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European Survey of Road users' safety Attitudes

Enforcement and support for road safety policy measures

ESRA thematic report no. 6

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Enforcement and support for road safety policy measures

ESRA thematic report no. 6

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List of Abbreviations

Country codes

AT	Austria
BE	Belgium
CH	Switzerland
DE	Germany
DK	Denmark
EL	Greece
ES	Spain
FI	Finland
FR	France
IE	Ireland
IT	Italy
NL	the Netherlands
PL	Poland
PT	Portugal
SE	Sweden
SI	Slovenia
UK	United Kingdom
USA	United States of America

Other abbreviations

AAAFTS	AAA Foundation for Traffic Safety
CARE	Community Database on Road Accident
ESRA	European Survey of Road Users' Safety Attitudes
EU	European Union – but, in figures and tables of the present report 'EU' refers to the 17 countries participating in ESRA
ETSC	European Transport Safety Council
SARTRE	Social Attitudes to Road Traffic Risk

ESRA weights

European weight A	European weight based on all ESRA 2015 countries except Italy
European weight B	European weight based on all ESRA 2015 countries
European weight C	European weight based on all ESRA 2015 countries except Slovenia
Individual country weight	Individual country weight based on gender and age

Summary

Objective and methodology

The ESRA project (European Survey of Road users' safety Attitudes) is a joint initiative of research organisations and road safety institutes in 17 European countries aiming at collecting comparable (inter)national data on road users' opinions, attitudes and behaviour with respect to road traffic risks. The project was funded by the partners' own resources.

The first ESRA survey was conducted online using representative samples (at least N=1,000) of the national adult populations in 17 European countries. A common questionnaire was developed and translated into 20 different country-language versions. The survey covered a range of subjects, including the attitudes towards unsafe traffic behaviour, self-declared (unsafe) behaviour in traffic and support for road safety policy measures. Data collection took place simultaneously in all countries in June/July 2015. In total, data from more than 17,000 road users (of which 11,000 frequent car drivers) were collected. Hence, the ESRA survey produced a very rich dataset. An overview of the project and the results are available on: www.esranet.eu.

This thematic report presents the ESRA results on enforcement and support for road safety policy measures. Traffic law enforcement has been defined as the area of activity aimed at controlling road user behaviour by preventative, persuasive and punitive measures in order to effect the safe and efficient movement of traffic (Zaal, 1994 after: OECD, 1974). Improving the enforcement of traffic laws was the second most frequently selected measure that governments should concentrate on in order to enhance road safety: roughly, four out of ten respondents (42%) chose this measure as either a first or a second priority for their government (European Commission, 2010). Despite these views, police enforcement surveys, including public opinion surveys, are relatively scarce. The main goal of the report is to try and analyse road user opinions on road traffic enforcement.

Key results

ESRA respondents were asked to think of all their encounters with the police in the past year, explain what they think about traffic enforcement and relate to new proposed preventive measures. The analysis looked primarily at responses to the following questions. The results were analysed and showed that:

- Over the last 12 months 29% of road users surveyed were stopped for a check by road police (of which 12% more than once), 15% were fined for a road traffic violation (of which 4% more than once), and 3% were convicted in court (of which 1% more than once). The intensity of traffic law enforcement differs from country to country in selected European countries. In Italy in the last 12 months 67% of respondents were stopped for a police check, in Poland– 47%, and in Portugal – 44%. Over the same period in the United Kingdom only 8% of respondents were stopped for a check with 10% in Denmark and 16% in Germany.
- In terms of the number of fines the enforcement of drivers exceeding the speed limit is the most frequent police activity. Those who said they have paid a fine in the last year (15% of road users surveyed), 63% paid it for exceeding the speed limit and another 7% for not wearing seat belts. Offences that are very rarely punished include driving under the influence of illegal psychoactive substances, driving under the influence of alcohol and carrying children without proper restraints (3% respectively). In all the countries the most frequent fines are for driving over the speed limit, which is not really surprising considering the widespread nature of this behaviour among drivers. It is interesting to note, however, that in so many European countries this line of road police work clearly dominates.
- Recent years have seen an increased focus on driver distraction, especially on drivers using mobile phones. While all European Union countries have introduced a ban for hand-held calling while driving, ESRA results show that police enforcement of mobile phone laws is not very strong.
- The ESRA survey shows that in the last 12 months 19% of road users surveyed have been checked for alcohol (of which 7.8% more than once). Illegal psychoactive substances are

