

Road Users' Safety Attitudes towards Speeding across 39 Countries

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Outline

1. Key facts about speeding
2. The ESRA survey
3. Descriptive Results
4. Advanced Analysis
5. Summary and Discussion





Key facts about speeding

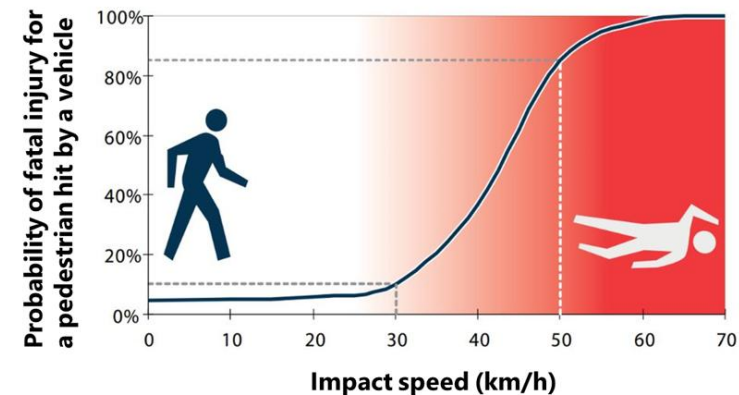
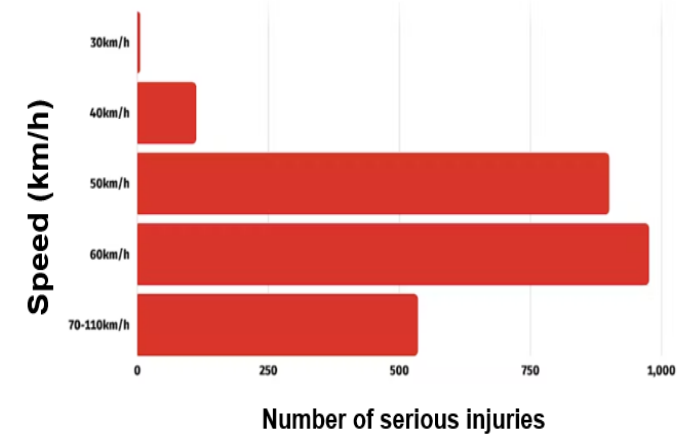
Speeding Kills (1/2)

- Road crashes is a **major societal problem** worldwide, with 1,19 million road fatalities per year and more than 50 million of road injuries
- Speeding is the **number one cause of road crashes** worldwide, especially in cities where pedestrians, cyclists and motorcyclists are highly exposed and vulnerable in case of a collision (70% of fatalities in urban areas are VRUs)
- Speed has been found to be a **major contributory factor** in around 10-15% of total crashes and in around 30% of fatal crashes
- Speed effects the **quality of life** of urban residents, especially the safe mobility of vulnerable road users



Speeding Kills (2/2)

- When speed increases, the risk of a **crash and of its severity** increases as well
- A 5% increase in average speed leads to approximately a 10% increase in all **injury crashes** and a 20% increase in **fatal crashes**
- The increase in crash risk is usually attributed by the fact that when speed increases, the **time to react** to traffic situations is shorter and manoeuvrability of a speeding car is limited
- **Pedestrian fatalities** increase from 10% in 30km/h collisions to 90% in 50km/h collisions





The ESRA survey

The ESRA project

- **ESRA** (E-Survey of Road users' Attitudes) is a joint international initiative of research centers and road safety institutes across the world
- **Duration** of the third edition of the project (ESRA3):
 - 3 years (2022-2024)
- **ESRA3 Steering Committee:**
 - ESRA coordination: VIAS Institute (BE)
 - ESRA3 steering group partners: **BASt (DE)**, IATSS (JA), UGE (FR), ITS (PO), KFV (AT), **NTUA (EL)**, PRP (PT), SWOV (NL), TIRF (CA), DTU (DK)



ESRA3 Participating countries



Europe-23

Austria, Belgium, Switzerland, Germany, Denmark, Greece, Spain, Finland, France, Ireland, Italy, Netherlands, Poland, Portugal, Sweden, Slovenia, United Kingdom, Czech Republic, Serbia, Luxembourg, Armenia, Bosnia & Herzegovina, Latvia

