Who are the users of speed regulation assistance?
Comparing driver characteristics of casual and intensive system users
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Introduction

- Speed management is a major issue in road safety. Along with driver education and enforcement strategies, the implementation of assistance systems represents a promising countermeasure.\(^1\)
- Speed regulation assistance can decrease crash risk, reduce speed variations, prevent speed peaks and improve traffic flow.\(^2\) However, its benefit depends on the extent of its use.
- Mature technologies with high availability in Europe:
  - Cruise Control (CC): automatically maintains the driving speed at level chosen by the driver
  - Speed Limiter (SL): sets the vehicle’s maximum speed

Question: Who are the users? What distinguishes casual from intensive users?

Method

- INTERACTION survey: Standardized web-based questionnaire with in-vehicle technology users\(^3\)
- French data (N=1177)
- CC/SL users (N=474)
  - exclusive SL users (n=30)
  - CC & SL users (n=199)
  - exclusive CC users (n=245)

Analyses (for CC and SL separately)

- Median-split on usage frequency → casual vs. intensive users
- Comparison of driver characteristics by means of Chi-Square tests and Mann-Whitney-U-tests

Results

Gender

- CC: Male users are more represented as intensive users than casual users.
- No effect for SL users.

Age categories

- No effect for CC users.
- Higher age categories have higher chances of being intensive than casual SL users.

Annual mileage

- Intensive CC use is related to higher annual mileage than casual CC use.
- No effect for SL users.

Professional car use

- Drivers who indicate using their car for professional matters are overrepresented in the intensive user group for CC and SL.

Frequency of other system use

CC & SL use:

- Intensive CC users are more likely than casual users to be intensive SL users too (p<.01).
- The same holds for SL users regarding CC use (p<.01).

Navigation system (NS) use:

- Intensive CC users are more likely than casual users to be intensive NS users (p<.01).
- The same holds for SL users (p<.01).

Main perceived benefits

- Intensive CC use is associated to being male and to high annual mileage. Intensive SL use is rather related to higher age.
- Intensive use of CC and of SL is related to professional car use and intensive use of other systems. \(\Rightarrow\) need for assistance? acceptance of technology?
- Main perceived benefit of CC and SL is to ‘reduce speeding’. \(\Rightarrow\) promote speed regulation assistance as a countermeasure
- Comfort plays a role regarding CC use. Its safety benefit is more recognized by intensive users. \(\Rightarrow\) system experience?

Conclusion

- Intensive CC use is associated to being male and to high annual mileage. Intensive SL use is rather related to higher age.
- Intensive use of CC and of SL is related to professional car use and intensive use of other systems. \(\Rightarrow\) need for assistance? acceptance of technology?
- Main perceived benefit of CC and SL is to ‘reduce speeding’. \(\Rightarrow\) promote speed regulation assistance as a countermeasure
- Comfort plays a role regarding CC use. Its safety benefit is more recognized by intensive users. \(\Rightarrow\) system experience?

Different factors need to be addressed so as to support regular CC and SL use. Fostering the use of in-vehicle technologies in general seems promising for both systems.

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