

An analysis on willingness to provide personal vehicle travel information using GPS device

Toshiyuki Yamamoto, Nagoya Univ.

Background

Vehicle trajectory by GPS is valuable traffic info. source, but causes privacy issues

Objective

Investigate willingness to provide personal vehicle travel info. in Japan

- Which information can be provided?
- How is individual heterogeneity?
- Effect of realizing benefit to provide?

Method

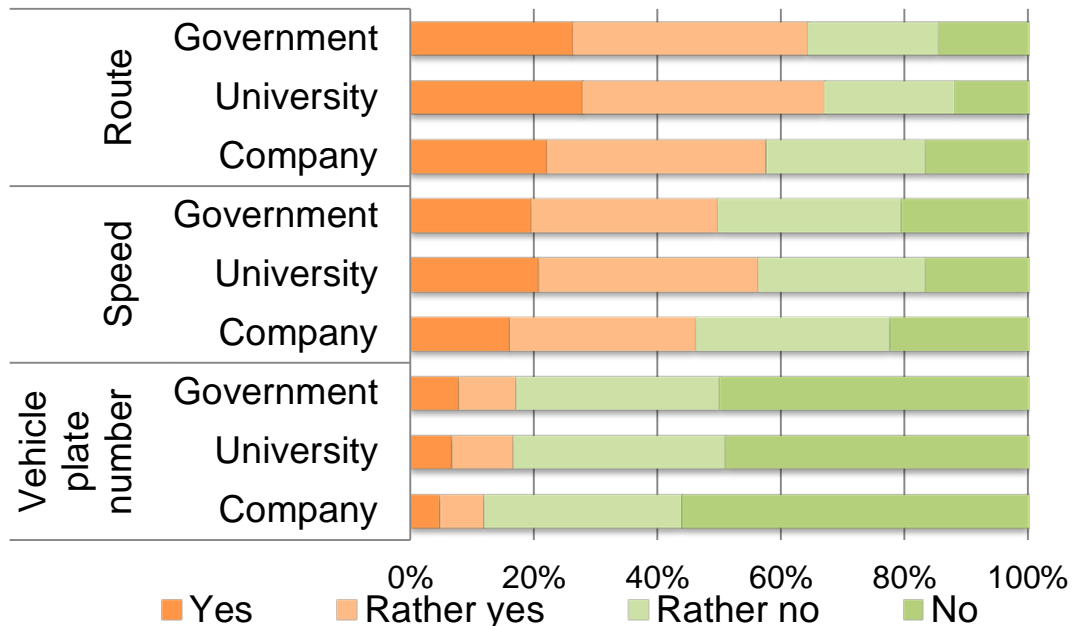
Internet questionnaire survey

- November 2012 in Japan
- 1040 drivers

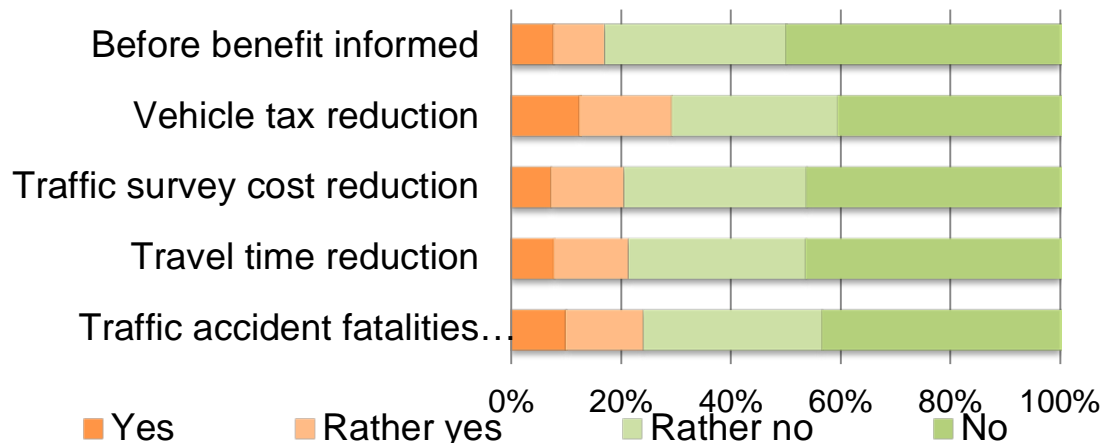
Questionnaire item

- **Info. type:**
trip OD, route, date/time, speed, driver age/gender, vehicle plate number
- **Info. user:**
government, university, company
- **Informed benefit:**
vehicle tax reduction, traffic survey cost reduction, travel time reduction, traffic accident fatalities reduction

