



The International Maritime Transport and logistics Conference
Towards Global Competitiveness in Maritime Industry



“INVESTING IN PORTS”
The Trends, The Future



HOW TO GET MORE ELECTRIC CARS ON THE ROAD: SLOVENIAN CONSUMER'S PERSPECTIVE

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SLOVENIA

A sustainable transport solution

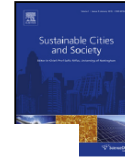
Sustainable Cities and Society 11 (2014) 56–60



Contents lists available at [ScienceDirect](#)

Sustainable Cities and Society

Transportation Research Part D 30 (2014) 53–61



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Transportation Research Part D



higher education
; in the field of health (+ health) OP SI-HR 2014-2020

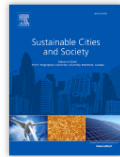
; the efficiency of the intralogistic system Call for

plementation of research and development projects

Home > Journals > Sustainable Cities and Society



20; Greeting the economy in line with the



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CHAPTER TITLE: Sustainable transport, Electric vehicle promotional policies and Factors influencing the purchasing decisions of electric vehicles: A case of slovenia

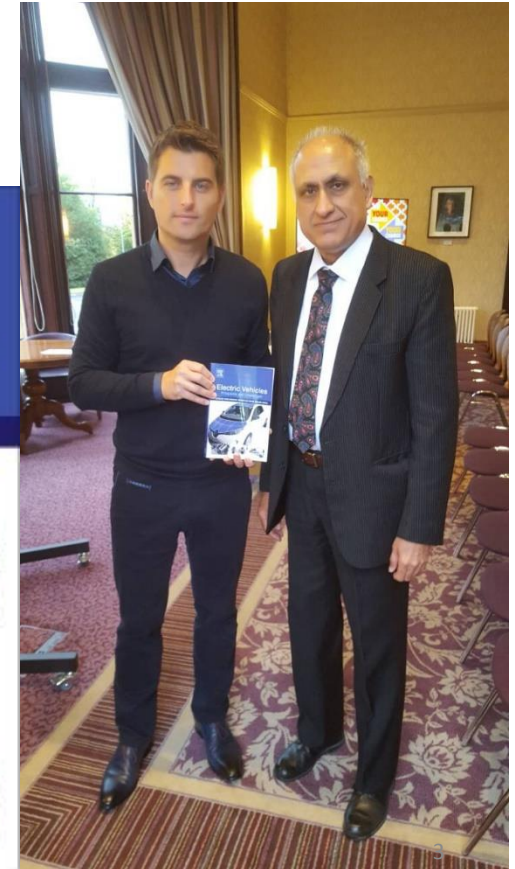
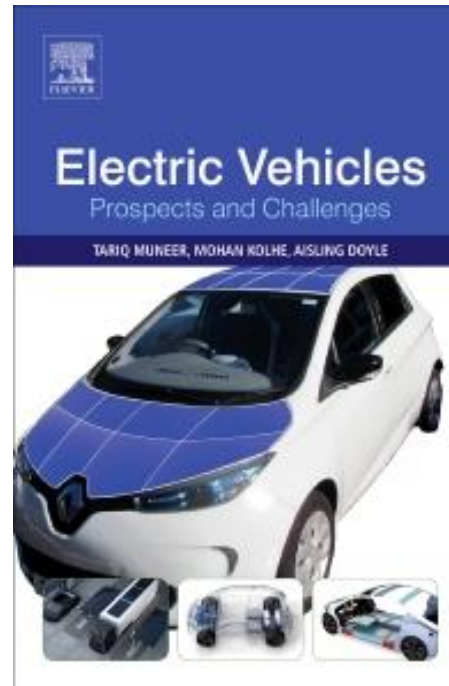
Electric Vehicles: Prospects and Challenges

Authors:

