

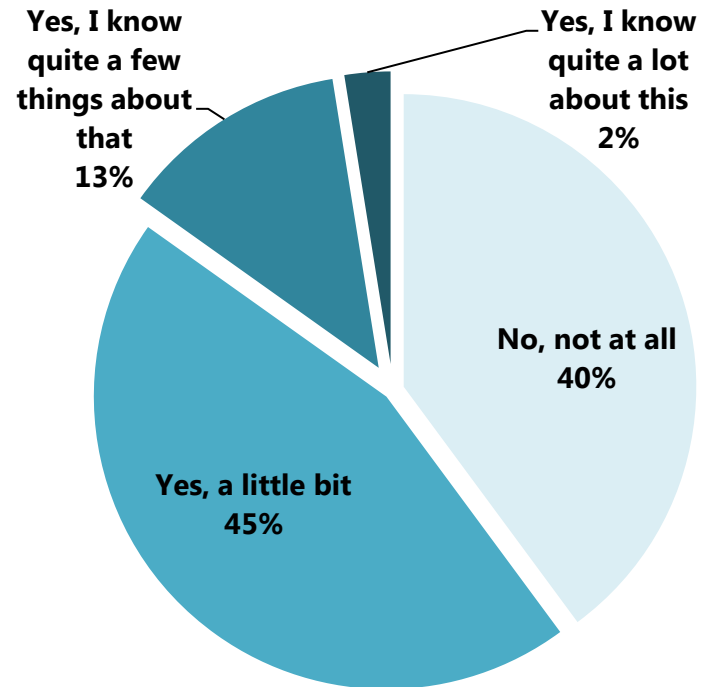
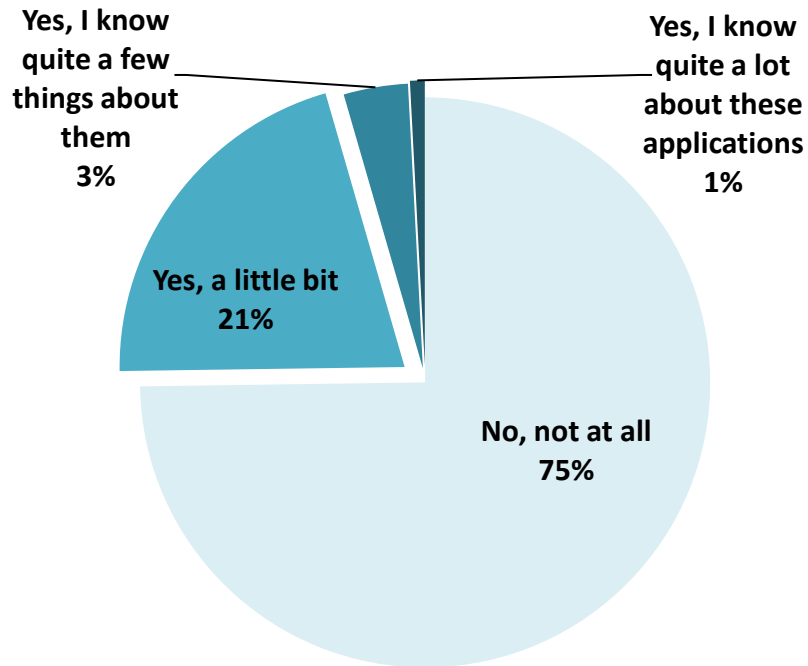
“Aceptación pública de las aplicaciones de las pilas de combustible de hidrógeno en Europa”

Christian Oltra y Roser Sala (CIEMAT)