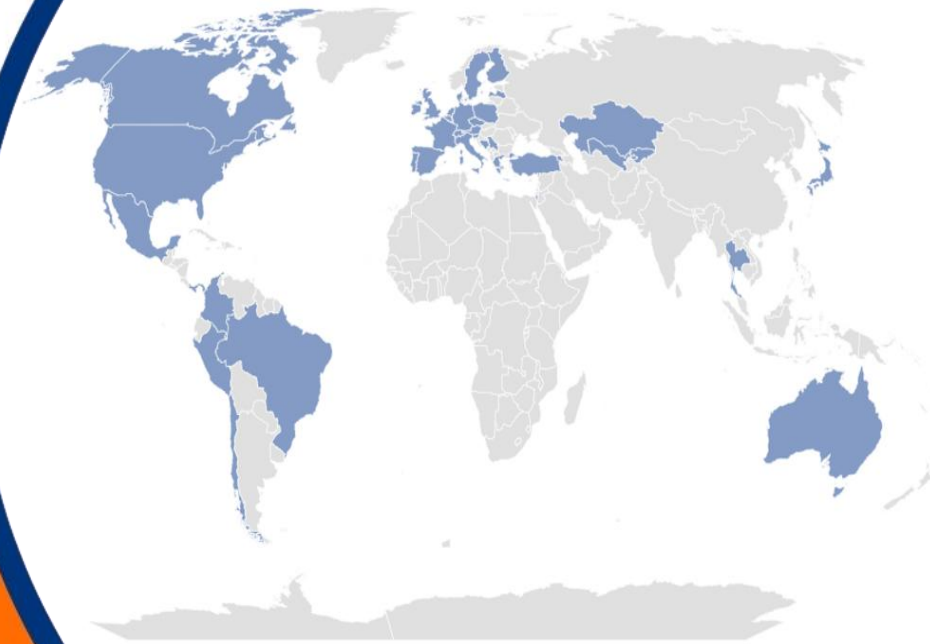
America-8

Canada, United States, Brazil, Chile, Colombia, Mexico, Peru, Panama

Asia Oceania-8

Israel, Australia, Japan, Thailand, Kazakhstan, Kyrgyzstan, Turkey, Uzbekistan

39 countries in ESRA3_2023

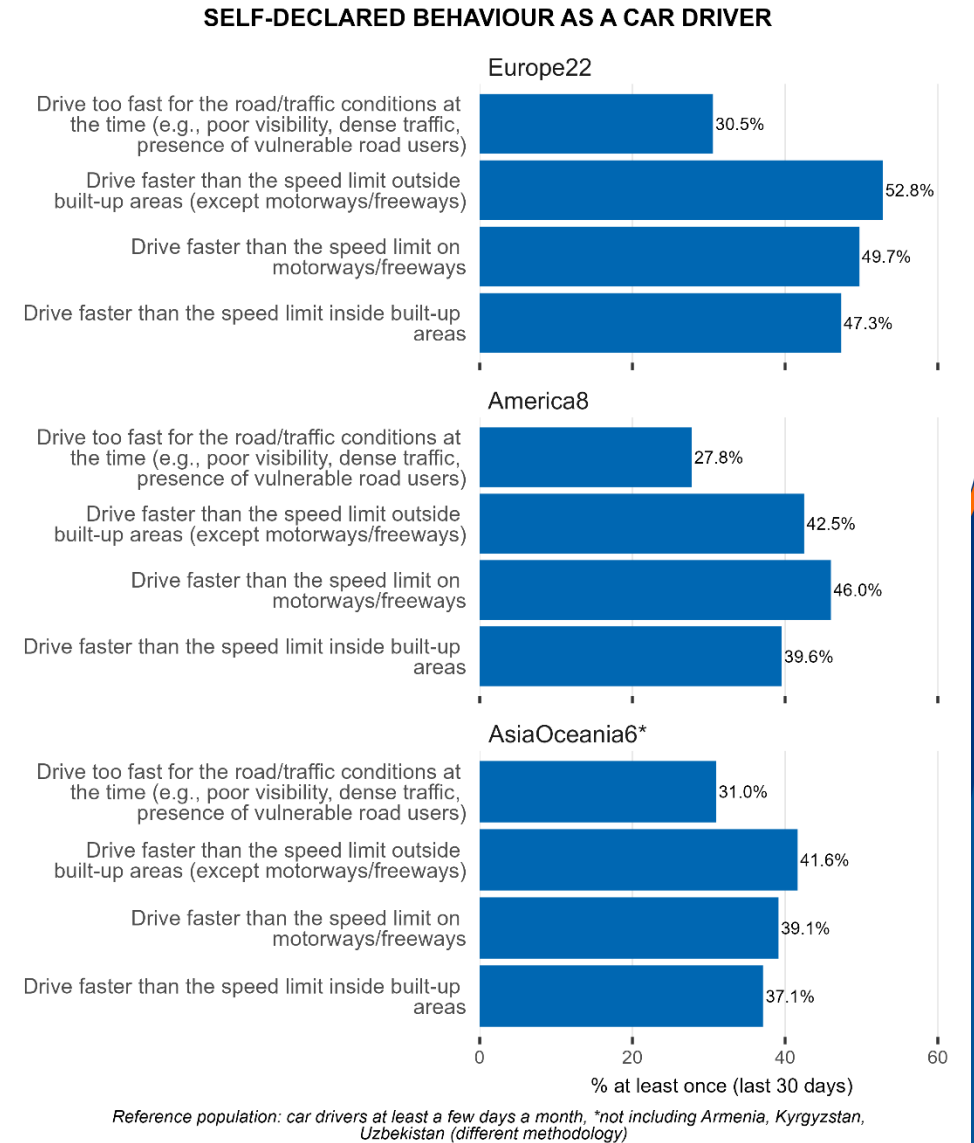




Descriptive Results

Self-reported Speeding Behaviours

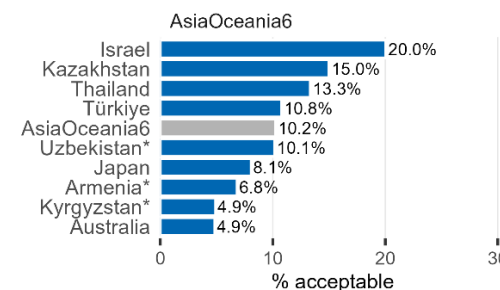
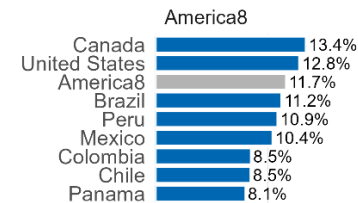
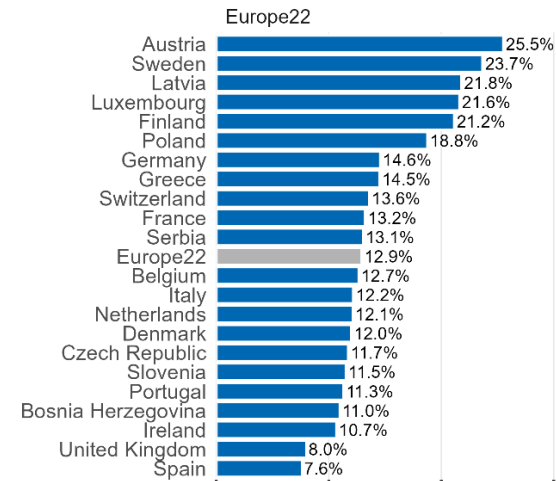
- Self-reported **speeding behaviour** of car drivers ranged from 27.8% (America8) to 52.8% (Europe22)
- More speeding is reported in Europe22 for the **different road types**
- **Men are more likely to report speeding** for all road types and conditions