Tariq Muneer, Mohan Kolhe, Aisling Doyle

Imprint: Elsevier

Published Date: 12th July 2017

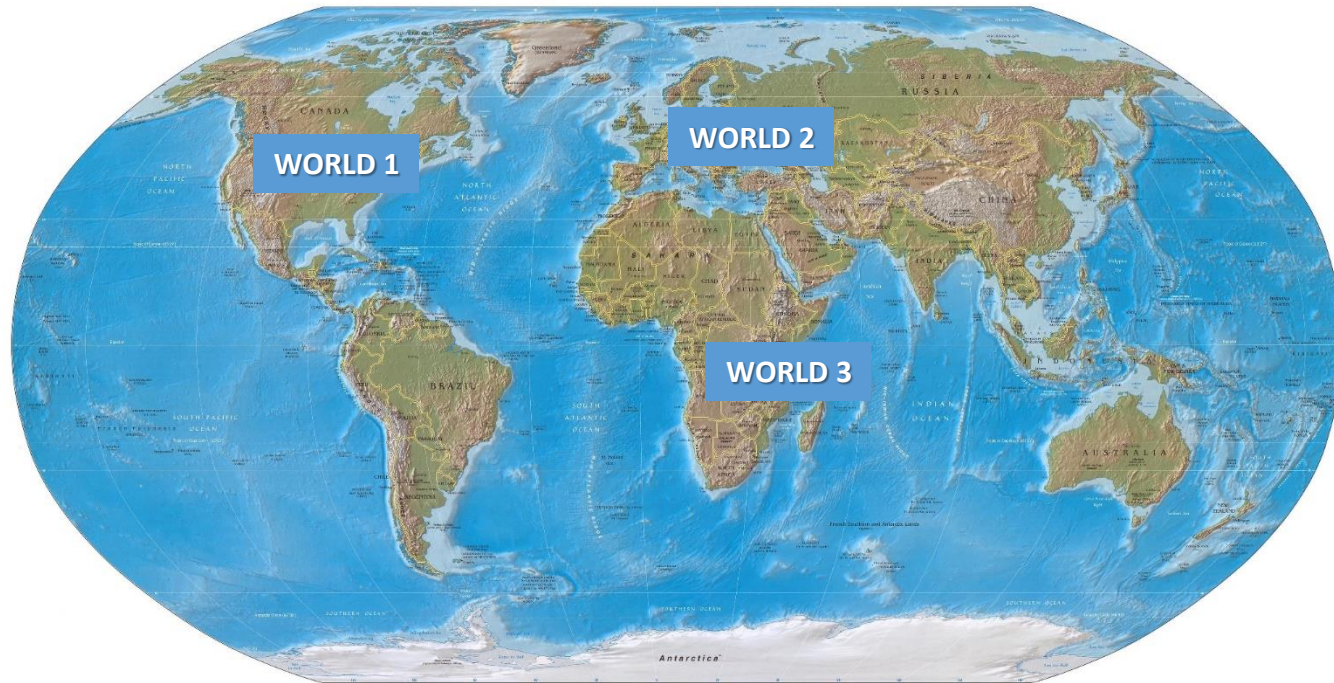


LABORATORY FOR SUSTAINABLE MOBILITY AND TRANSPORT

We drive Electric vehicle



THREE REGIONS 2025 (J.F Coates)



World studies - the common denominator



- The **increasing presence of globalization**, ...namely in all areas of human activities;
- the **growing impact of new technologies** on our daily lives and business organization;
- **increasing ecological problems**

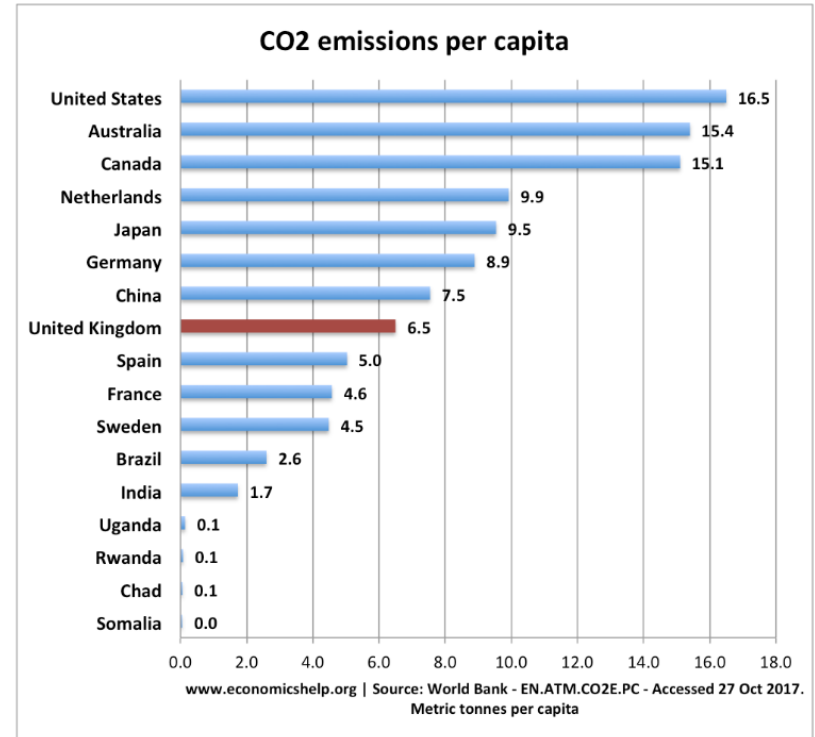
Greenhouse gas emissions

- According to estimates of climatologists ... our global ecosystem is able to recover if:
... the emission values are from 1.7 to ..up to 2 tonnes of emissions per capita.

Slovenia is contributing about 8 tons of greenhouse gases per capita!

CO2 emissions per capita of Egypt increased from 1.68 metric tons in 1997 to **2.29 metric tons in 2016** growing at an average annual rate of 1.75 %.

<https://knoema.com/atlas/Egypt/CO2-emissions-per-capita>





**Titanic could not escape the ice in the last minute.
We'll be in the same position soon!!!**





"I'd rather have a cleaner environment, but I can't imagine me without my car."

▲ Steph Willen/Independent Film Producer



BP advertisement in

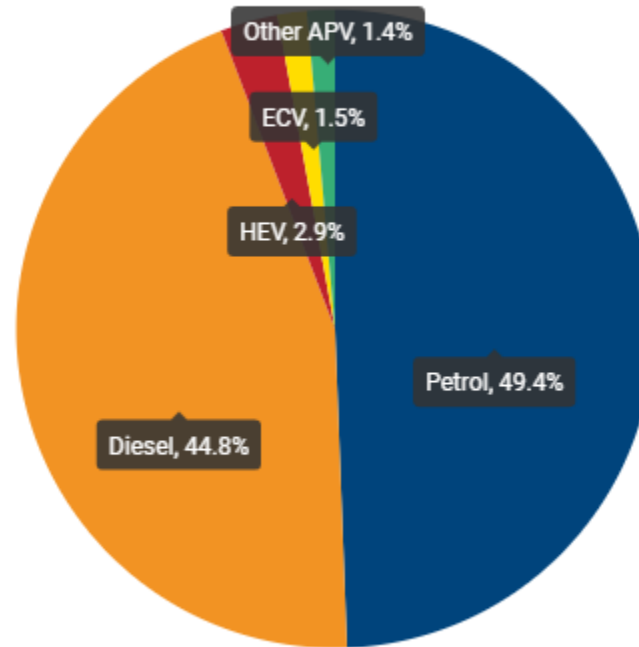
***Fortune
magazine***



The Genie has been released. Now
it is impossible to put him back in.

New passenger car in the EU15 by fuel type

■ Petrol ■ Diesel ■ Electrically-chargeable vehicles ■ Hybrid electric vehicles
■ APV other than electric



Currently, 95% of transportation is fueled by petroleum.

<https://www.studentenergy.org/topics/transportationSource:>

Source: ACEA, AAA
Source: ACEA, 2017.