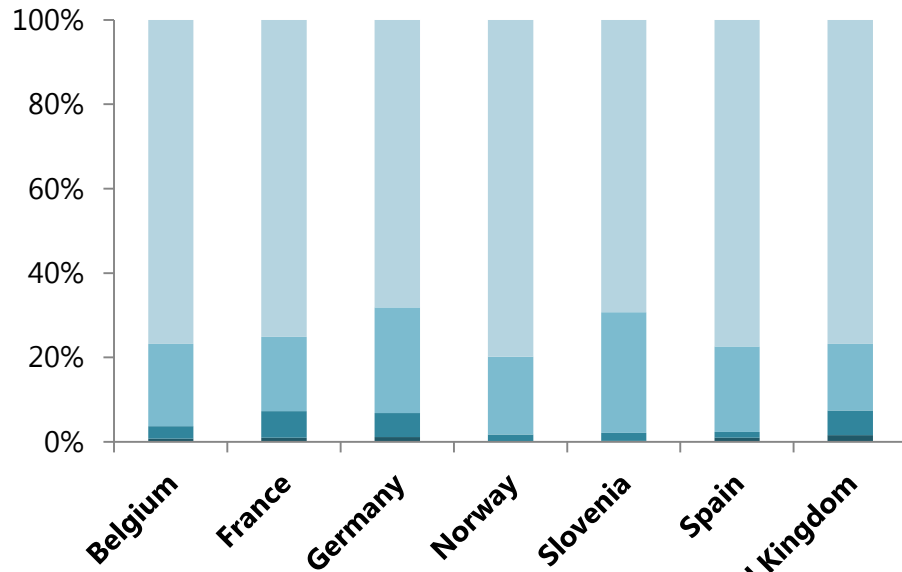
PUBLIC SURVEY- RESULTS

Awareness of home fuel cells & HFCEVs

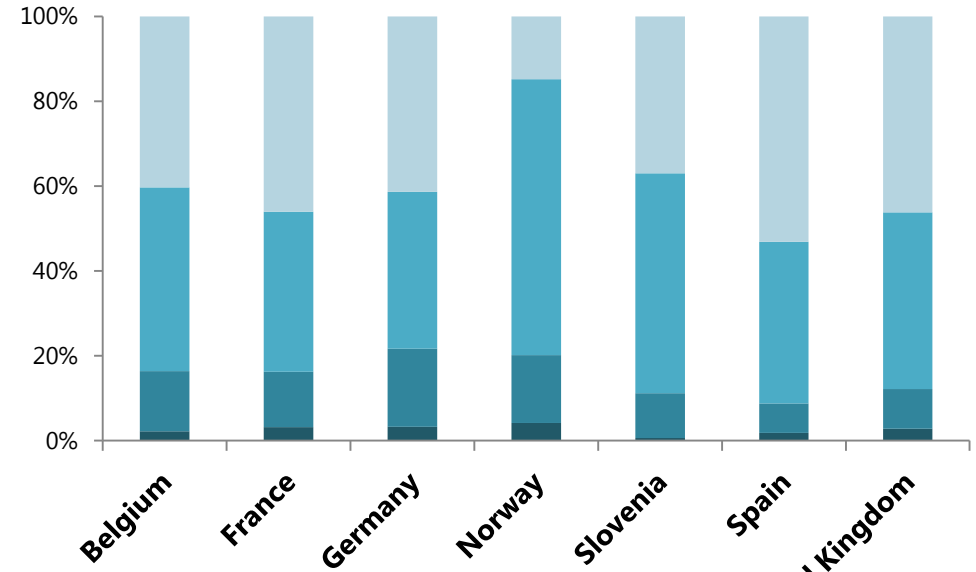


PUBLIC SURVEY- RESULTS

Awareness of home fuel cells & HFCEVs

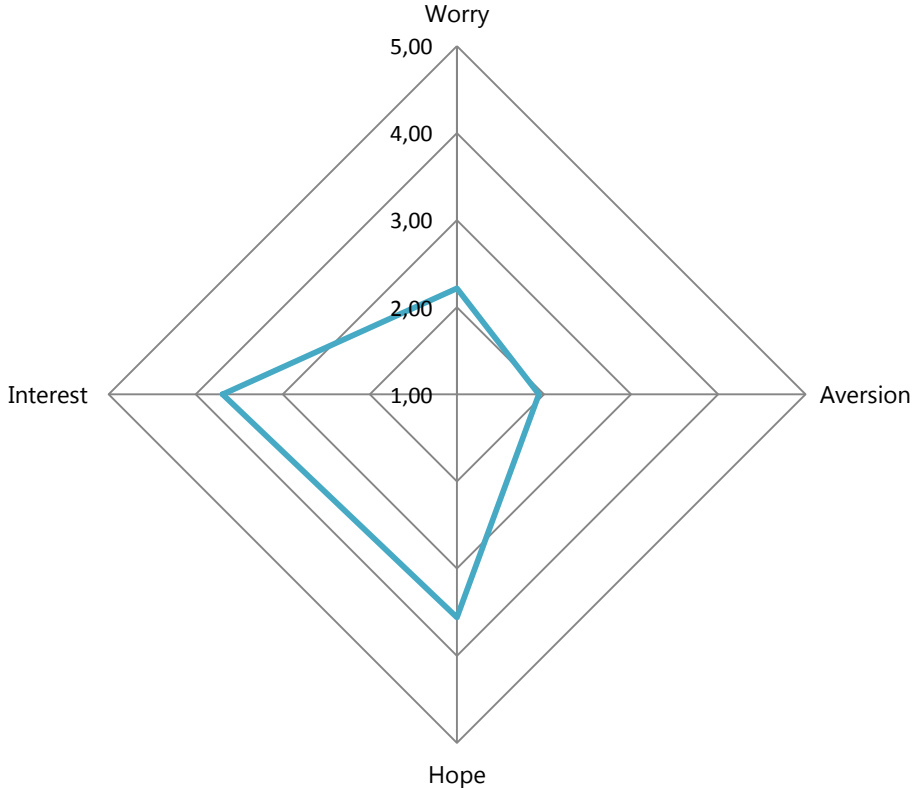
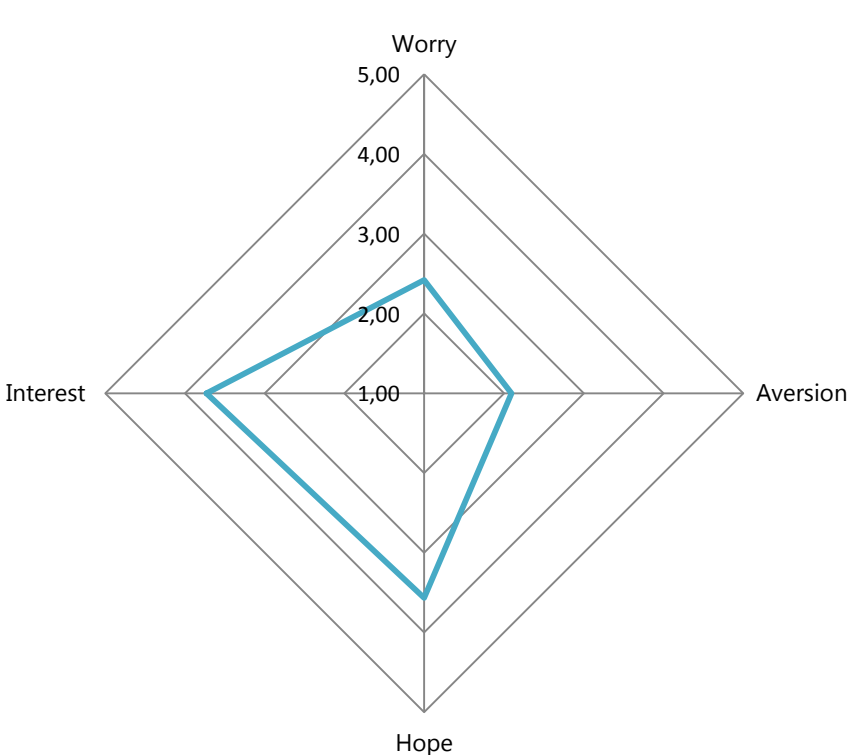


- Yes, I know quite a lot about these applications
- Yes, I know quite a few things about them
- Yes, a little bit
- No, not at all



- Yes, I know quite a lot about these applications
- Yes, I know quite a few things about them
- Yes, a little bit
- No, not at all