checked much less frequently with only 4% of respondents having been controlled in the last 12 months (of which 2% more than once). This is the right moment to point out that 30% of drivers surveyed admitted to having driven after drinking (at least once in the past year), after taking medication that carries a warning to say it may influence your driving ability (21%) and after taking illegal drugs (10%).

- The perceived likelihood of being checked for different violations on a typical journey depends on the type of offence. Respondents thought that the lowest likelihood was of checks of illegal drugs (71% think such checks are unlikely), alcohol (60%), seat belt use (58%) and speed (38%). In the last 5 years (since SARTRE4; 2010) driver opinions about this have improved but the scale is not sufficient. The perceived likelihood of a police check is the lowest for drivers from Denmark, Finland, Ireland, United Kingdom and Germany and the highest for drivers from Poland, France, Slovenia and Spain.
- The results of ESRA show a strong consistency in what road users think about the current traffic regulations, how they are being enforced and the penalties for offenders. It is clear that road user opinions depend on the type of offence and, what is perhaps more important, the prevalence of the specific traffic behaviour. To use a simple interpretation, we can say that the rarer a risk behaviour is, the tougher the stance on enforcement. And so 87% of all respondents think that drug driving regulations should be more rigorous, enforcement should be more intense and the penalties more severe. With this as the background, the opinions on how to tackle those speeding are much milder (only 47% of all respondents think that current traffic rules for speeding should be more strict).
- The ESRA survey asked respondents to assess 11 preventive measures, some of which are already being implemented, others still under discussion. Most respondents supported the introduction of zero tolerance for alcohol for novice drivers with 80% of respondents choosing it. ESRA participants were also keen on alcohol interlock for repeat drink-driving offenders (76%) and penalty points, which once exceeded would result in a driving ban (70%). The least support in ESRA survey was given to a proposal allowing cyclists to run red lights when permitted by specific road signs with only 34% of respondents choosing it.

Finally, building on ESRA results the report proposes several changes in the current preventive policy.

Key recommendations

Policy recommendations at European level

- Launch a discussion on how traffic enforcement should be changed in order to increase its influence on road safety, including the desirability and need to introduce more effective.
- Develop models and mechanisms for cost-benefits assessments for assessing traffic law enforcement by the police.
- Define enforcement related indicators and set targets at European Union level, such as the number of people controlled, the subjective perception of enforcement and the reduction of risky behaviour resulting from enforcement and penalties.
- Support more research on understanding how road user behaviour, in particular of road users with very risky behaviour, could be more substantially influenced by enforcement activities.
- Facilitate and support the exchange of best practice in terms of effective and efficient enforcement across Member States.

Policy recommendations at national and regional level

- Monitor systematically data on police enforcement activities and ensure that these are comparable with those of other European countries.
- Run regular surveys to understand the real behaviour and opinions of road users.
- Inform the public on need for and the effects of police enforcement.

Specific recommendations to specific stakeholders

- *[To companies and research organisations]* Develop new measurement methods that can give high efficiency increases of police enforcement organisations.

Conclusion

The ESRA project has demonstrated the feasibility and the added value of joint data collection on road safety attitudes and performance by partner organizations in a large number of European countries. The intention is to repeat this initiative on a biennial or triennial basis, retaining a core set of questions in every wave, allowing the development of time series of road safety performance indicators. This will become a solid foundation for a joint European (or even global) monitoring system on road safety attitudes and behaviour.

1. Introduction

Traffic law enforcement has been defined as the area of activity aimed at controlling road user behaviour by preventative, persuasive and punitive measures in order to effect the safe and efficient movement of traffic (Zaal, 1994 after: OECD, 1974). Three elements are usually identified as being part of traffic law enforcement (Rothengatter, 1990): legal regulations and norms that define how the road transport system should be used safely and effectively, police which makes sure in an organised way that existing regulations are respected by all system users and a set of legal sanctions for those who have failed to comply, whatever the reason. Enforcement, together with engineering and education, is recognised as being one of the main ways of improving road safety.