The market for 'electrified' passenger cars can be split in two main categories

- **1. Electrically-chargeable vehicles (ECVs)**

- *full battery electric vehicles and plug-in hybrids, both of which require appropriate recharging infrastructure.*

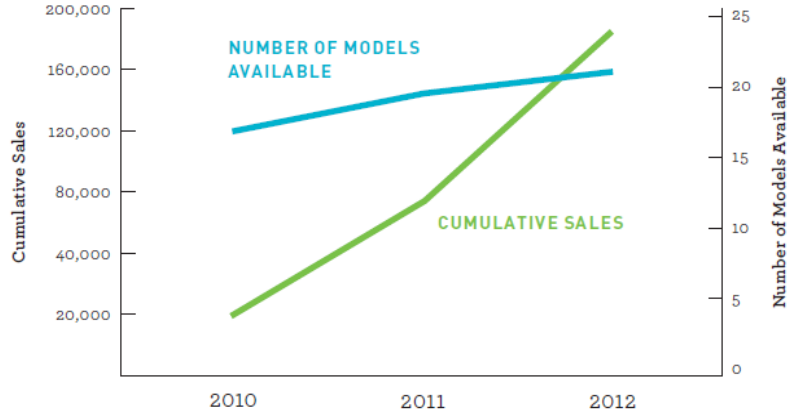
- **2. Hybrid electric vehicles (HEVs)**

- powered by an internal combustion engine (running on petrol or diesel) but also have a battery-powered electric motor that serves to complement the conventional engine.

- Sales of electrically-chargeable vehicles (ECVs) grew in recent years, but only in line with the overall growth of car sales. Their market share, however, has remained more or less stable; growing by just 0.9 percentage points between 2014 and 2017.
- In 2017, ECVs made up roughly 1.5% of all passenger cars sold across the European Union. At this pace, the market share of ECVs would be 3.9% by 2025 and 5.4% by 2030.

Source: ACEA, 2018.

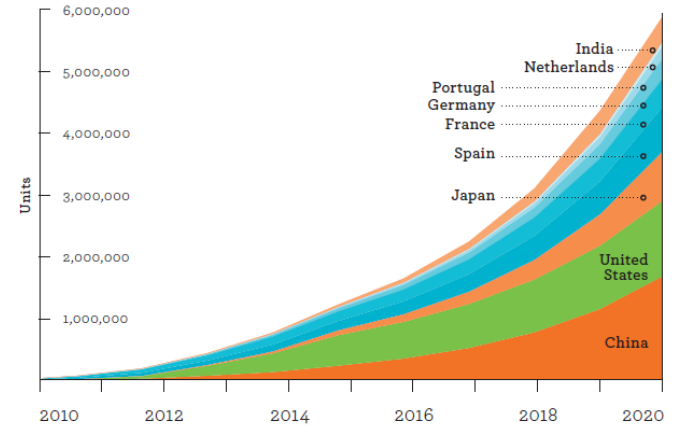
The impact of the increase in choice of models of electric vehicles on sales growth



Source: MarkLines Databases, in IEA, 2013.



Objectives sales of electric vehicles by 2020



Source: EVI, in IEA, 2013.

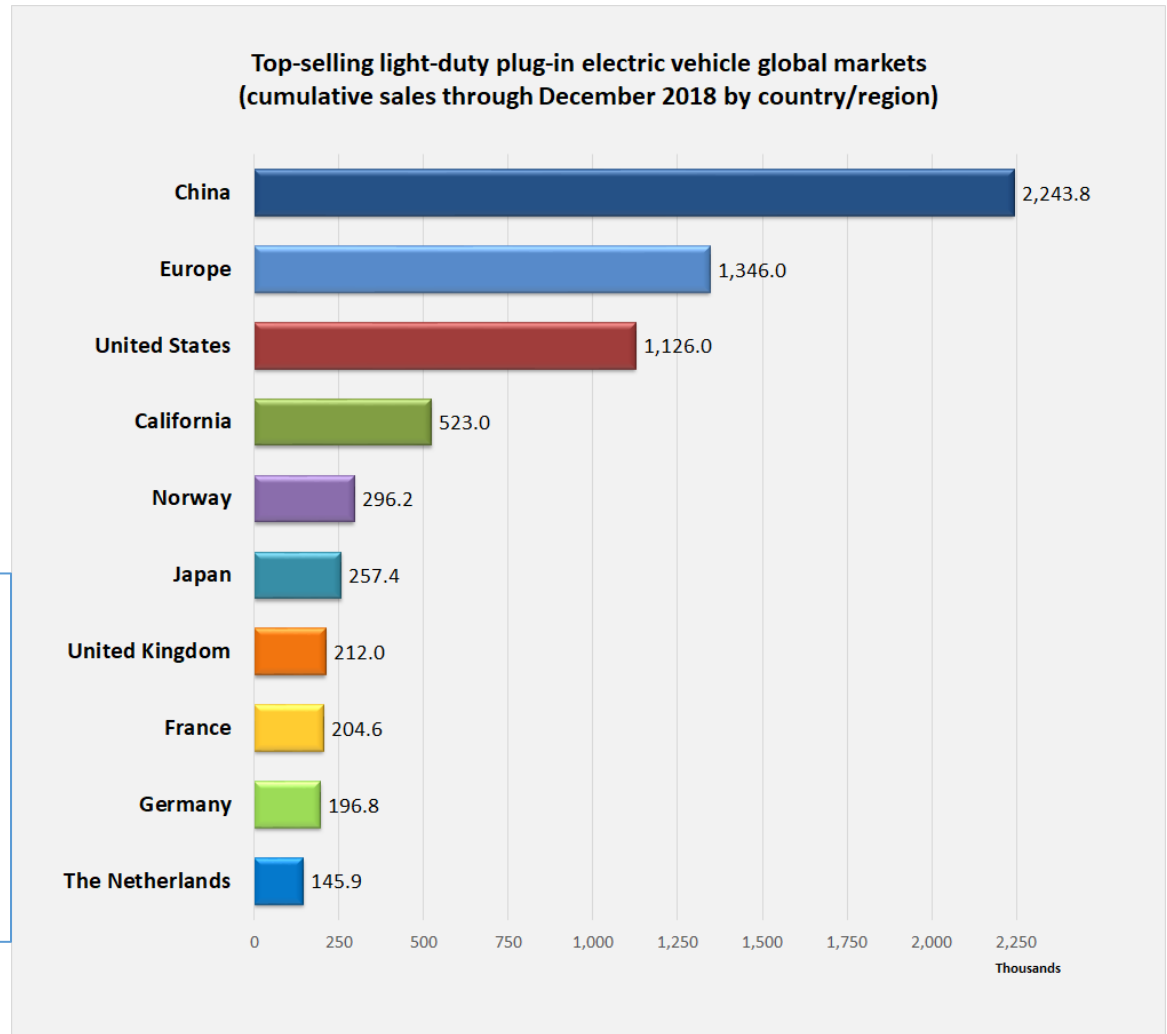
Trends ... or what's going on ...