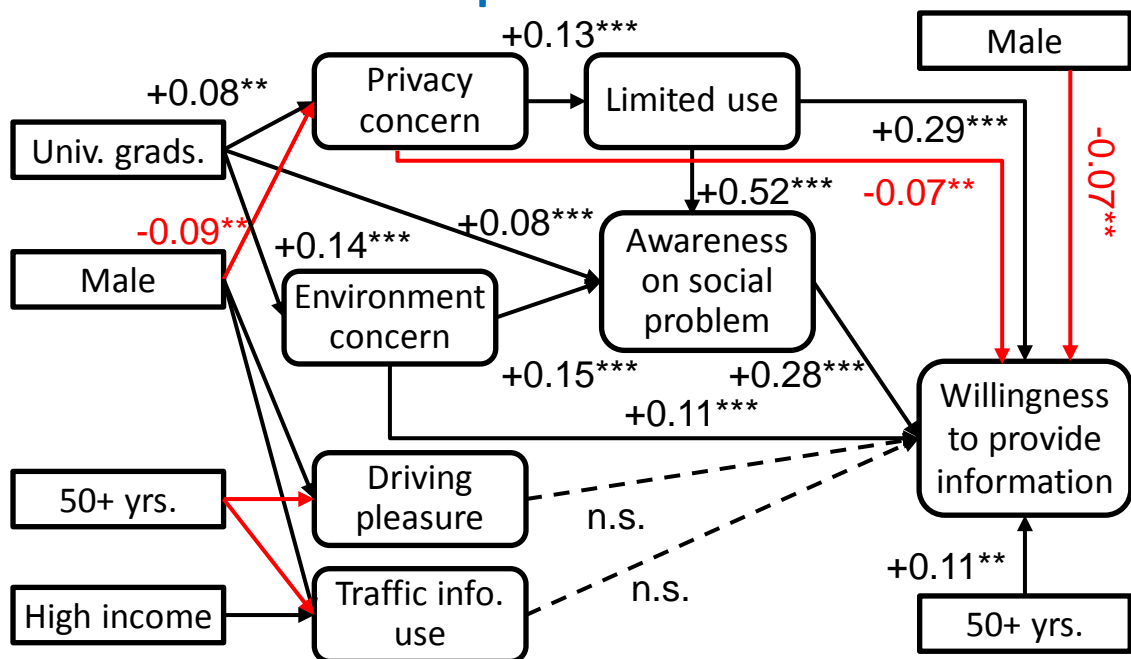
Willingness by information type and user



Vehicle plate number to government



Structural equation model



GFI = 0.94, AGFI = 0.92, RMSEA = 0.043, N = 1040

Conclusion

- More willingness to university than government, at least to company
- Least willingness to provide vehicle plate number than speed
- Information on private benefit increases willingness more than social benefit