The success of enforcement is dependent on its ability to create a meaningful deterrent threat to road users (Zaal, 1994; ETSC, 2011). To achieve this, increasing surveillance levels are introduced to ensure that perceived apprehension risk is high, as is rising penalty severity and that procedures are in place to enable a quick and effective way to punish road traffic regulations violators. Traffic laws have to be known and accepted by road users. However, knowledge about traffic rules is a necessary but not sufficient condition for compliance. Sanction as a mechanism for getting people to obey the rules has a much greater effect when that sanction is compatible with the norms, values and the sense of justice held by the citizens themselves. Thus they are more likely to obey the rules they consider being important.

Improving the enforcement of traffic laws was the second most frequently selected measure that governments should concentrate on in order to enhance road safety: roughly, four out of ten respondents (42%) chose this measure as either a first or a second priority for their government (European Commission, 2010). Despite these views, police enforcement surveys, including public opinion surveys, are relatively scarce.

The ESRA questionnaire includes a few questions that provide information directly relevant to the enforcement issue. The chapters that follow present the experience of enforcement, including enforcement of particular behaviours such as drink- and drug–driving, subjective perception of risk detection, opinion on enforcement and finally attitudes towards new countermeasures which encourage, or force drivers to comply with traffic laws.

2. Methodology

The ESRA project (European Survey of Road users' safety Attitudes) is a joint initiative of research organisations and road safety institutes in 17 European countries aiming at collecting comparable (inter)national data on road users' opinions, attitudes and behaviour with respect to road traffic risks. The project was funded by the partners' own resources.

The first ESRA survey was conducted online using representative samples (at least N=1,000) of the national adult populations in 17 European countries (Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Poland, Portugal, Slovenia, Spain, Sweden, Switzerland, The Netherlands, United Kingdom). A common questionnaire (see Appendix - ESRA 2015 Questionnaire) was developed and translated into 20 different country-language versions. The subjects covered a range of subjects, including the attitudes towards unsafe traffic behaviour, self-declared (unsafe) behaviour in traffic, and support for road safety policy measures – overall over 223 variables. The ESRA questionnaire was inspired by the previous European project, SARTRE, and also includes some questions of the AAAFTS-survey (USA) 'Traffic Safety Culture Index', which enables tentative comparisons with these projects. Data collection took place simultaneously in all countries in June/July 2015. A Belgian polling agency coordinated the field work to guarantee a uniform sampling procedure and methodology. In total, data from more than 17,000 road users (of which 11,000 frequent car drivers) were collected. Hence, the ESRA survey produced a very rich dataset.

Seven institutes – BRSI (BE), KFV (AT), NTUA (EL), CTL (IT), ITS (PL), PRP (PT), BFU (CH) – combined their expertise to analyse the common data and to disseminate the results. The results of the 2015 survey are published in a Main report and six thematic reports:

- Speeding
- Driving under the influence of alcohol and drugs
- Distraction and fatigue
- Seat belt and child restraint systems
- Subjective safety and risk perception
- Enforcement and support for road safety policy measures

There are also 17 country fact sheets in which the main results per country are compared with an European average. An overview of the project and the results are available on www.esranet.eu. More details on the data collection method and the sample per country can be found in the Main report.

