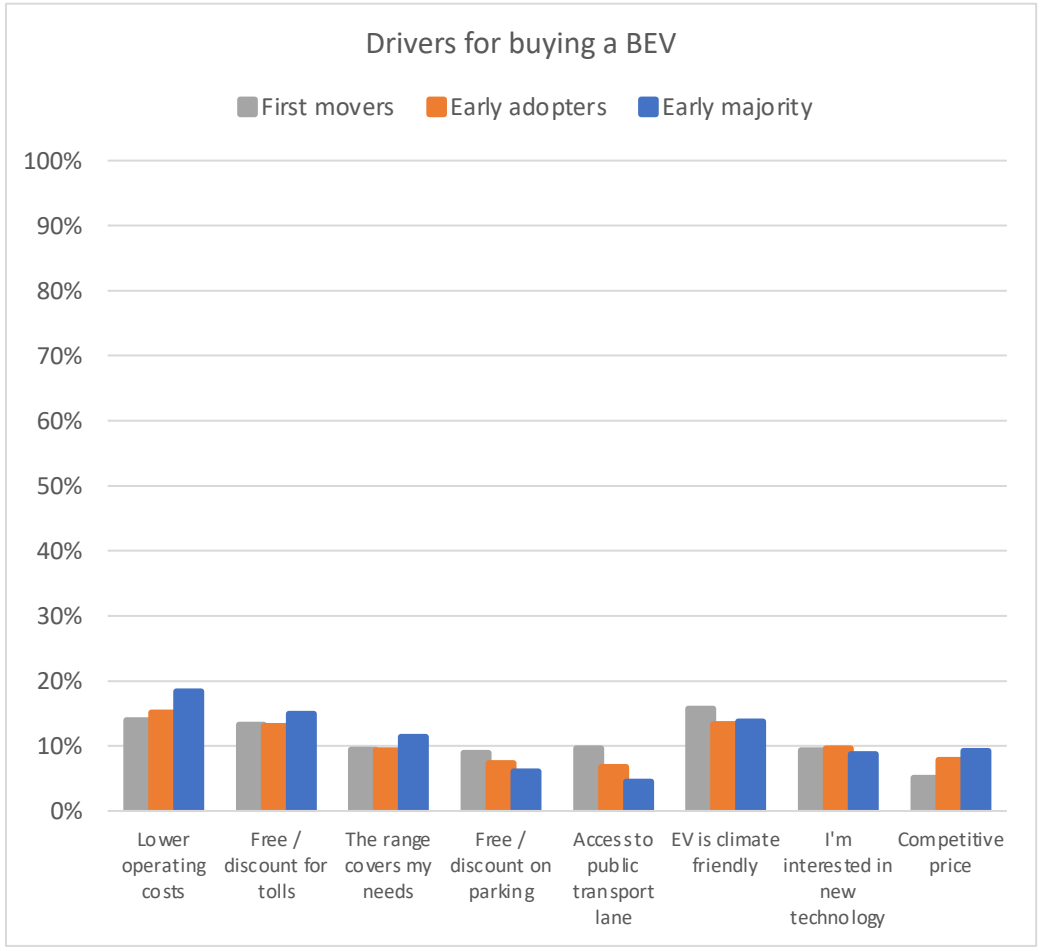


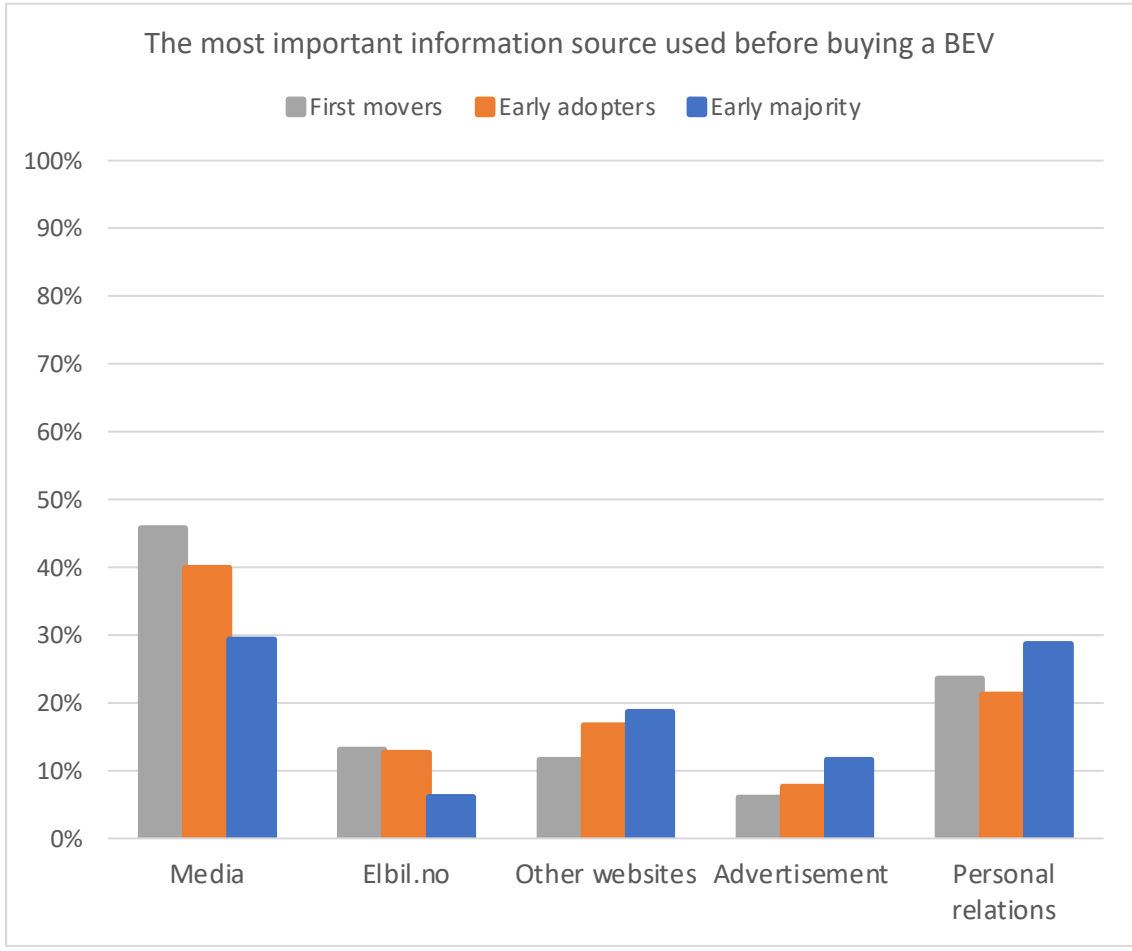