Affects associated to home fuel cells and HFCEVs



Perceived benefits associated to HFCEVs

Cost too much to install



have **acceptable costs**

Cost too much to run



be **affordable** to run

Be very inconvenient



very **convenient**

Have a very negative



very **positive** effect on the **environment**

Require a **high** frequency of maintenance



low frequency of maintenance

Be very dangerous



very **safe**

Be **inconvenient** to use



user friendly

Be **environmentally friendly**



be **environmentally harmful**

Have **sufficient range**



don't have a sufficient range

Be **easy to refuel/recharge**



not easy to refuel/recharge

Be **safe** to drive



not safe to drive

Be **reliable**



unreliable

Be **economically affordable**



economically **not affordable**

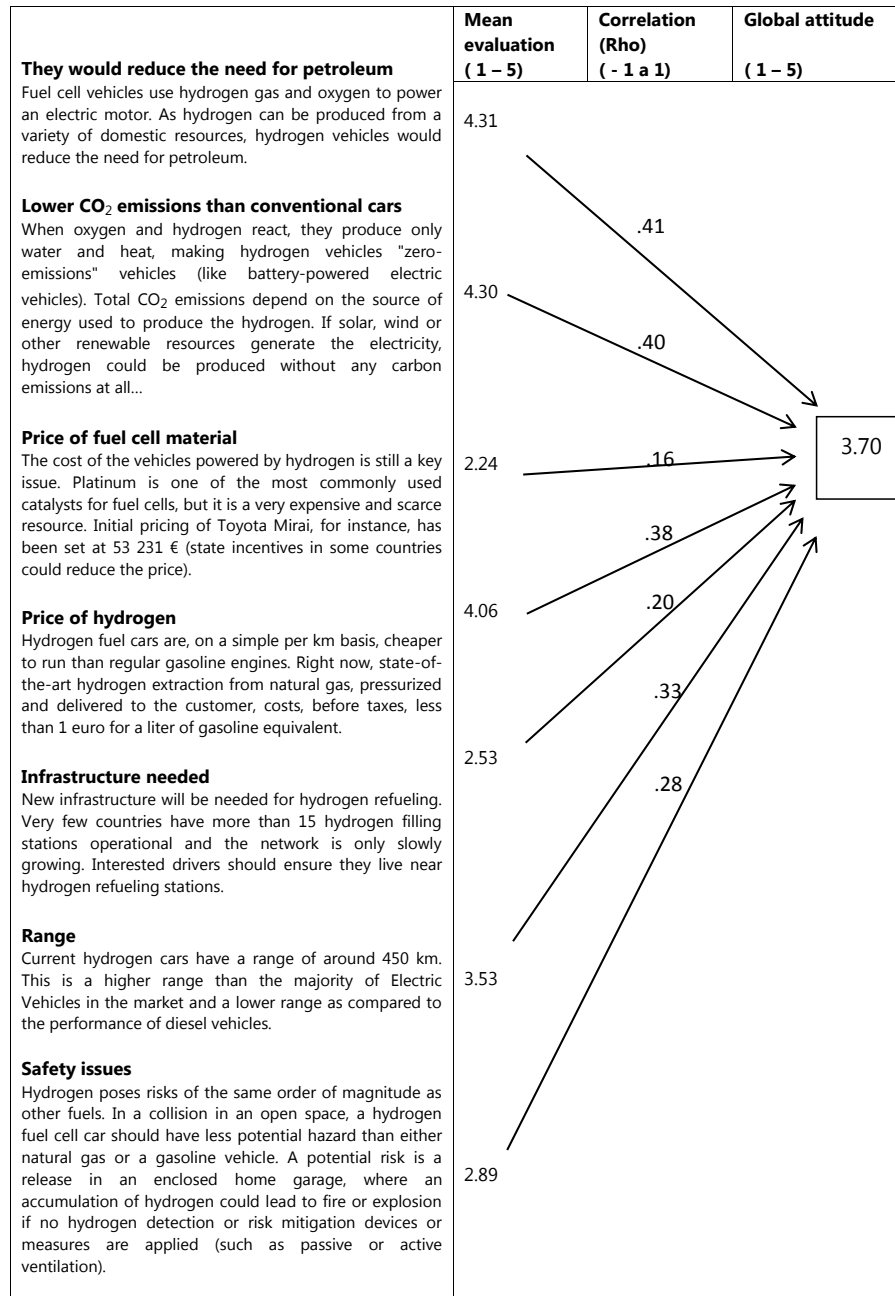
Make my life **easier**



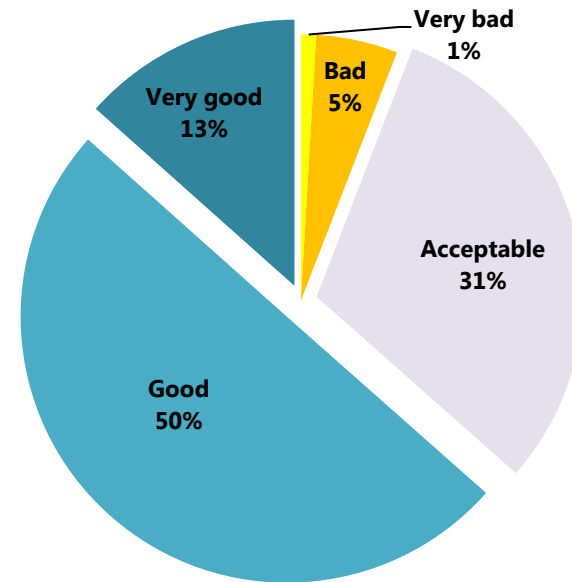
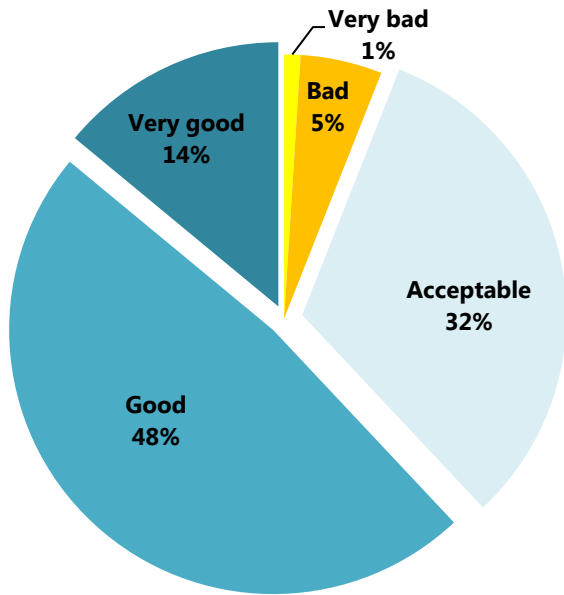
user friendly