- In Europe22 **younger age groups were most likely to report speeding** on all road types (in America8 this was only the case for “drive too fast for the road conditions at the time”, on other road types a reversed age effect was observed)



Acceptability of Speeding

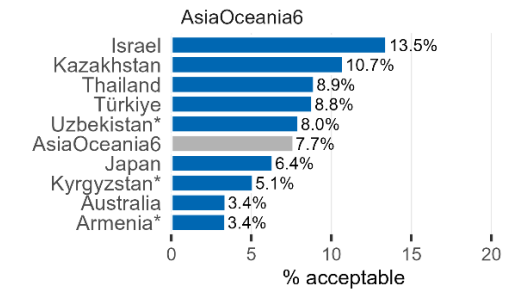
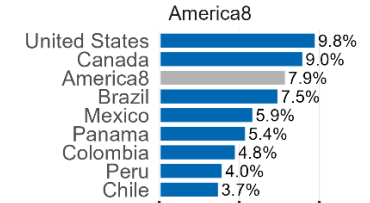
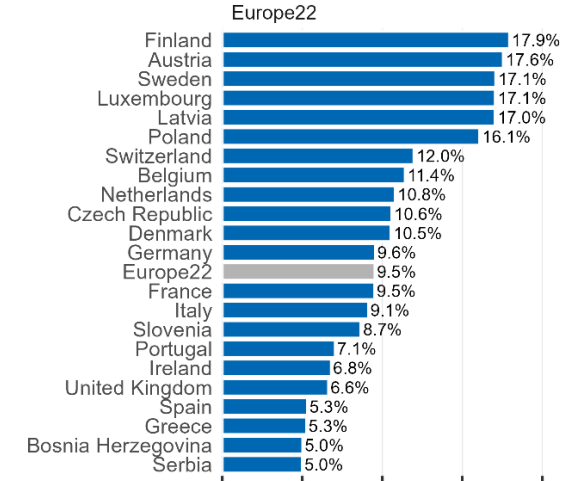
- **Personal vs. other's acceptability** speeding outside built-up areas is accepted by less than one third
- Respondents believe that "**others**" are more likely to accept speed violations than they are themselves
- Higher personal acceptability for **driving too fast for the road/traffic conditions** at the time in America8 (3.9%) and for speeding on motorways/freeways in Europe 22 (13.2%)
- **Men accept speeding** more for Europe22, the perception of personal and others' acceptability decreased with increasing age

