

User Acceptance and Vehicle Automation

An Empirical Investigation on the European Consumers' Acceptance Towards Highly Automated Passenger Vehicles

Research Motivation

- Automotive industry still **lacks** a widely accepted and used framework to **assess technology acceptance** towards the driving/usage of **Highly Automated Passenger Vehicles (HAPVs)**
- Few studies** in the existing literature have studied in what extent European consumers intend to drive/use HAPVs in the future

Methodology



- 57%** stated that they feel **extremely or quite safe** when they are driving/using passenger vehicles today
- 80%** believe that technology progress, until now, has **extremely or quite improved** the safety of their travels with passenger cars

Application of UTAUT model

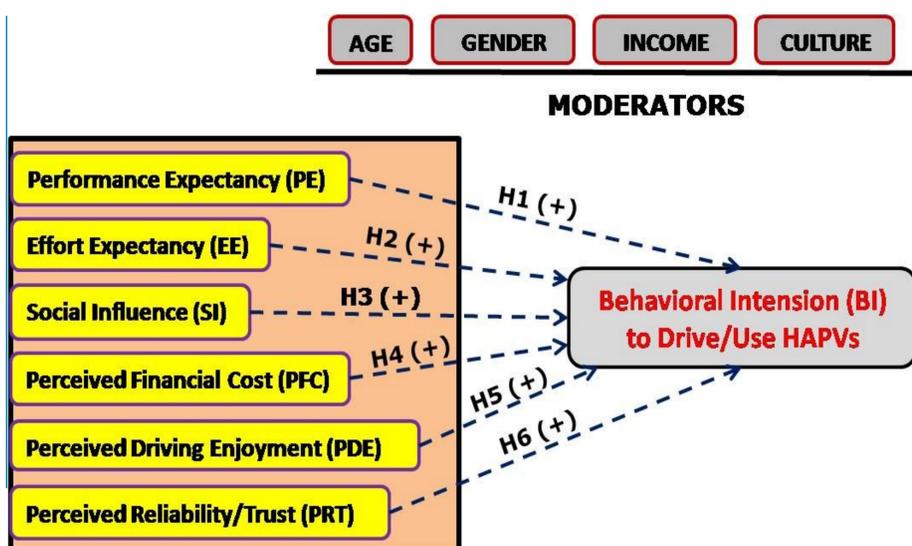


Fig.1. UTAUT-extended research model

Factors influencing HAPVs' adoption

- PDE** plays the **biggest role** in European consumers' desire to drive/use HAPVs
- PFC, PRT, SI** and **PE** appear to be **important deciding factors**
- Factor **EE failed** to reach significance
- Respondents in **Northern Europe** are **more likely to drive/use HAPVs**, contrary to those from Southern Europe

H#	Path	Standardized path coefficients β	p-value	Decision
H1	PE → BI	0.121**	<0.01	Supported
H2	EE → BI	-0.008#	non-significant	Rejected
H3	SI → BI	0.107***	<0.001	Supported
H4	PFC → BI	0.187***	<0.001	Supported
H5	PDE → BI	0.215***	<0.001	Supported
H6	PRT → BI	0.107**	<0.01	Supported
	Age → BI	-0.005#	non-significant	
	Gender → BI	0.053*	<0.05	
	Income → BI	0.045#	non-significant	
	Culture → BI	0.378***	<0.001	

- 43%** **strongly or somewhat agreed** with the statement «I intend to drive/use HAPVs when they become available in the near future»

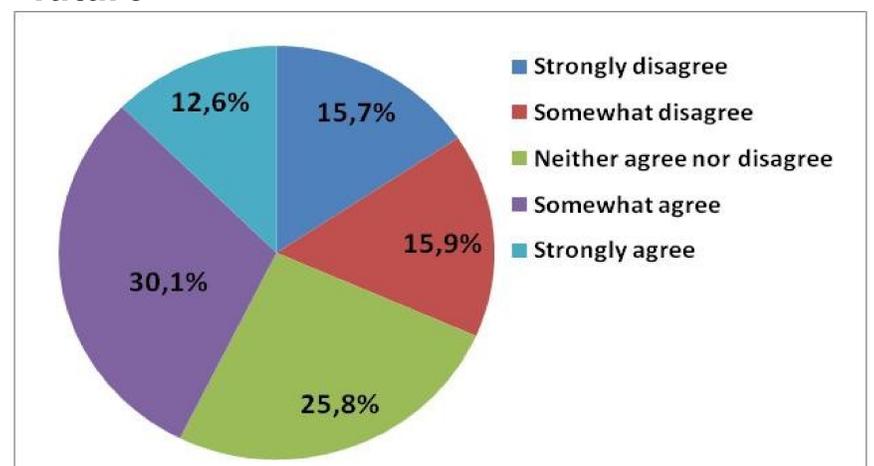


Fig.2. European consumers' intention to drive/use HAPVs