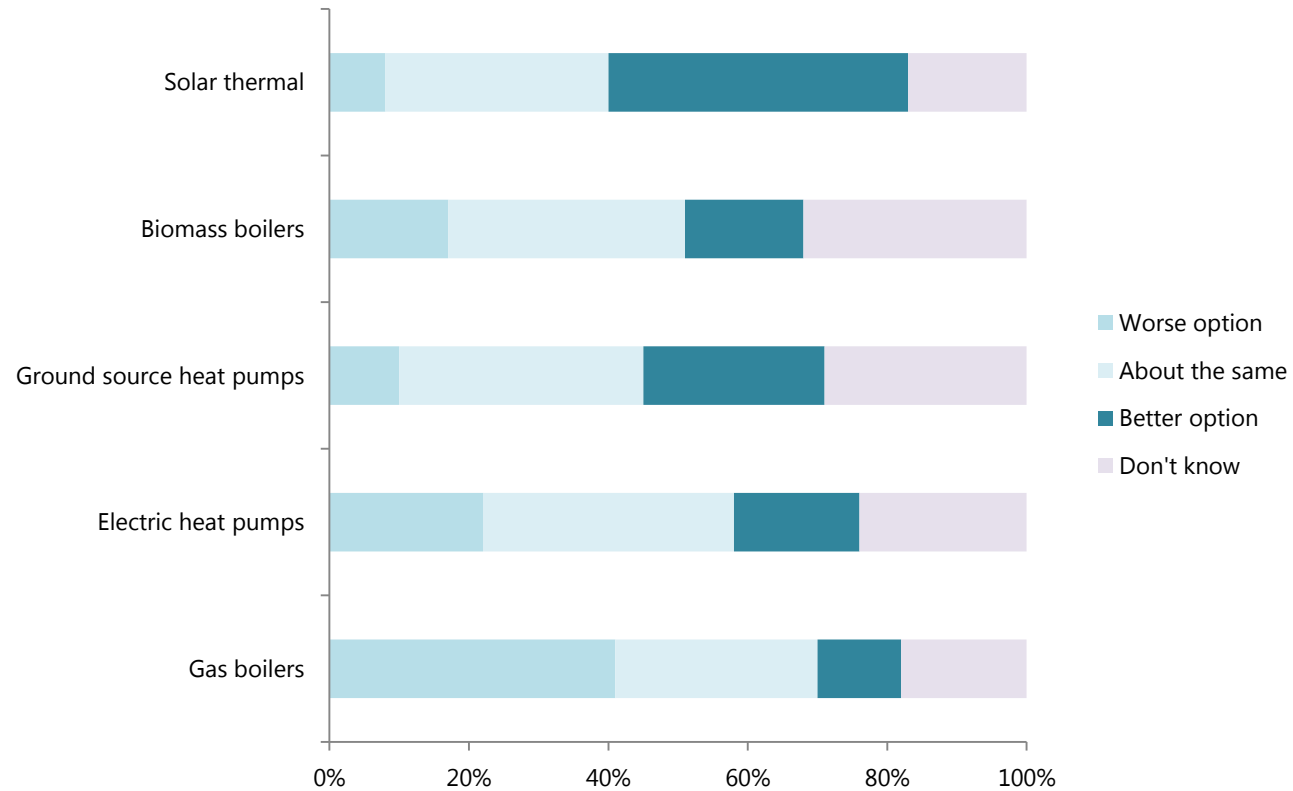
Informed evaluation



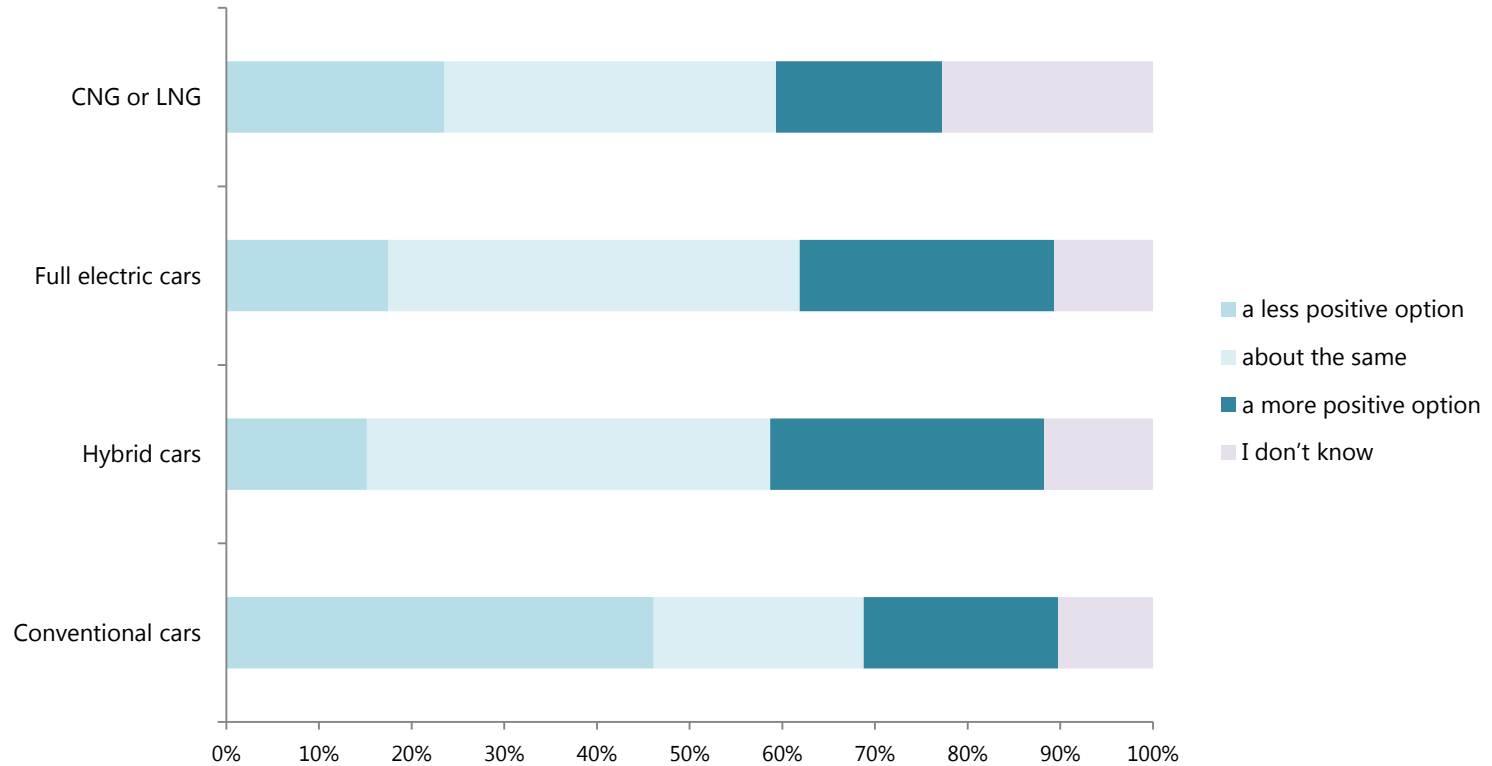
Global evaluation of home fuel cells and HFCEVs



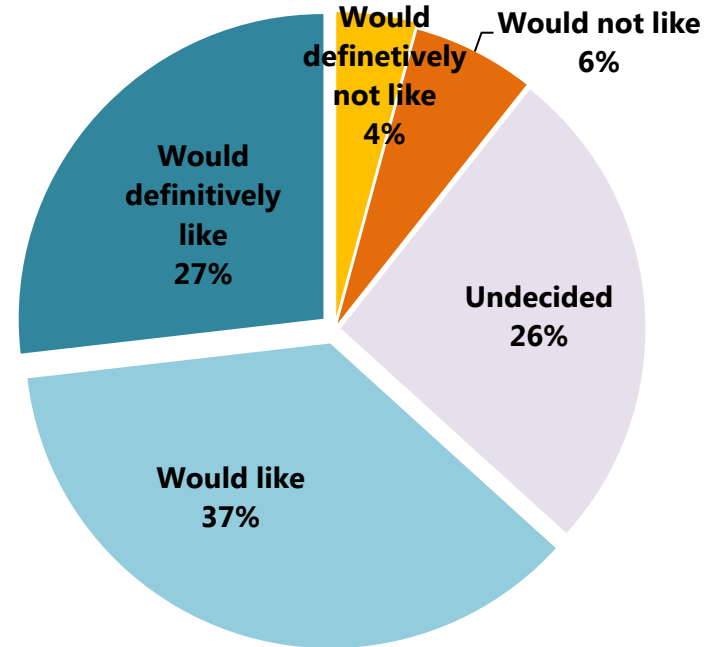
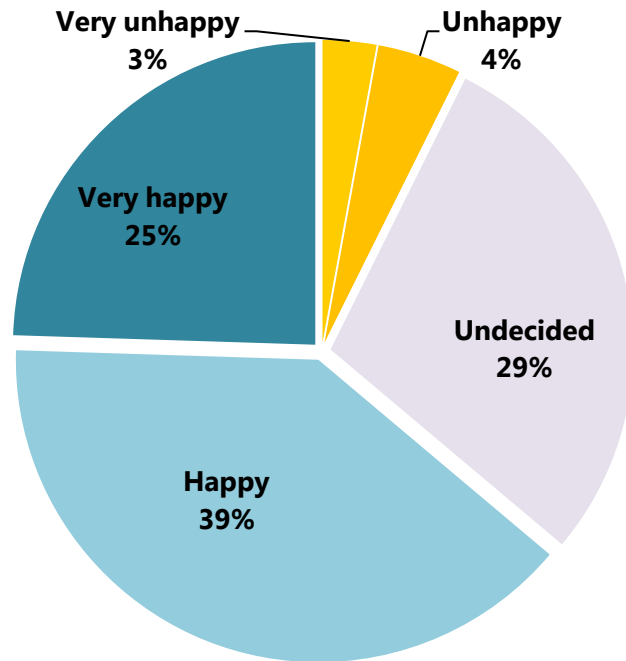
Evaluation of alternative technologies as compared to home fuel cells