OTHER'S ACCEPTABILITY - CAR DRIVER
Drive faster than the speed limit outside built-up areas (except motorways/freeways)



Reference population: all road users, *not in regional mean (different methodology)

PERSONAL ACCEPTABILITY - CAR DRIVER
Drive faster than the speed limit outside built-up areas (except motorways/freeways)

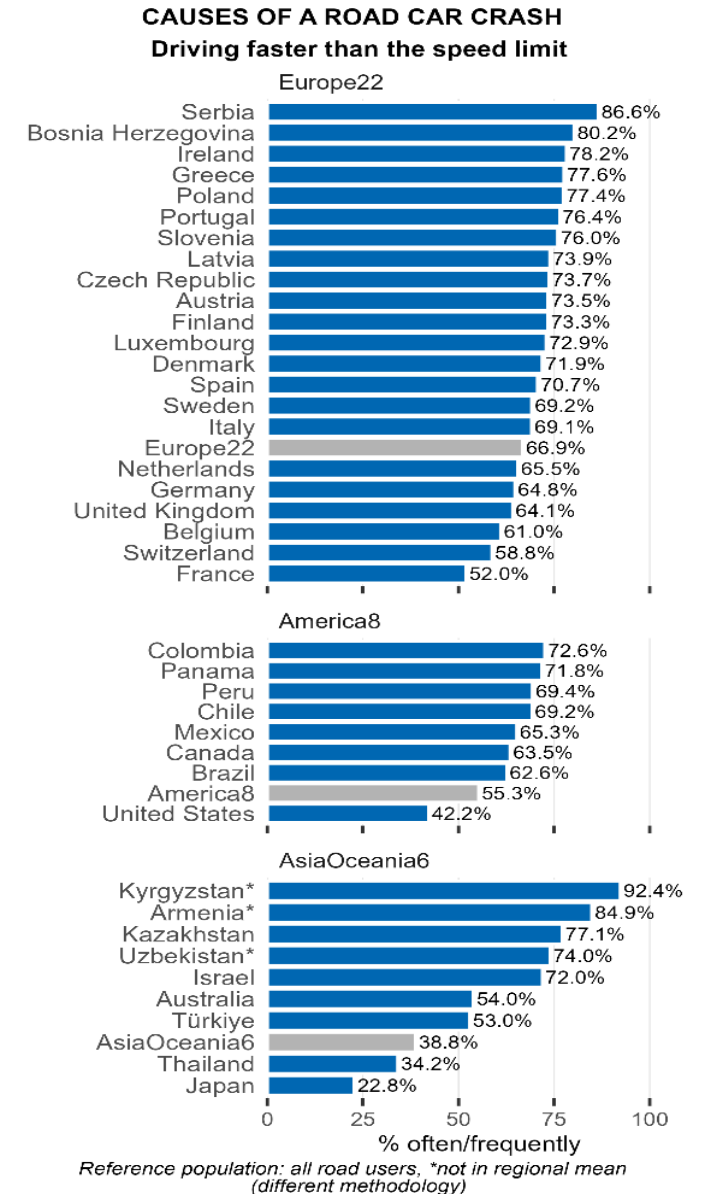


Reference population: all road users, *not in regional mean (different methodology)