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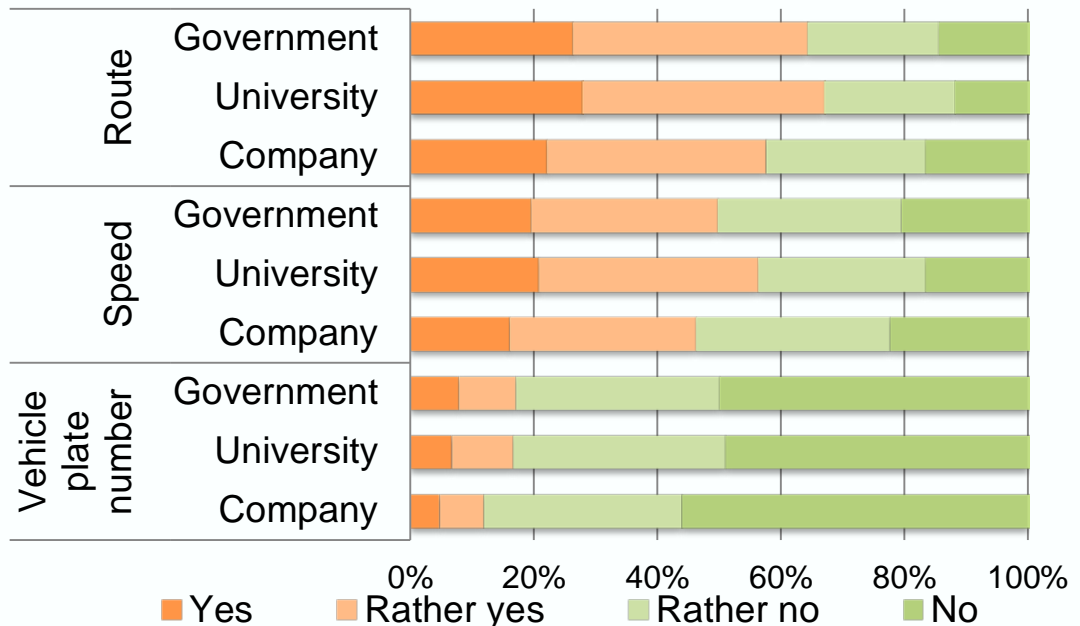
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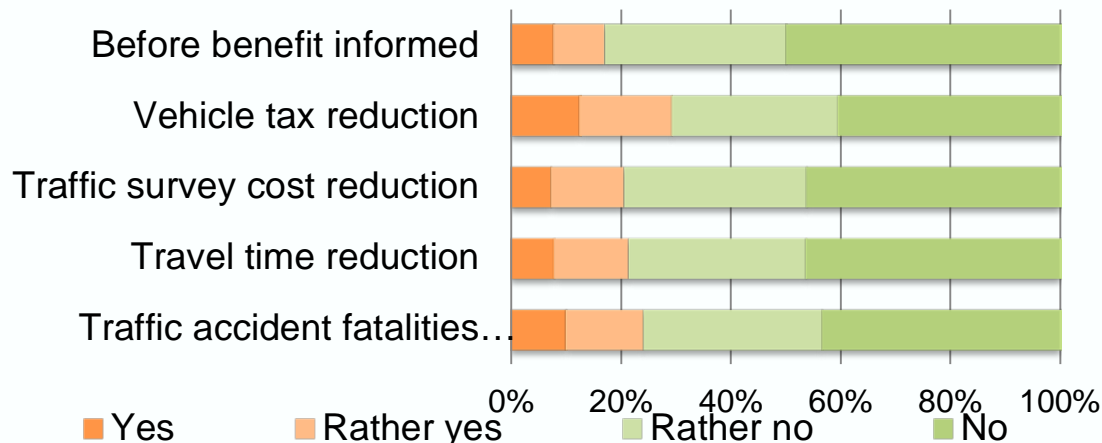
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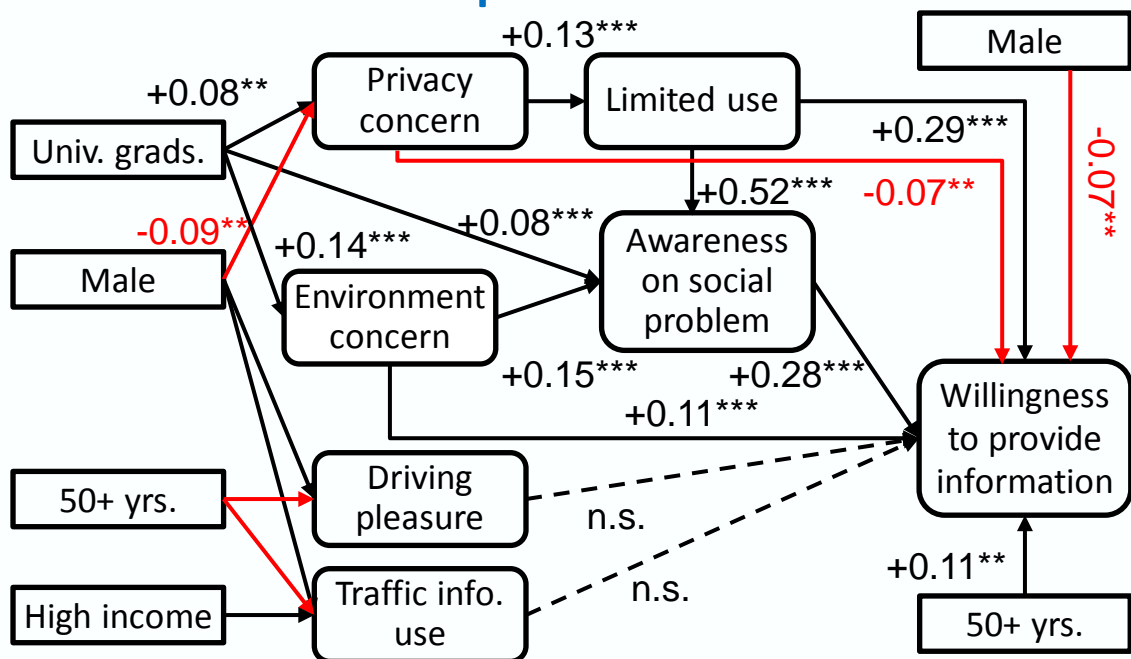
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