Evaluation of alternative technologies as compared to HFCEVs



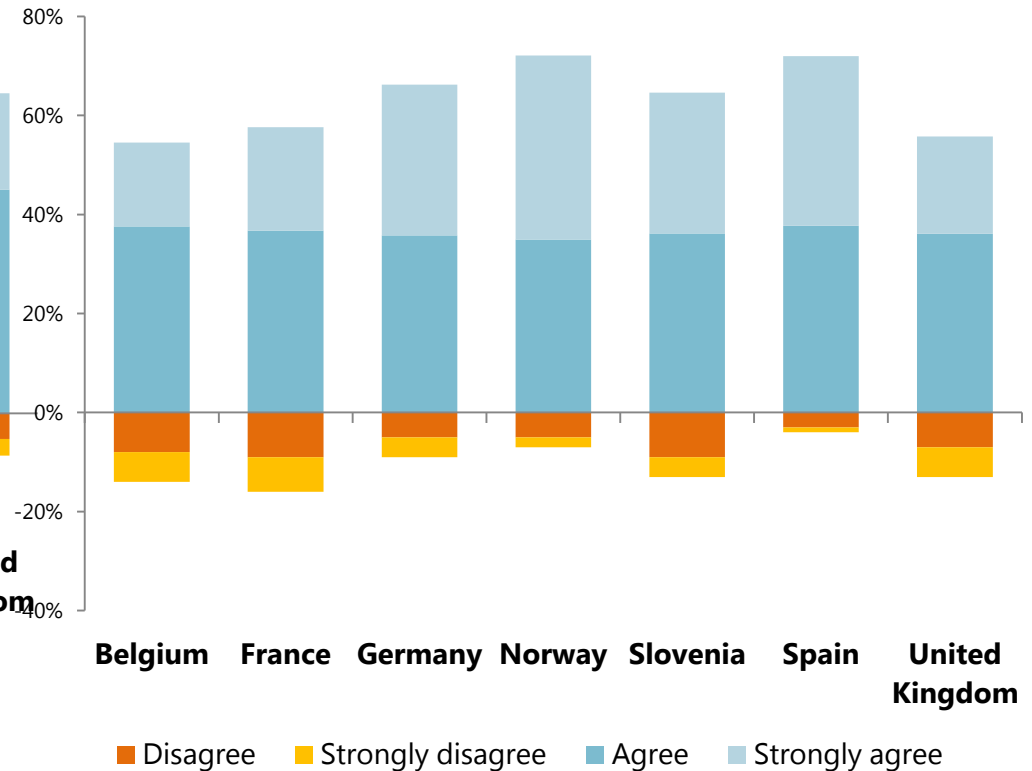
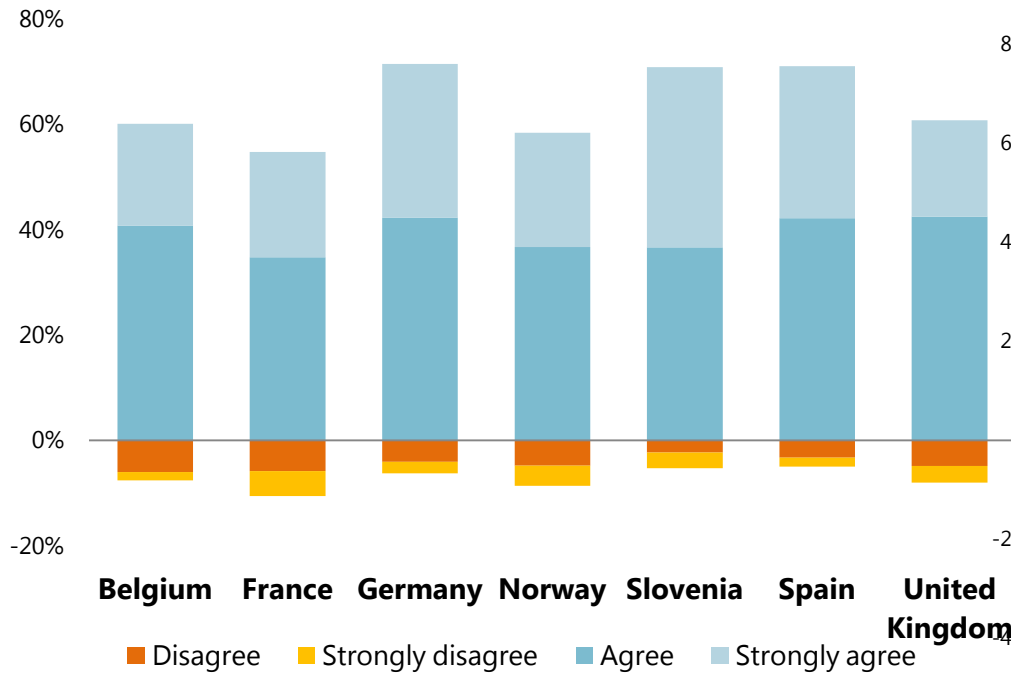
Acceptance of home fuel cells & HFCEVs



Acceptance of home fuel cells & HFCEVs

Figure. % of respondents in the total sample that would like to have a hydrogen fuel cell system in their home

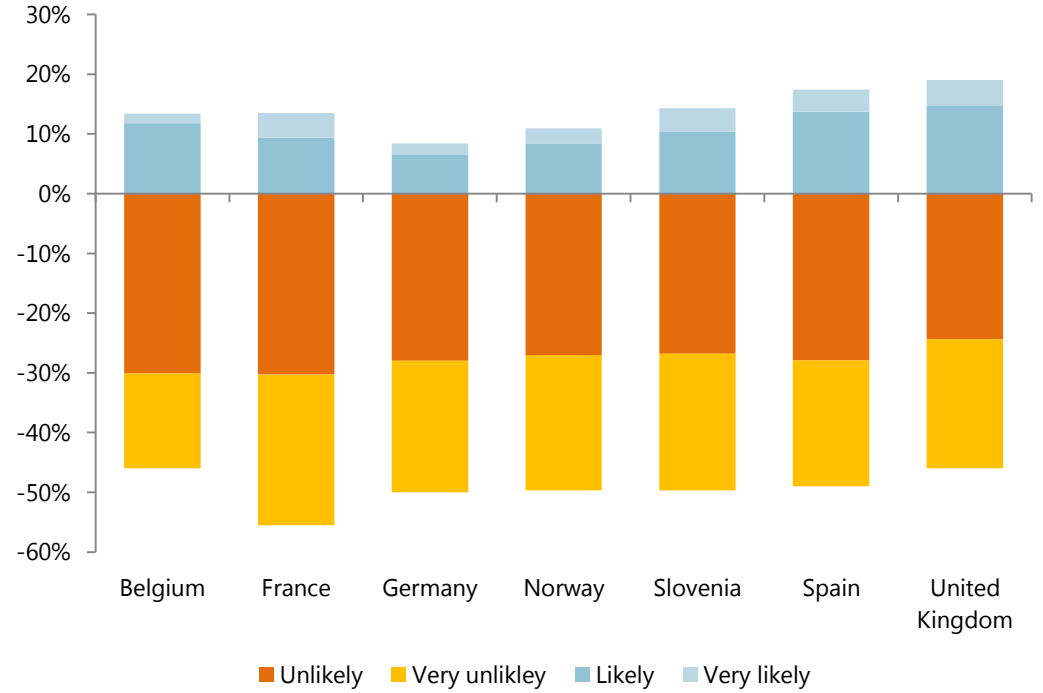
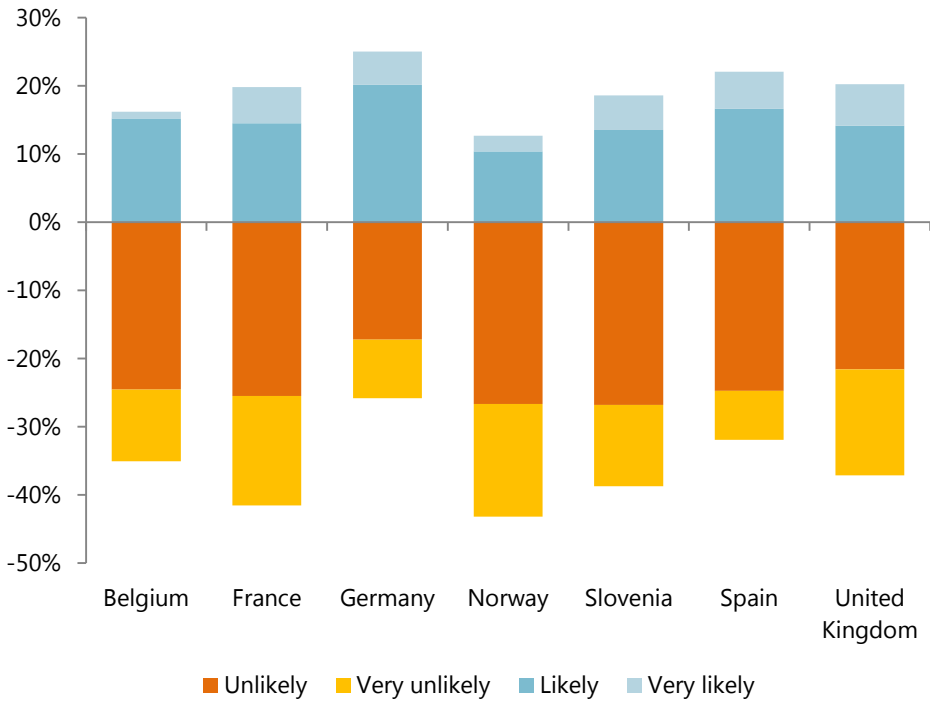
Figure. Acceptance of HFCEVs (% of respondents that would like to have a HFCEV, all the countries)