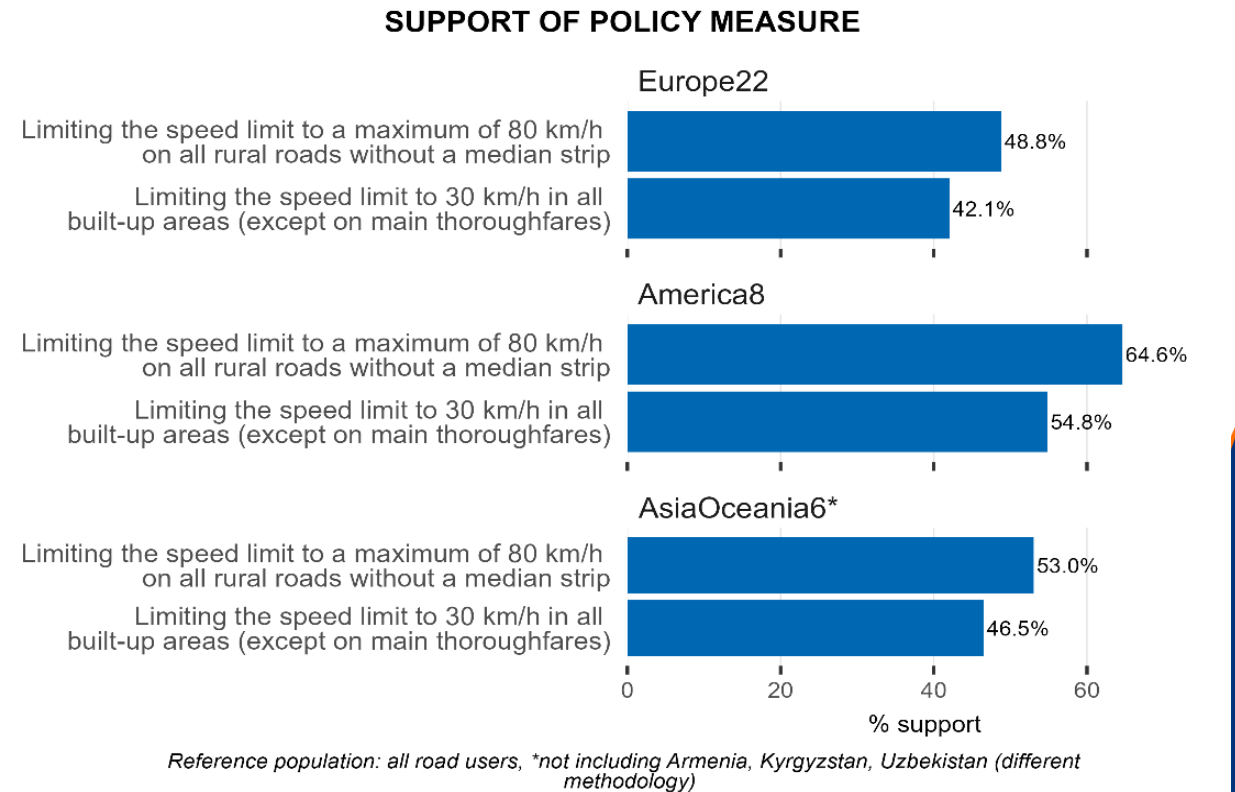
Subjective Safety and Risk Perception

- Regional differences of the perception of how often speeding is a **cause of road crash** (lowest for AsiaOceania6, highest for Europe22)
- **Women and older individuals** in Europe22 were more likely to think that speeding is the cause of a road crash