From Jan - Feb 2018, **1501**
electric and hybrid vehicles were
sold in Slovenia.

In the same period of 2017 - **901.**

<https://www.zurnal24.si/avto/slovenija-prodaja-vozil-statistika-315798> - www.zurnal24.si

Alexandria, 18.3.2019



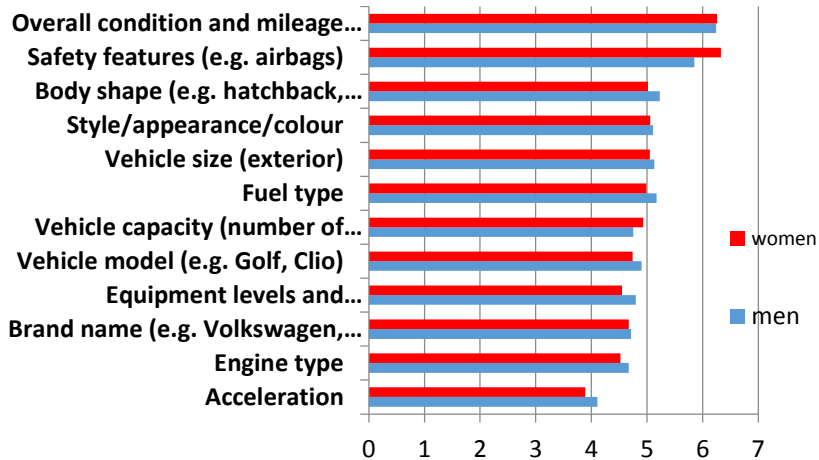
HOW TO GET MORE ELECTRIC CARS ON THE ROAD: SLOVENIAN CONSUMER'S PERSPECTIVE

- a pre-structured questionnaire from Borthwick and Carreno (2012) was modified and distributed in Slovenia.
- Research was done from April to June in 2013/repeated in 2014 (Spain, Poland), Slovenia (2016), Croatia (2018)
- Slovenia (2013) - 681 participants.
- 52% of participants were women and 48% were men.

FACTORS INFLUENCING THE PURCHASING DECISIONS OF LOW EMISSION CARS

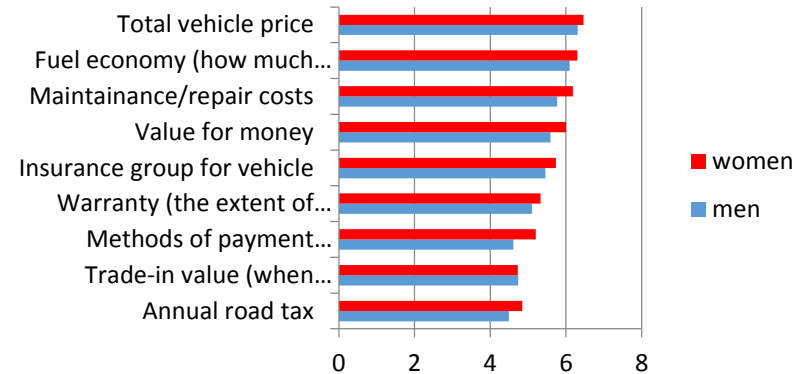
Important vehicle performance factors

(On a scale from 1 to 7 where 1 means NOT IMPORTANT and 7 means VERY IMPORTANT)



Important financial considerations

(On a scale from 1 to 7 where 1 means NOT IMPORTANT and 7 means VERY IMPORTANT)



Source: FLUM, 2014.