This thematic report presents the ESRA results on enforcement and support for road safety policy measures. The main goal of the report is to try and analyse road user opinions on road traffic enforcement. ESRA respondents were asked to think of all their encounters with the police in the past year, explain what they think about traffic enforcement and relate to new proposed preventive measures. The analysis looked primarily at responses to the following questions:

- **Do you support each of the following measures?** (Obligatory winter tyres for cars, trucks and buses, A licence system with penalty points for traffic violations that results in the revocation of the licence when a certain number of points are reached, Drivers who have been caught drunk driving on more than one occasion should be required to install an alcohol interlock, Zero tolerance for alcohol (0,0 for novice drivers (licence obtained less than 2y), Zero tolerance for alcohol (0,0 for all drivers, Zero tolerance for using any type of mobile phone while driving (hand-held or hands-free) for all drivers, Ban on alcohol sales in service / petrol stations along the highways / motorways, Allowing cyclists to run red lights when permitted by specific road signs, Having a law requiring all cyclists to wear a helmet, Obligation for pedestrians and cyclists to wear high-visibility vests when in the dark, Ban of using headphones (or earbuds) by pedestrians and cyclists);
- **What do you think about the current traffic rules and penalties in your country for each of the following themes?** (The traffic rules should be more strict, The traffic rules are not being checked sufficiently, The penalties are too severe);

- **On a typical journey, how likely is it that you (as a driver) will be checked by the police for…?** (alcohol, the use of illegal drugs, seat belt wearing, respecting the speed limits);
- **In the past 12 months, how many times…?** (have you been stopped by the police for a check, have you had to pay a fine for a traffic violation, have you been convicted at court for a traffic violation);
- **Was this a fine for…?** (violating the speed limits, driving under the influence of alcohol, driving under the influence of drugs (other than medication), not wearing a seat belt, transporting children in the car without securing them correctly (child car seat, seat belt, etc.), talking on a hand-held mobile phone while driving, other reason);
- **Was this conviction for…?** (violating the speed limits, driving under the influence of alcohol, driving under the influence of drugs (other than medication), not wearing a seat belt, transporting children in the car without securing them correctly (child car seat, seat belt, etc.), talking on a hand-held mobile phone while driving, other reason);
- **In the past 12 months, how many times were you checked by the police for alcohol while driving a car (i.e., been subjected to a Breathalyser test)?**;
- **In the past 12 months, how many times have you been checked by the police for the use of drugs/medication while driving?**

Wherever possible, to help with interpreting ESRA results, other public surveys were used, especially SARTRE4 (2010). In the latter case, it was agreed to use driver results as a point of reference because drivers are the biggest group of road users (n=12507 drivers) in that survey. What is more, 91% of ESRA respondents have a driving license and nearly 97% said they drive at least a few days in a year. Road user opinions were also contrasted with road safety rates or police work data in the particular countries. The success with this endeavour, however, was only partial. It was established that information about police activities is not easily available or reliable, making any comparisons difficult. This report, unlike other ESRA reports, presents the results for four (rather than three) age groups. This has helped to create a sub-group of 'young drivers' (aged 18-24) which is separate from the overall road user group. For years young drivers have been the focus of research. The main reason is that their risk of being involved in a road traffic accident is significantly higher compared to other age groups. As we can see from the recent publications of DG MOVE young people are at almost twice the risk of being killed in a road accident than the average member of the population across the European Union countries as a whole, although recent years have shown a slightly faster rate of fatality reduction compared to other age groups[1] (European Commission, 2015). This may be the result of the numerous preventive actions targeting young drivers. But this can equally be caused by the diminishing percentage of young people with a driver's license in some countries, a consequence of a growing access to virtual contact which reduces the need for actual contact among young people. The last claim is strengthened by findings such as that a higher proportion of internet users was associated with a lower licensure rate (Sivak, 2013). The report looked at whether previous preventive measures and changes in the social environment have changed what young drivers think and their declared behaviour.

Finally, a large part of the report analyses differences and similarities between the countries. This is why we used basic descriptive statistics. To assess the changes, we used tests identifying the significance of the differences for two independent samples which matched the scale of the variable. They were the t-test, Pearson's Chi-squared test and Mann-Whitney's U test.

Calculations were made with the SPSS 19 statistical package. All of these analyses can only be made under specific assumptions that the driver responses are true. In order to be able to make general statements about the driver's habits in each country we also assumed that the driver groups are representative of driver populations in their countries. This is why all calculations were made on weighted results. The chapter presents selected results only. This is why they should be seen as a reflection of a trend rather than an accurate description of traffic enforcement.