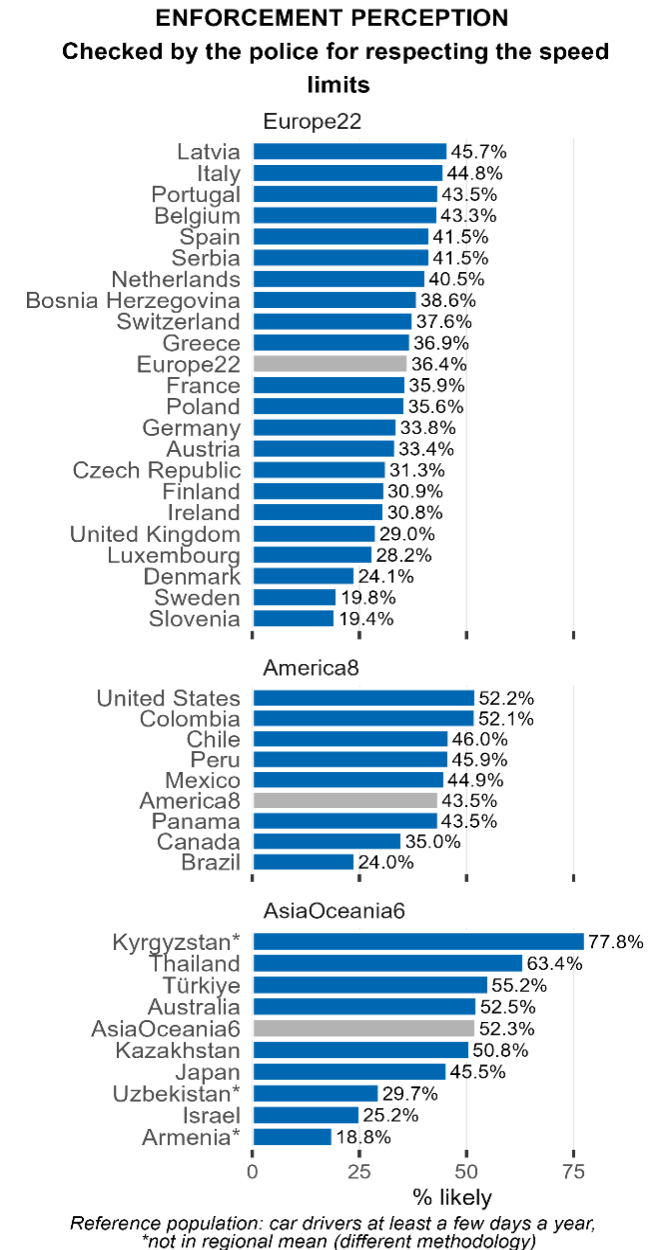
Support for Policy Measures

- America8 seems to show the **highest support** for policy measures regarding speed limits
- **Women show higher support** for speeding policy measures than men
- In Europe22, **older individuals** show higher support than younger ones



Enforcement

- Proportion of respondents who **perceived enforcement** regarding speeding as likely was highest for AsiaOceania6
- **Women perceive enforcement** as less likely than men (in Europe22 and America8)
- **Younger age groups** tend to perceive enforcement as more likely than older age groups (in Europe22 and America8)



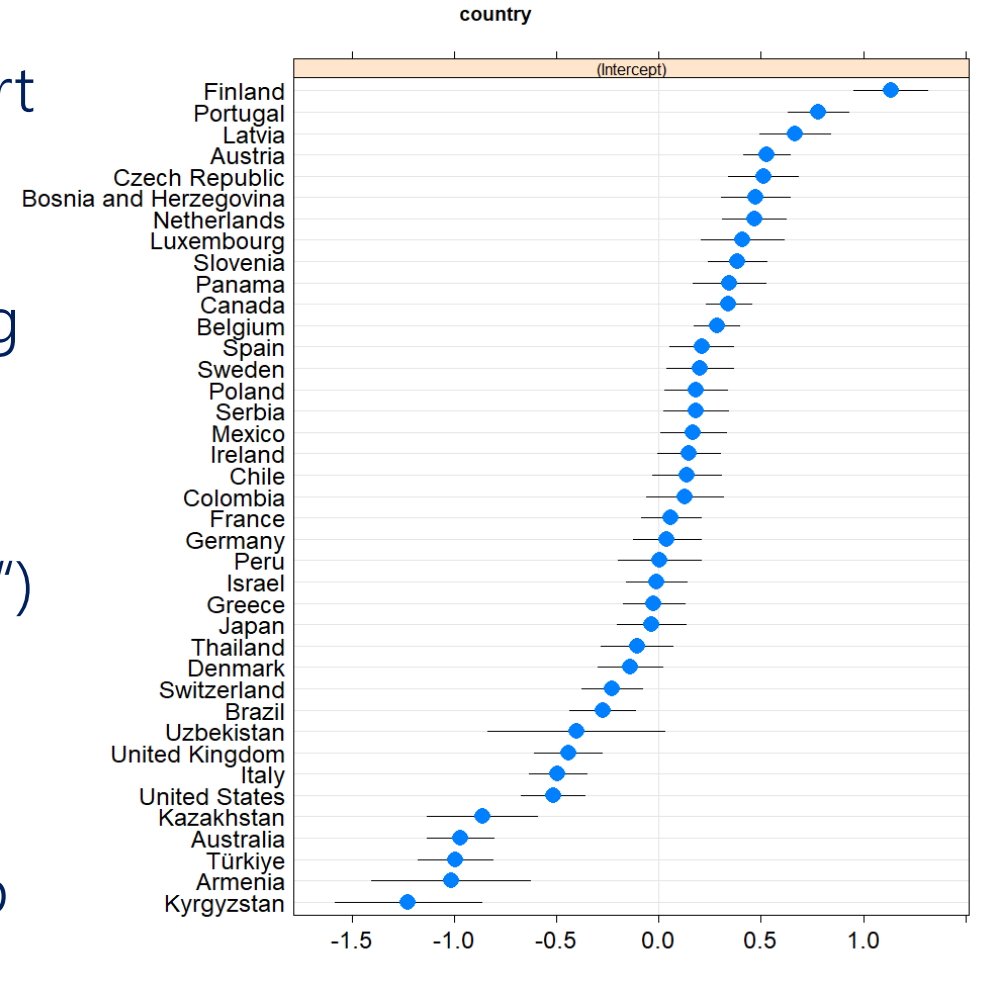


Advanced Analyses

(Generalized Linear Mixed Models)