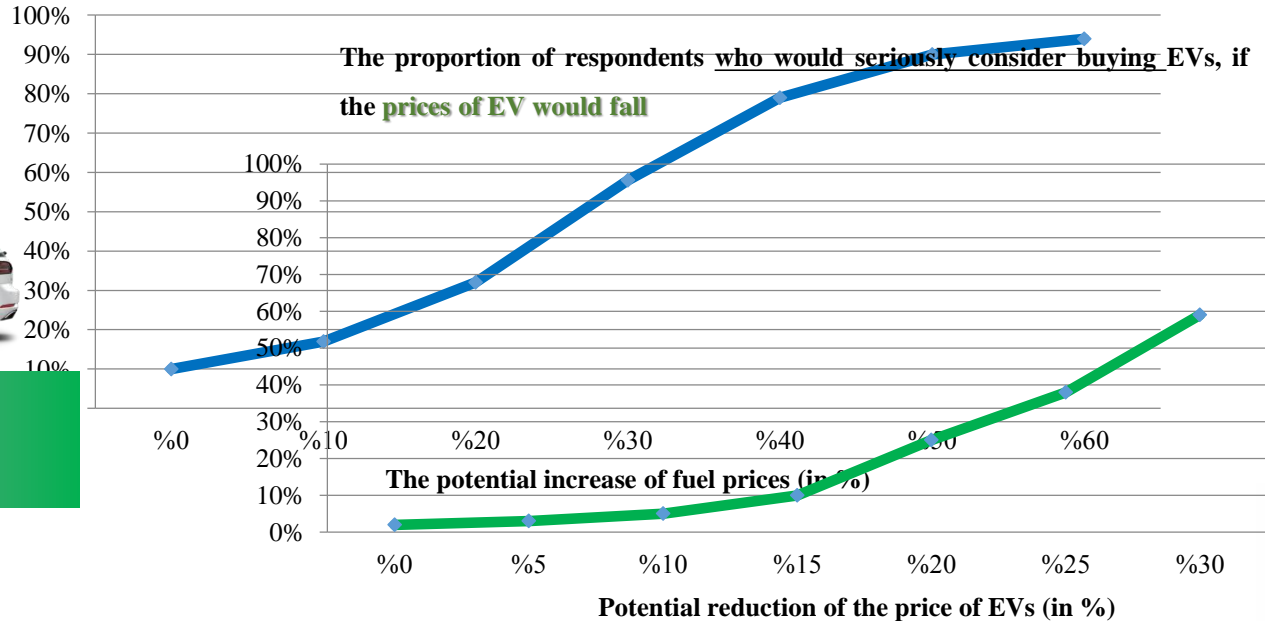
FACTORS INFLUENCING THE PURCHASING DECISIONS OF LOW EMISSION CARS

The proportion of respondents who would seriously consider purchasing EVs if the fuel price increase.

e-Golf
41.318,- €



PP: 41.318 EUR
- 30% (12.395 EUR)
- SUB (7.500 EUR)
= **21.423 EUR**



Source: FLUM, 2014.

FACTORS INFLUENCING THE PURCHASING DECISIONS OF LOW EMISSION CARS

Segmentation of the sample ...

- Group I: **No-Greens**
(20% of the total sample),
- Group II: **Go-With The Flow-Greens**
(42% of the total sample) and
- Group III: **Go-Greens**
(38% of the total sample).



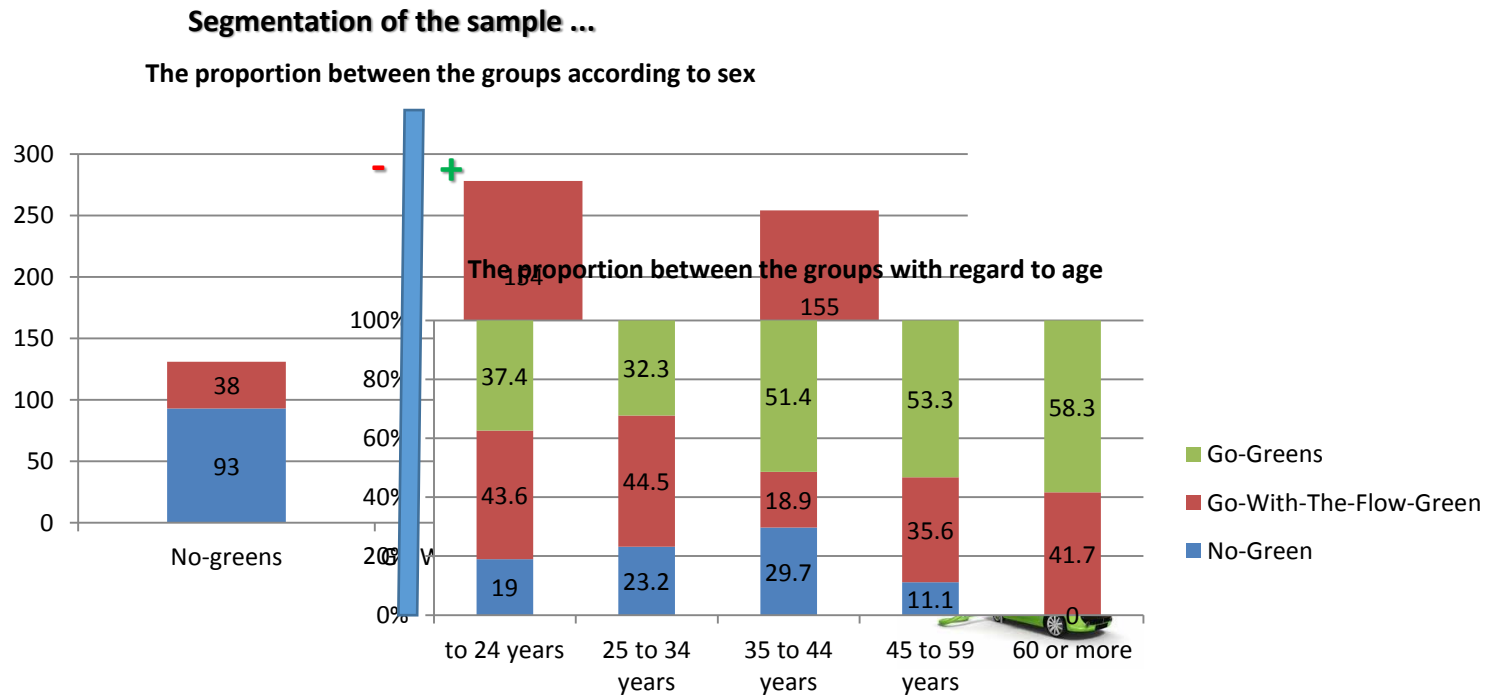
„**No-Greens**“ is the group not motivated to buy a EV in the near future. The information about CO2 and other emissions is not important to them when buying a car.

„**Go-With The Flow-Greens**“ have a positive opinion about EVs, but they are still not planning to buy one, like the people in the “No-Green” group.

„**Go-Greens**“ are very interested in buying a EV in the near future. They are aware of their responsibility to reduce environmental impact.