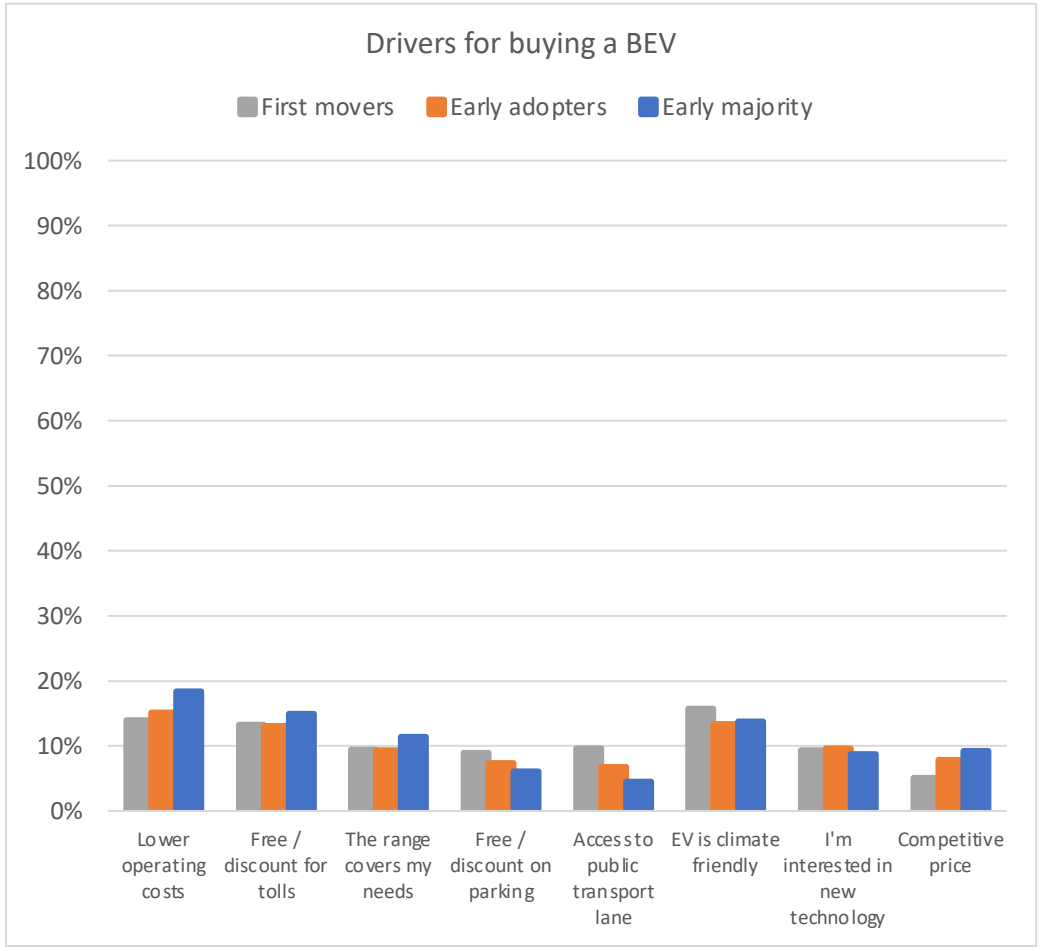