Self-reported Speeding Inside Built-up Areas

- **Women and older individuals** are less likely to report speeding behaviour
- Additional **associated factors** for reporting speeding behaviour:
 - Higher personal acceptability
 - Stronger behaviour beliefs ("I have to drive fast...")
 - Lower support for policy measures (regarding speeding)
- The likelihood of reporting speeding inside built-up areas is **highest among Finnish individuals** and lowest among individuals from Kyrgyzstan



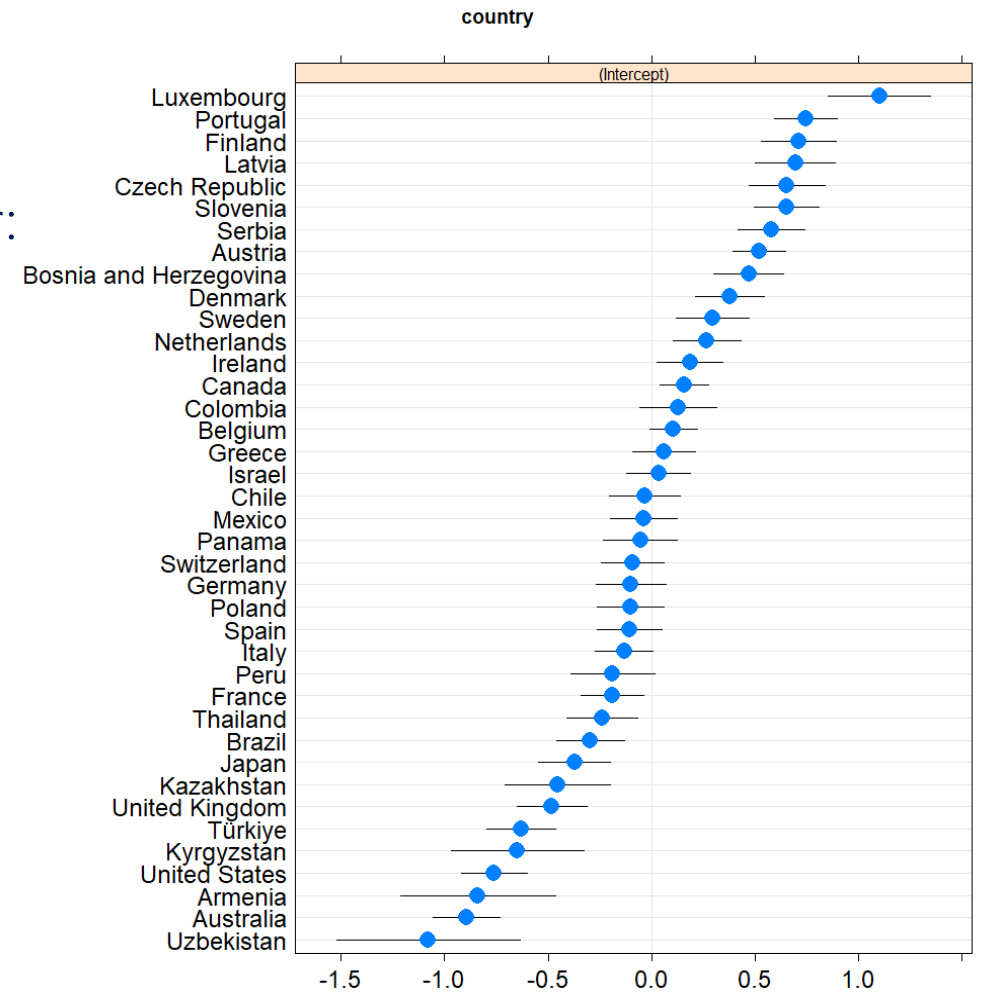
Random intercepts for countries in the Binary GLMM for car drivers' self-reported behaviour of speeding inside built-up areas



Self-reported Speeding Outside Built-up Areas

(except motorways/freeways)

- Women are less likely to report speeding behaviour
- Additional associated factors for reporting speeding behaviour:
 - Higher personal acceptability
 - Stronger behaviour beliefs ("I have to drive fast...")
 - Higher perceived behaviour control (regarding speeding)
 - Stronger habit to drive faster than the speed limit
 - Lower intention to respect speed limits in the future
 - Lower support for policy measures (regarding speeding)
- The likelihood of reporting speeding is highest among Luxembourg individuals and lowest among individuals from Uzbekistan