FACTORS INFLUENCING THE PURCHASING DECISIONS OF LOW EMISSION CARS

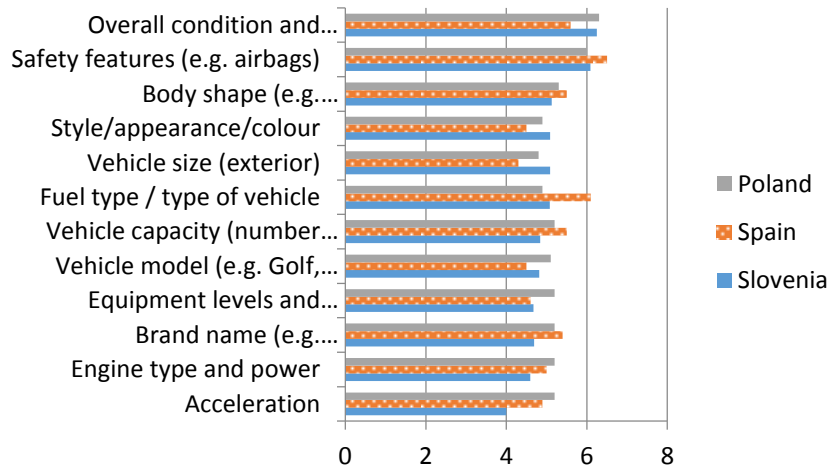


Source: FLUM, 2014.

FACTORS INFLUENCING THE PURCHASING DECISIONS OF LOW EMISSION CARS (POLAND/SPAIN/SLOVENIA)

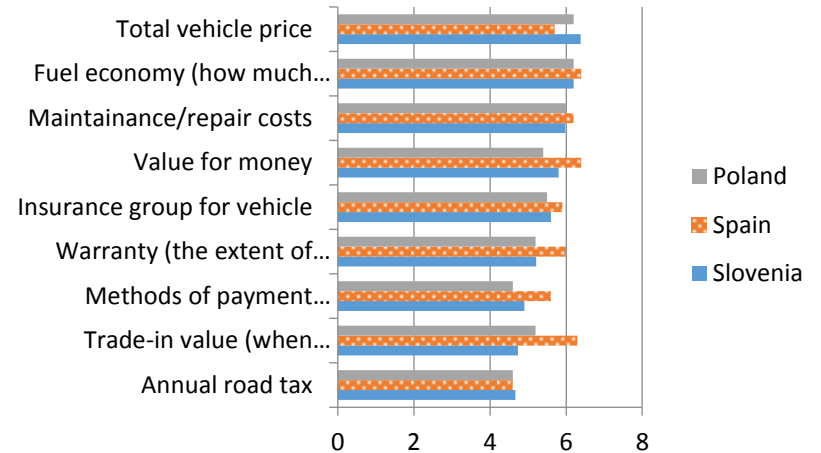
Important vehicle performance factors

On a scale from 1 to 7 where 1 means NOT IMPORTANT and 7 means VERY IMPORTANT



Important financial considerations

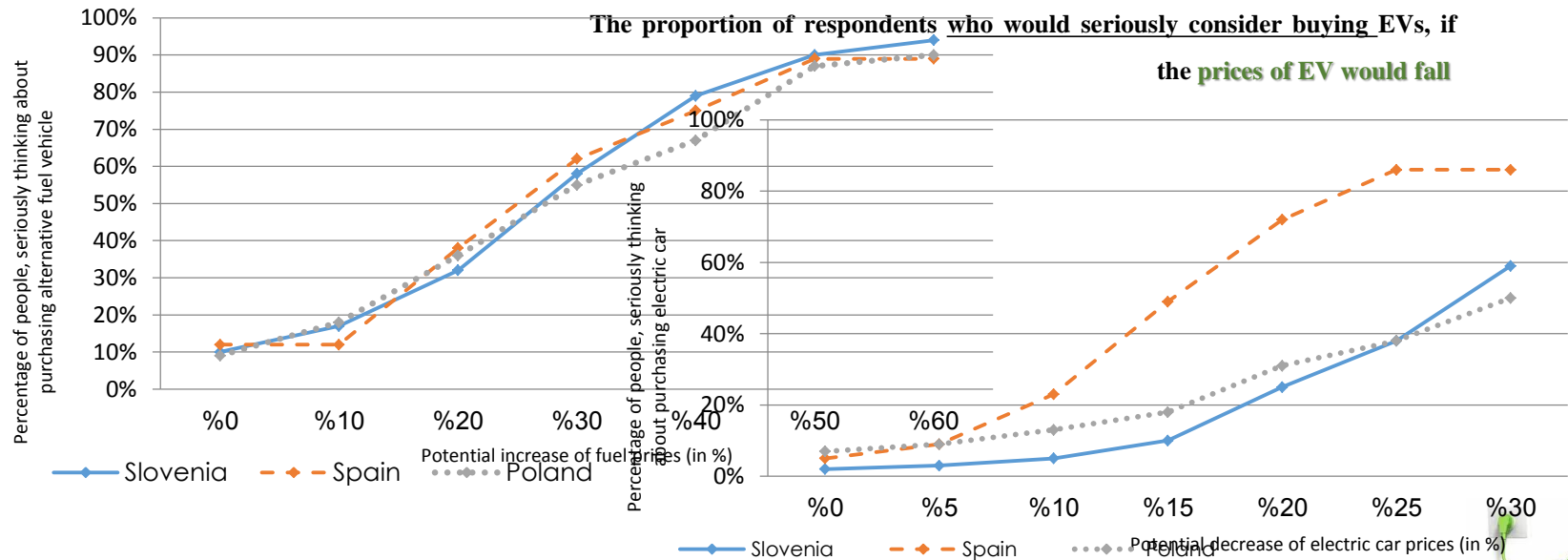
(On a scale from 1 to 7 where 1 means NOT IMPORTANT and 7 means VERY IMPORTANT)



Source: FLUM, 2015.

FACTORS INFLUENCING THE PURCHASING DECISIONS OF LOW EMISSION CARS (POLAND/SPAIN/SLOVENIA)

The proportion of respondents who would seriously consider purchasing EVs if
the fuel price increase.



FACTORS INFLUENCING THE PURCHASING DECISIONS OF LOW EMISSION CARS (**POLAND/SPAIN/SLOVENIA**)

Segmentation of the sample ...