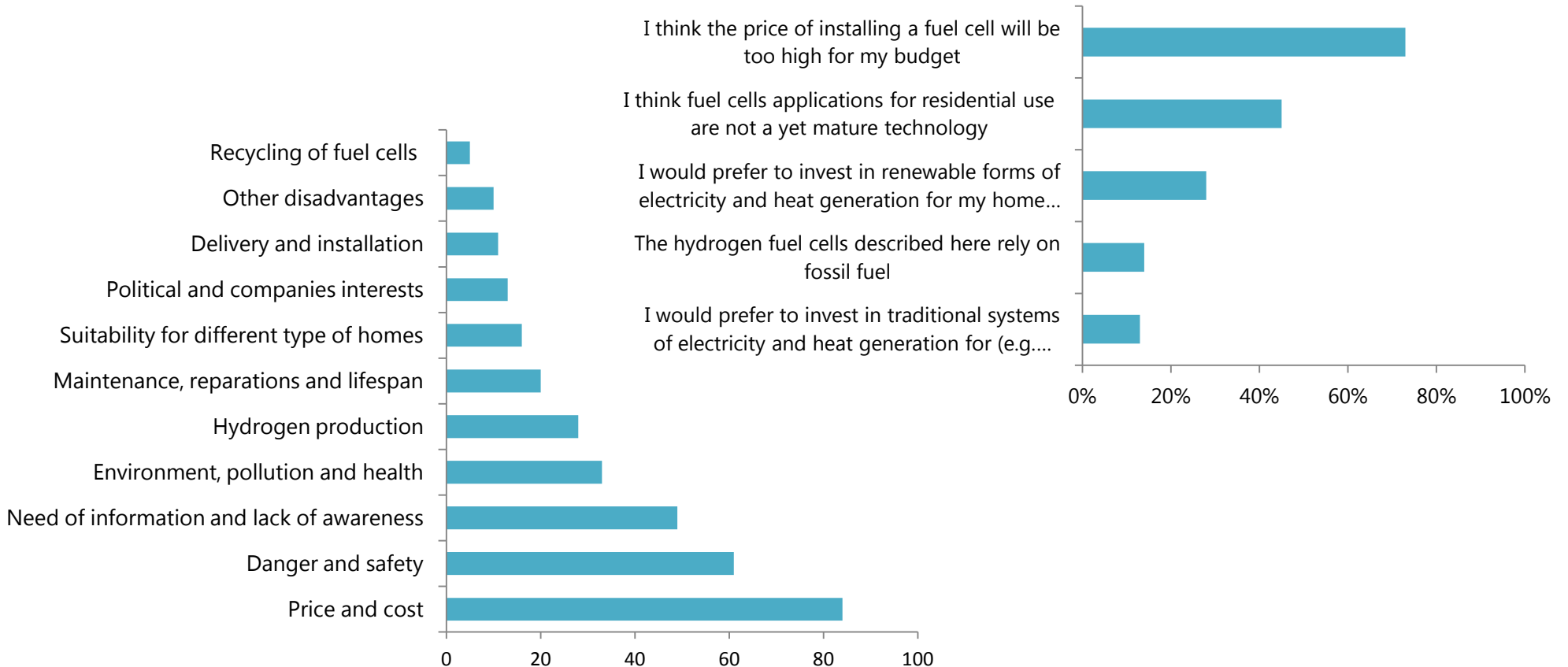
PUBLIC SURVEY- RESULTS



Self-reported likelihood of purchasing a home fuel cells & HFCEVs



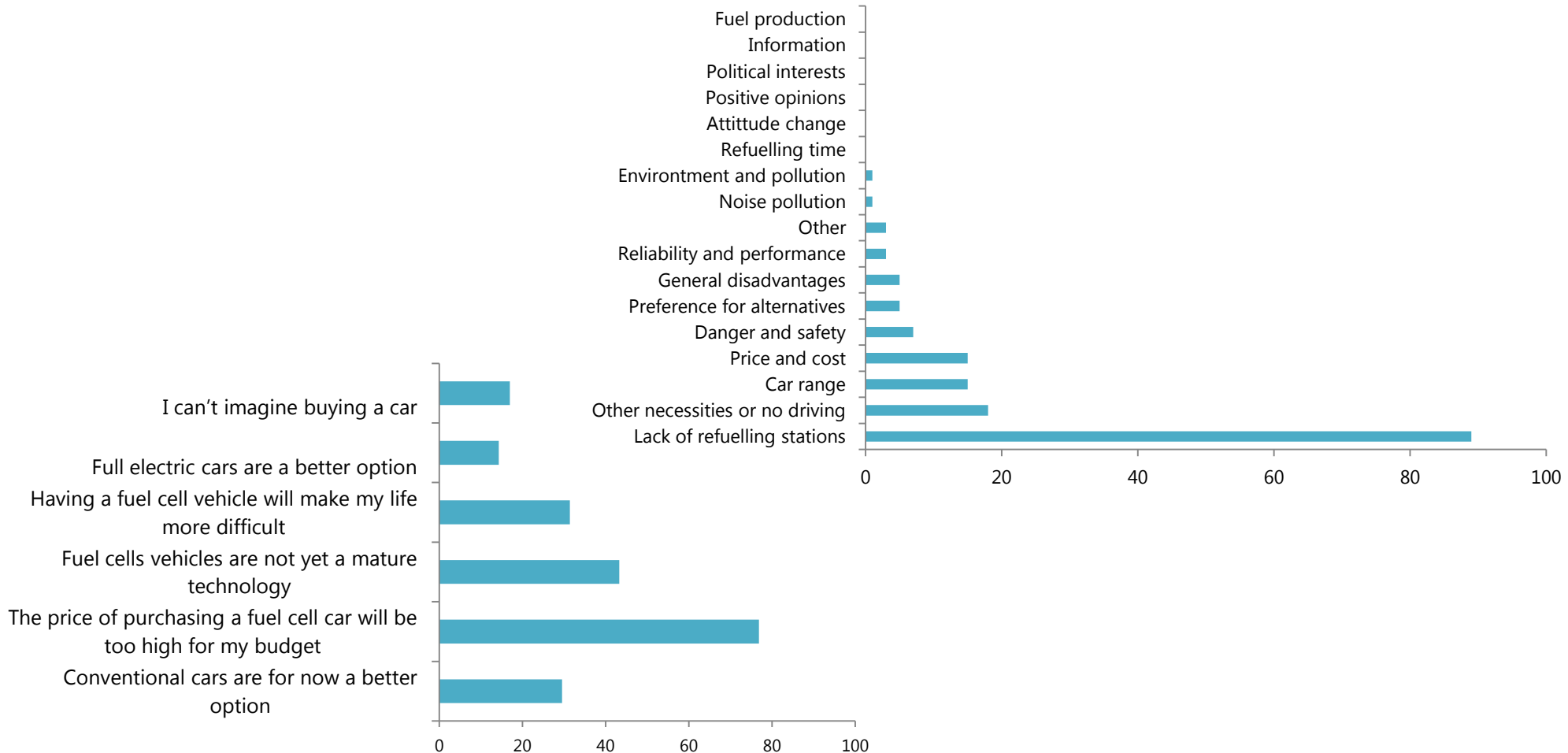
Respondents' reasons for not willing to buy a home HFC