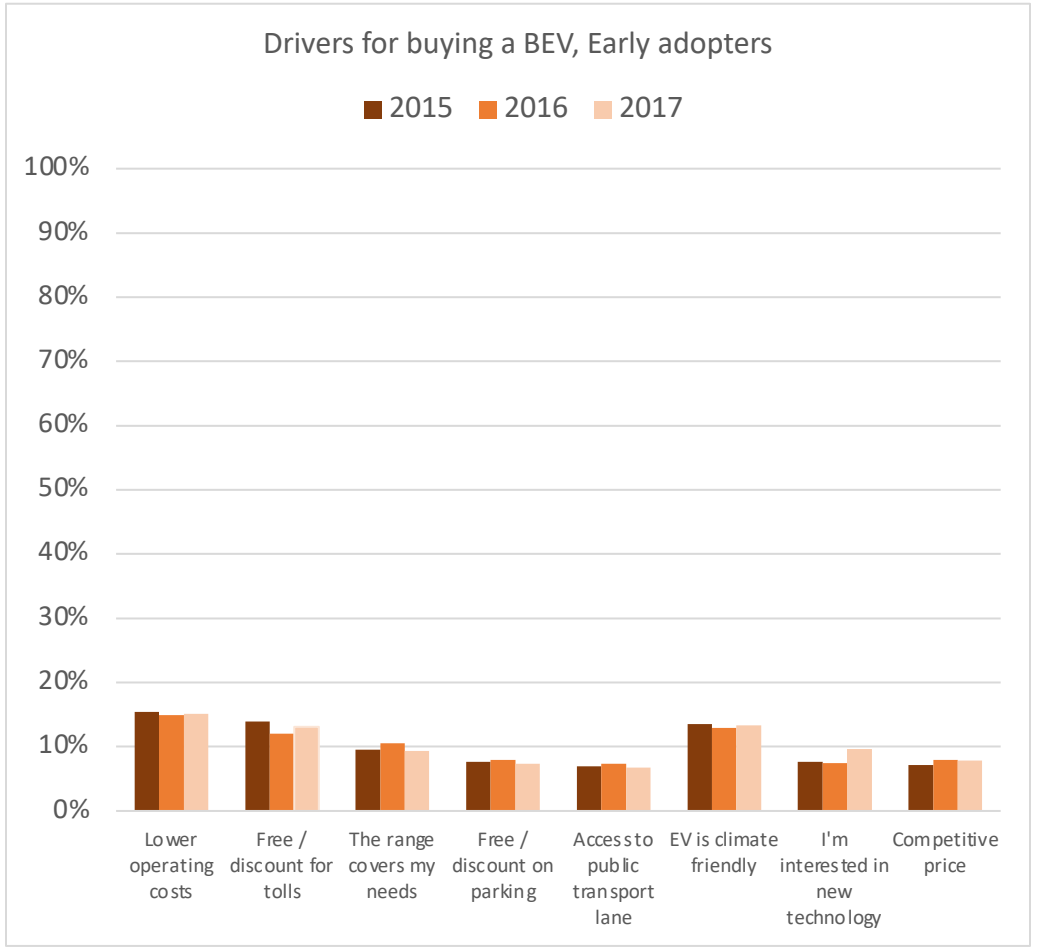
Important drivers and information sources