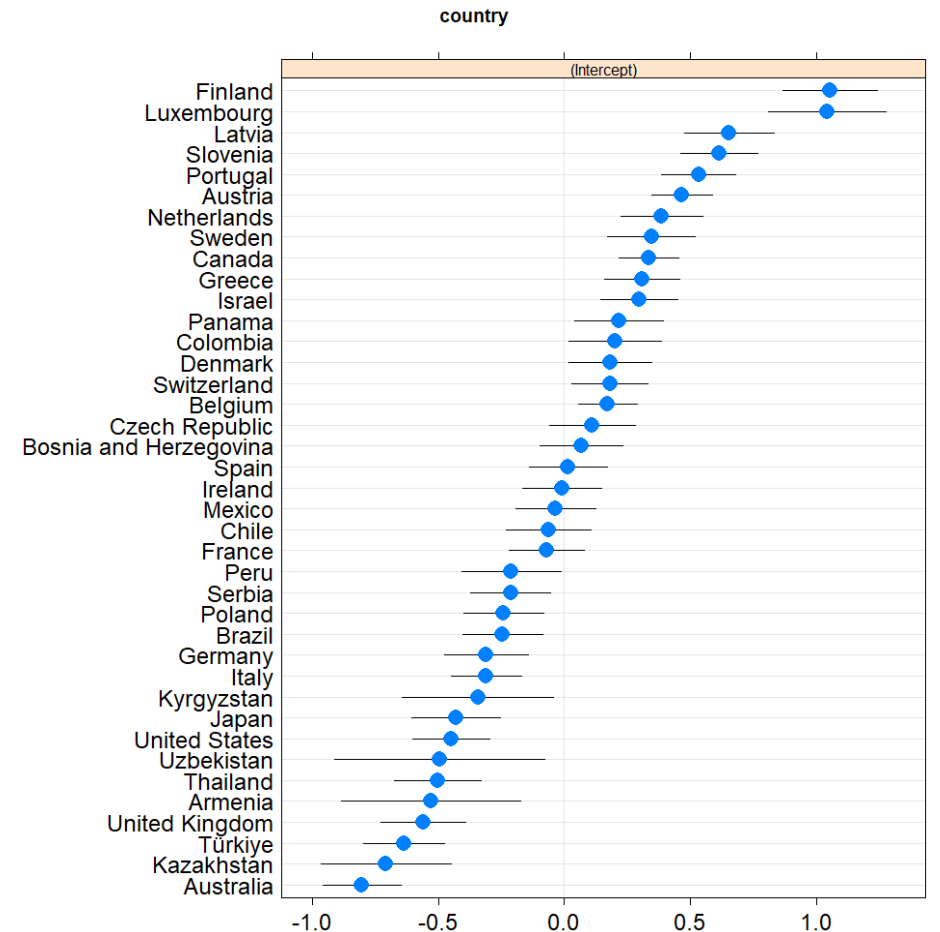


Random intercepts for countries
in the Binary GLMM



Self-reported Speeding on Motorways/Freeways

- Women are less likely to report speeding behaviour
- Additional associated factors for reporting speeding behaviour:
 - Higher personal acceptability
 - Stronger behaviour beliefs ("I have to drive fast...")
 - Higher perceived behaviour control (regarding speeding)
 - Stronger habit to drive faster than the speed limit
 - Lower intention to respect speed limits in the future
- The likelihood of reporting speeding is highest among Finland individuals and lowest among individuals from Australia



Random intercepts for countries
in the Binary GLMM





Summary and Discussion

Summary and Discussion

- **Gender Differences:** Self-declared speeding rates are lower among females compared to males
- **Age-Related Speeding Patterns:** In Europe, younger drivers are more likely to speed
- **Perceived Acceptability:** Drivers view speeding as less acceptable for themselves than for others, with men generally showing higher acceptance of speeding than women
- **Intentions vs. Behavior:** Many intend to respect speed limits despite previous speeding
- **Awareness of Risks:** significant awareness of the danger of speeding
- **Support for Policy Measures:** Nearly half of all respondents support speed limits (80 km/h on rural roads without medians)
- **Recommendations for Improvement:** promoting interdisciplinary collaboration, enhancing speed management policies, tailoring infrastructural changes to regional needs, and increasing the acceptability of stricter traffic rules to reduce speeding and related crash risks



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