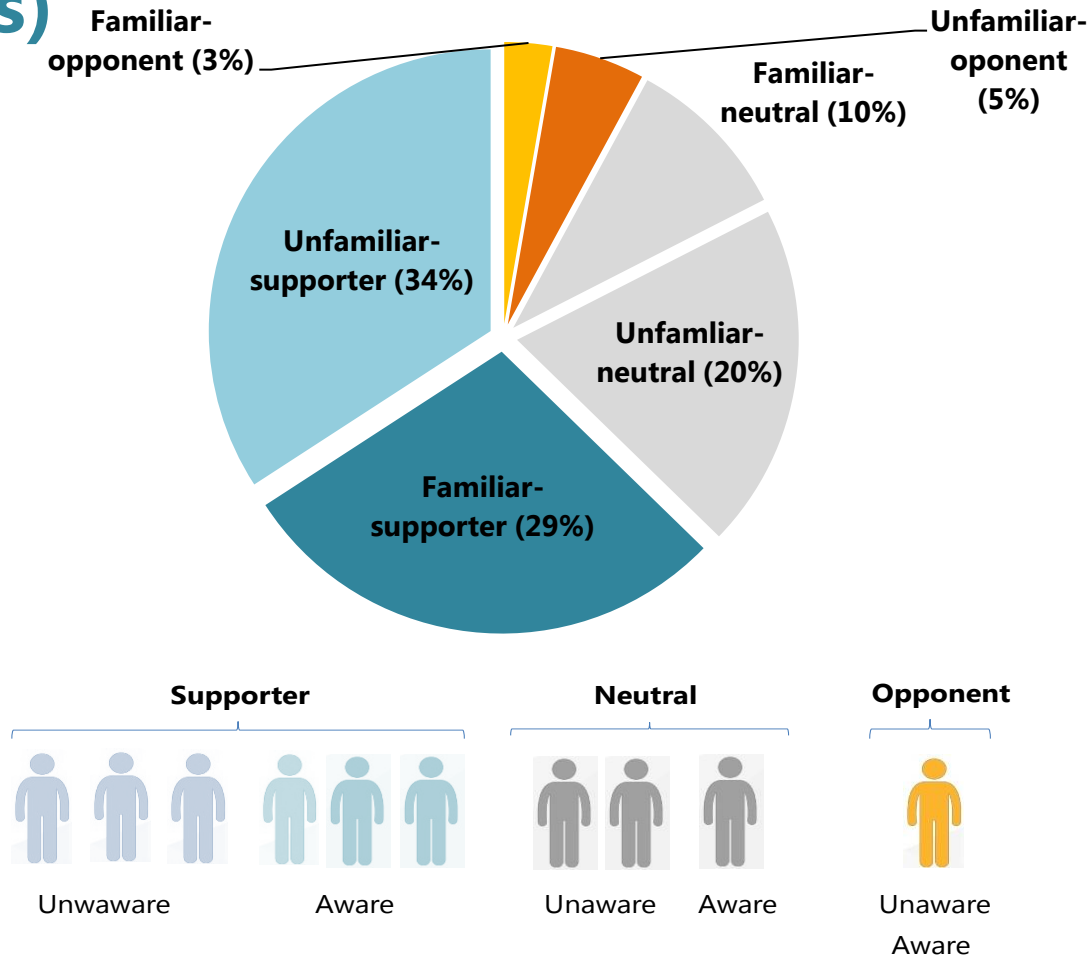
PUBLIC SURVEY- RESULTS



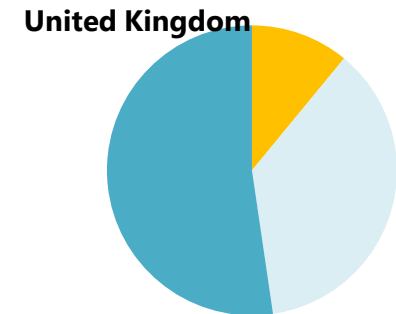
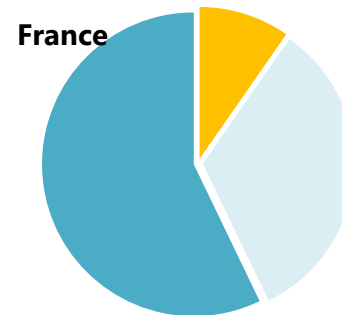
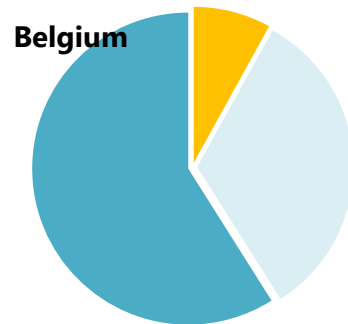
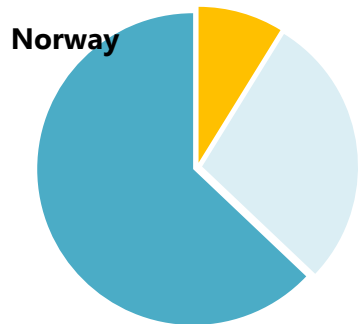
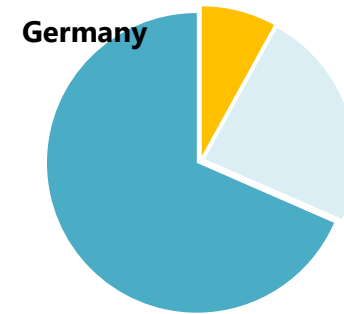
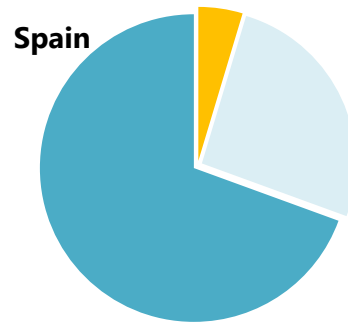
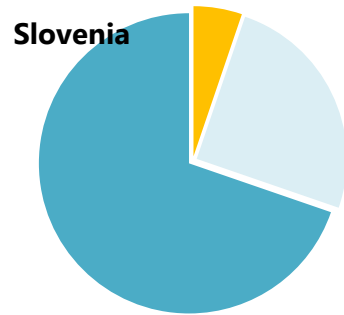
Respondents' reasons for not willing to buy a HFCEV



Supporters and opponents (all countries, both applications)