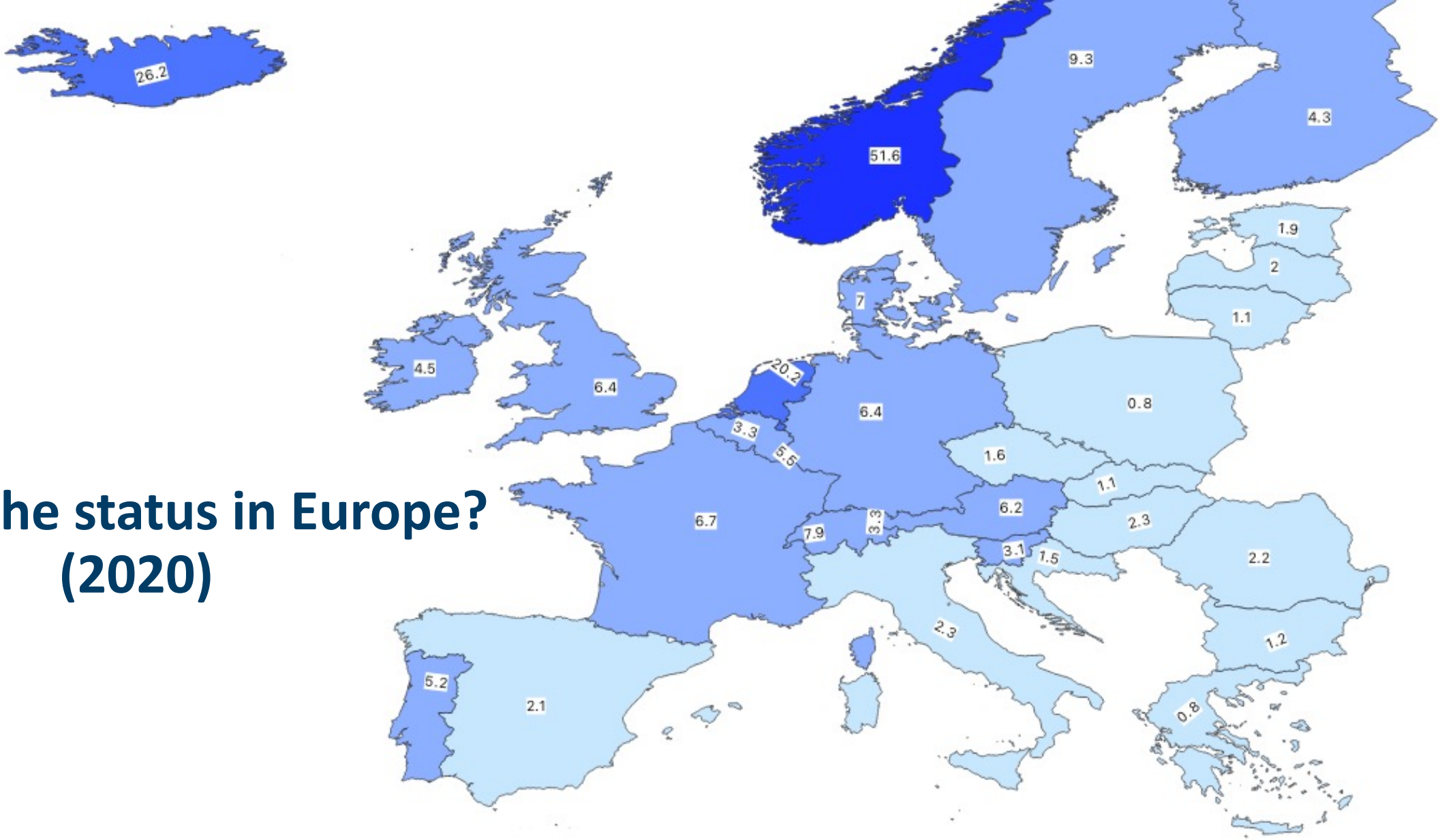


Consistency within a group





What is the status in Europe? (2020)



Summary and concluding remarks

Diffusion of innovation theory and BEV users in Norway

- Aligns with theory on certain areas (education, economy, motivation), but less on other areas (age)
- Early adopters and first movers as opinion leaders

Transferability to European countries

- Maturity in market seems to matter
- Proiritize between economic incentives and other benefits or strategies according to adoption level

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This work is supported by the FuChar project (295133/E20)

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