Group I: **No-Greens** (20% in Slovenia, 8% in Spain and 20 % in Poland), -

Group II: **Go-With The Flow-Greens** (42% in Slovenia, 32% in Spain and 40% in Poland) -

Group III: **Go-Greens** (38% in Slovenia, 60% in Spain and 40% in Poland).

„**No-Greens**“ is the group not motivated to buy a EV in the near future. The information about CO2 and other emissions is not important to them when buying a car.

„**Go-With The Flow-Greens**“ have a positive opinion about EVs, but they are still not planning to buy one, like the people in the “No-Green” group.

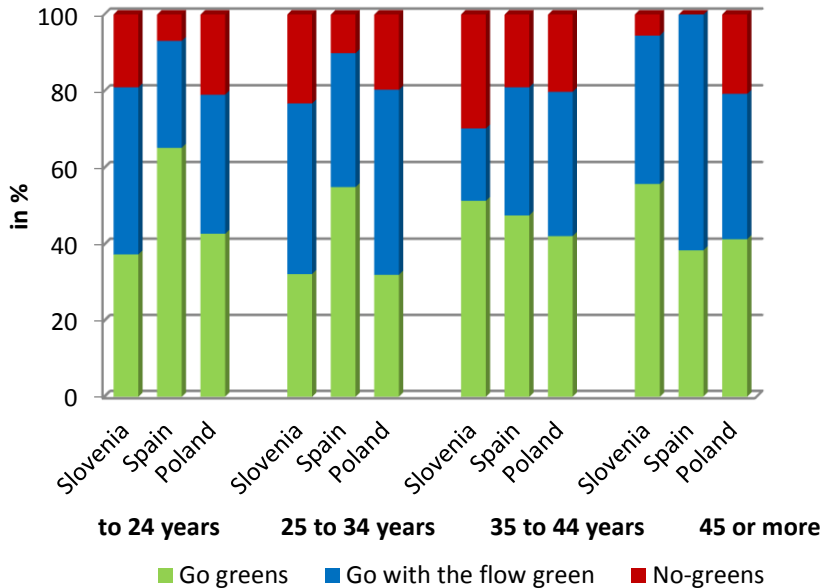
„**Go-Greens**“ are very interested in buying a EV in the near future. They are aware of their responsibility to reduce environmental impact.



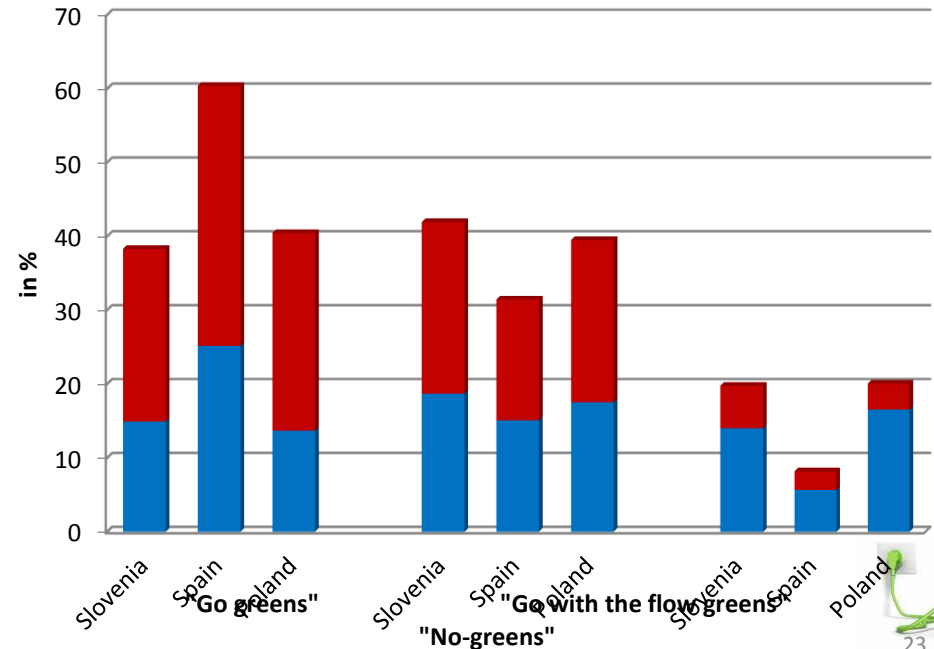
FACTORS INFLUENCING THE PURCHASING DECISIONS OF LOW EMISSION CARS (POLAND/SPAIN/SLOVENIA)

Segmentation of the sample ...

Age distribution between different segments of consumers

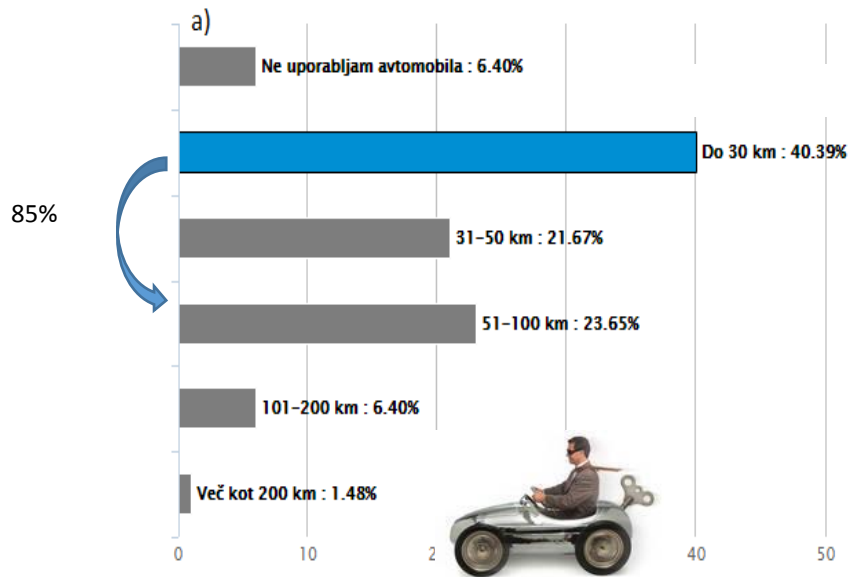


Ratio between males and females in different segments of consumers



Wishes and Needs of EV DRIVER'S rgd CHARGING INFRASTRUCTURE FOR ELECTRIC VEHICLES