Supporters and opponents per country



■ Opponent ■ Neutral ■ Supporter

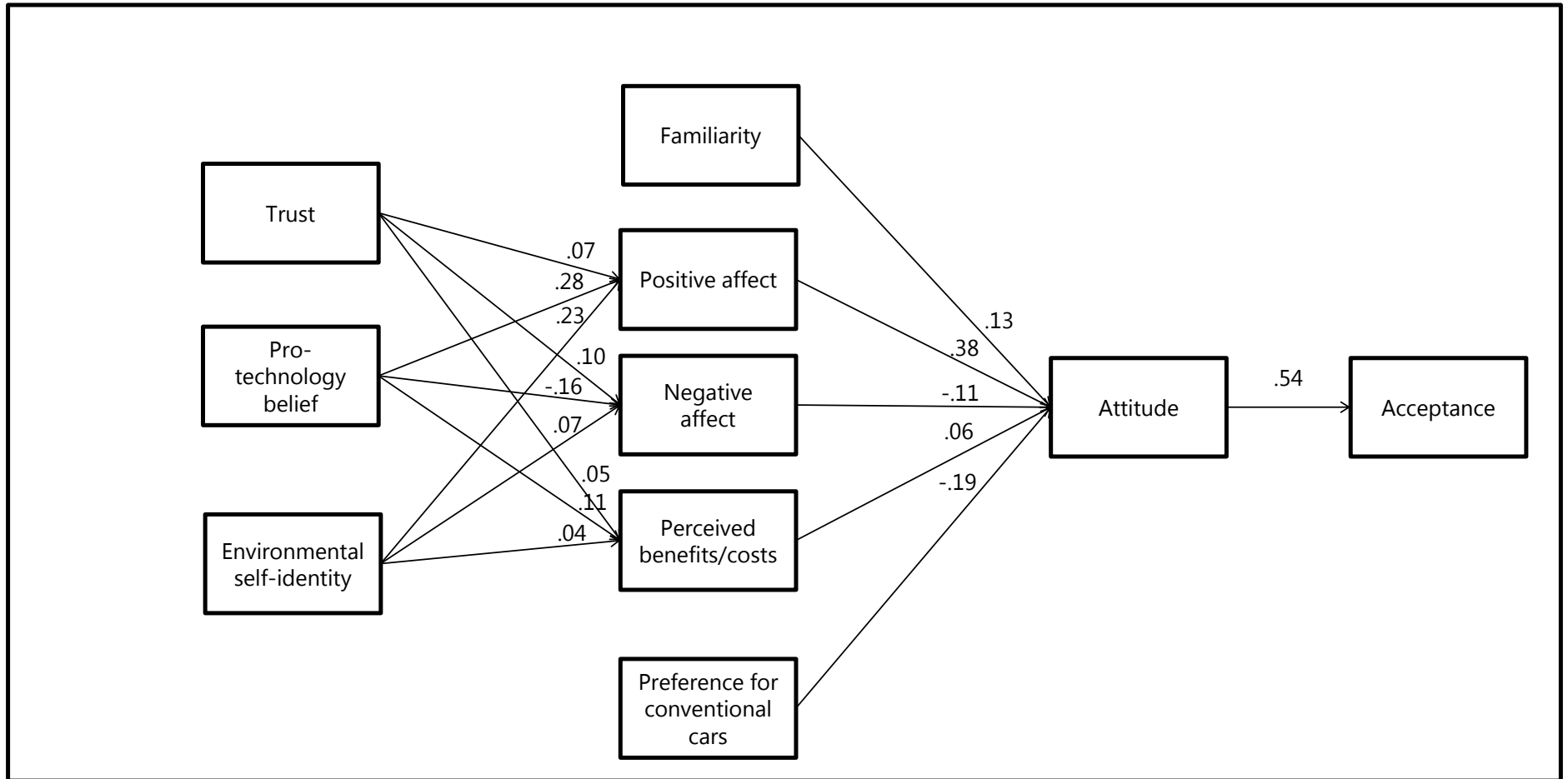
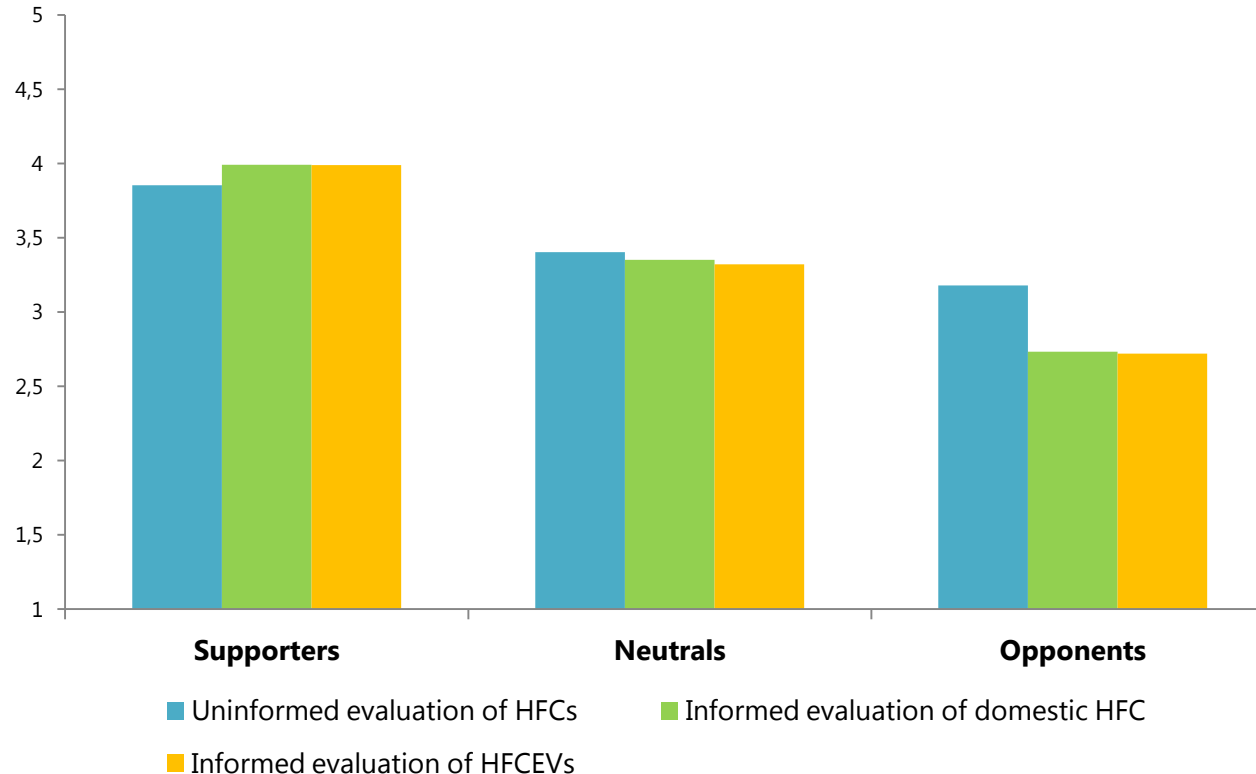


Figure 64. Summary of path analysis on acceptance of HFCEVs (standardized coefficients β)

Table 19. *Importance of consequences in global evaluation and self-reported likelihood of buying a HFCEV*

	Global evaluation of HFCEVs	Self-reported likelihood of purchasing a HFCEV
Reduce the need for petroleum	,410	,074
Reduce CO ₂ emissions	,398	,094
Price for fuel cell material	,159	,410
Price of hydrogen	,379	,146
Need for new infrastructure	,196	,404
Range	,331	,267
Safety issues	,284	,318

Change from uninformed evaluation to informed evaluation for supporters, neutrals and opponents (mean, seven countries)



**the difference is significant (p value <0.05)*

Overview

- A majority of people are concerned about the problems that the technology is intended to solve
- There is a medium-low level of public awareness of HFC applications. It varies across countries and applications
- There is a generally positive evaluation of residential fuel cells and HFCEVs
- Different socio-demographic groups may react differently to fuel cell applications
- Prior cultural orientations may also play a role
- A small percentage of people may simply dislike or be uninterested in these applications

Recomendations

- There is a need for further **work with consumers to understand their attitudes and preferences** towards transportation and provision of electricity and heat.
- Attitudes and **perceptions as well as emotions need to be accounted** for promotional campaigns. Creating a positive frame for the introduction of hydrogen and fuel cell technologies that resonates with individuals' lifestyles and identities, **making the personal (for consumers) benefits of these applications specific, tangible, increasing familiarity and interest with the technology** could favour the future adoption of the technology.
- Promotional campaigns should also take into account the existence of various sociodemographics, cultural identities, prior orientations and lifestyles among consumers. **Targeting audience attitudes** may allow a better connection with the public.
- There is also a need for interventions aimed at helping **avoid the range of barriers** associated with adoption of alternative forms heat and electricity and transportation (e.g. government grants, micro-loans).



HYACINTH

Hydrogen Acceptance in the Transition Phase
Support & Coordinated Action



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