a) Daily average mileage

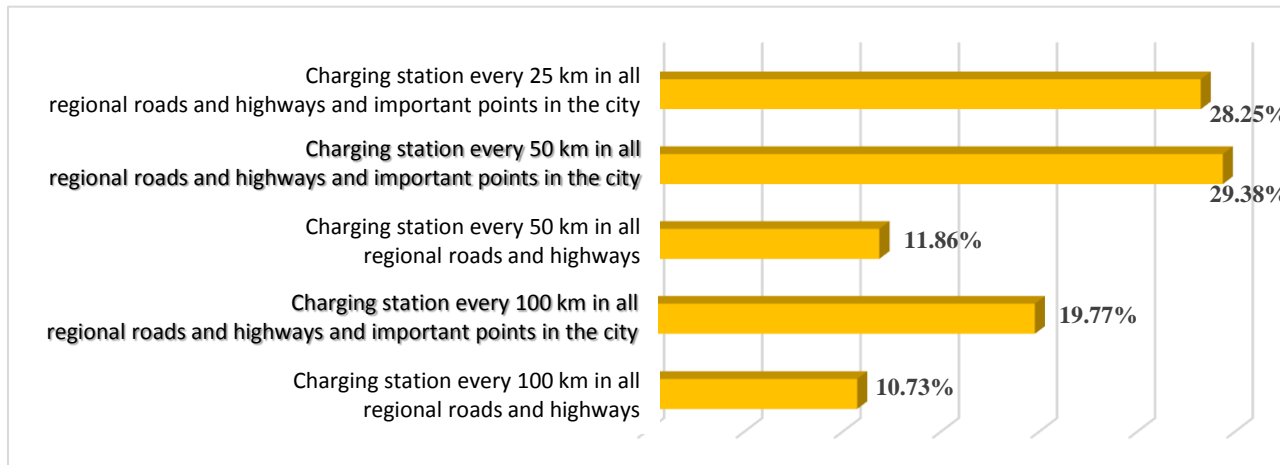


b) the wished range of EV

Source: FLUM, 2015.

Wishes and Needs of EV DRIVER'S rgd CHARGING INFRASTRUCTURE FOR ELECTRIC VEHICLES

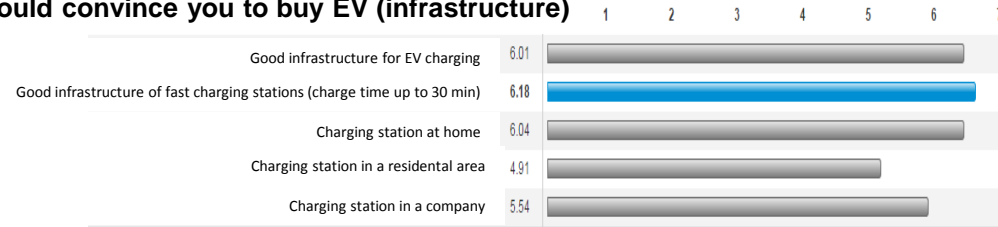
Adequate coverage of charging stations for EVs that could charge electric vehicles in terms of the potential user security



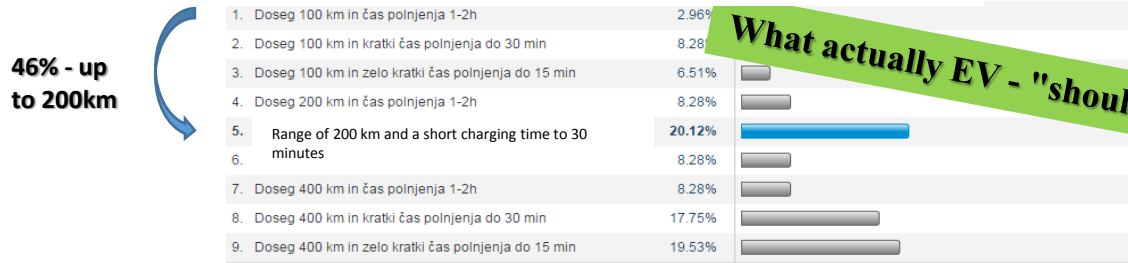
Source: FLUM, 2015.

Wishes and Needs of EV DRIVER'S rgd CHARGING INFRASTRUCTURE FOR ELECTRIC VEHICLES

A factor that should convince you to buy EV (infrastructure)



A factor that should convince you to buy EV (range & infrastructure)



Source: FLUM, 2015.

I. PROPOSALS – GRANT FUNDING

1. the automatic nature of the measure;
2. Tax incentives (MVT);
3. The proper information regarding the availability of non-refundable financial incentives;
4. "equalize" the funds that are intended for persons and legal entities;

PROPOSED MEASURES AND ACTIVITIES
TO PROMOTE THE PURCHASE AND USE OF EVs
AND CHARGING INFRASTRUCTURE DEVELOPMENT

II. PROPOSALS – CHARGING INFRASTRUCTURE

1. Awarding grant funding to invest in the construction of charging stations for users;



PROPOSED MEASURES AND ACTIVITIES
TO PROMOTE THE PURCHASE AND USE OF EVs
AND CHARGING INFRASTRUCTURE DEVELOPMENT

III. PROPOSALS –

TO RAISE AWARENESS OF THE MARKET FOR ELECTRICAL VEHICLES

1. It is necessary to overcome prejudices with regard to electric vehicles and to achieve an understanding of the importance of electric vehicles among users

Promotional events

„The financial“ packages

Ecological literacy



PROPOSED MEASURES AND ACTIVITIES
TO PROMOTE THE PURCHASE AND USE OF EVs
AND CHARGING INFRASTRUCTURE DEVELOPMENT

THANK YOU!

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Furamo modro.

Faculty of Logistics, University of Maribor, SLOVENIA