[1] *CARE data for 2010-2013. The calculations did not include BG, EE, LT, MT and SK (lack of data).*

3. Results and discussion

3.1. The experience of traffic enforcement during last 12 months

It is expected that massive enforcement of the most important traffic violations (speeding, drink-driving or no seat belt use) is the most effective way of influencing road-user behaviour and of reducing road fatalities (Kallberg et al., 2006). ESRA checked whether this claim holds true in practice.

Over the last 12 months 29% of road users surveyed were stopped for a check by road police (of which 12% more than once), 15% were fined for a road traffic violation (of which 4% more than once), and 3% were convicted in court (of which 1% more than once). Just as in previous public surveys, men are stopped for a check most often. 35% of them said that at least once in the last 12 months they have been stopped by police with women representing 22%. The difference is statistically significant (χ^2 (N=14,705; 2)=302.16; p<0.001). Men are also fined more often (19% and 11% respectively) as well as convicted in court (3% and 1% respectively). These differences between the two groups are also statistically significant (χ^2 (N=14590; 2)=153.90; p<0.001) and (χ^2 (N=14,337; 2)=49.89; p<0,001)). Please note that half of those stopped for a check are asked to pay a fine and very few of them are taken to court. This is probably the result of random police checks becoming gradually more and more common across Europe; sobriety checks primarily in this case.

It is usually the younger age groups that are stopped for police checks. The differences between age groups are statistically significant (Test post hoc, multiple comparisons, Test T2 Tamhane; p<0.05).

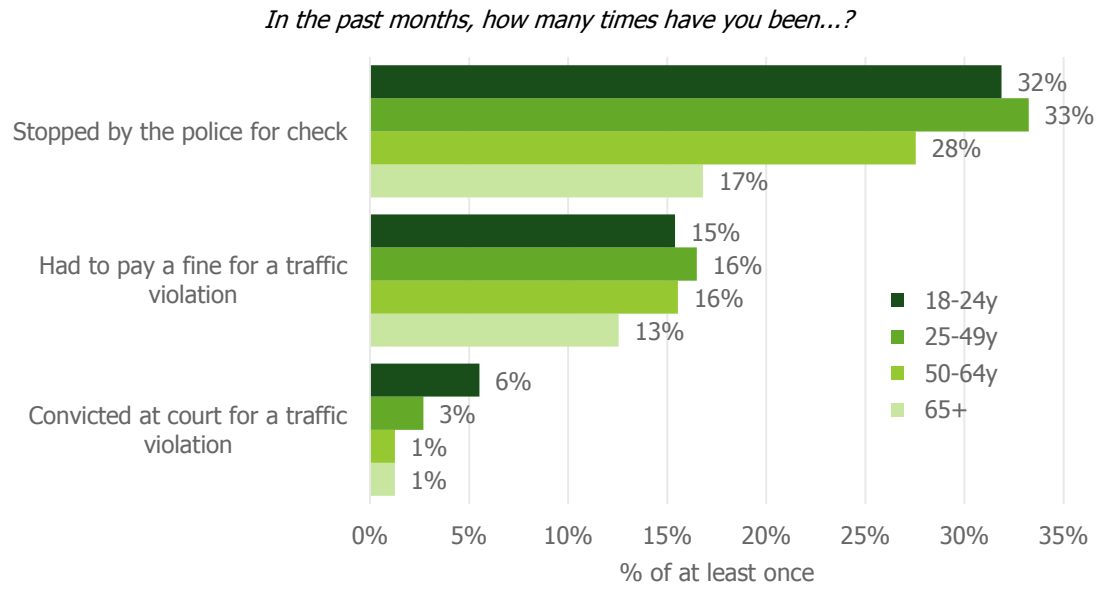

Figure 1: Experience of road users with different forms of enforcement over the last 12 months by age.
Note: European weight B.

The results from ESRA show that the intensity of traffic law enforcement differs from country to country in selected European countries (Figure 2). In Italy in the last 12 months 67% of respondents were stopped for a police check, in Poland – 47%, and in Portugal – 44%. Over the same period in the United Kingdom only 8% of respondents were stopped for a check with 10% in Denmark and 16% in Germany.

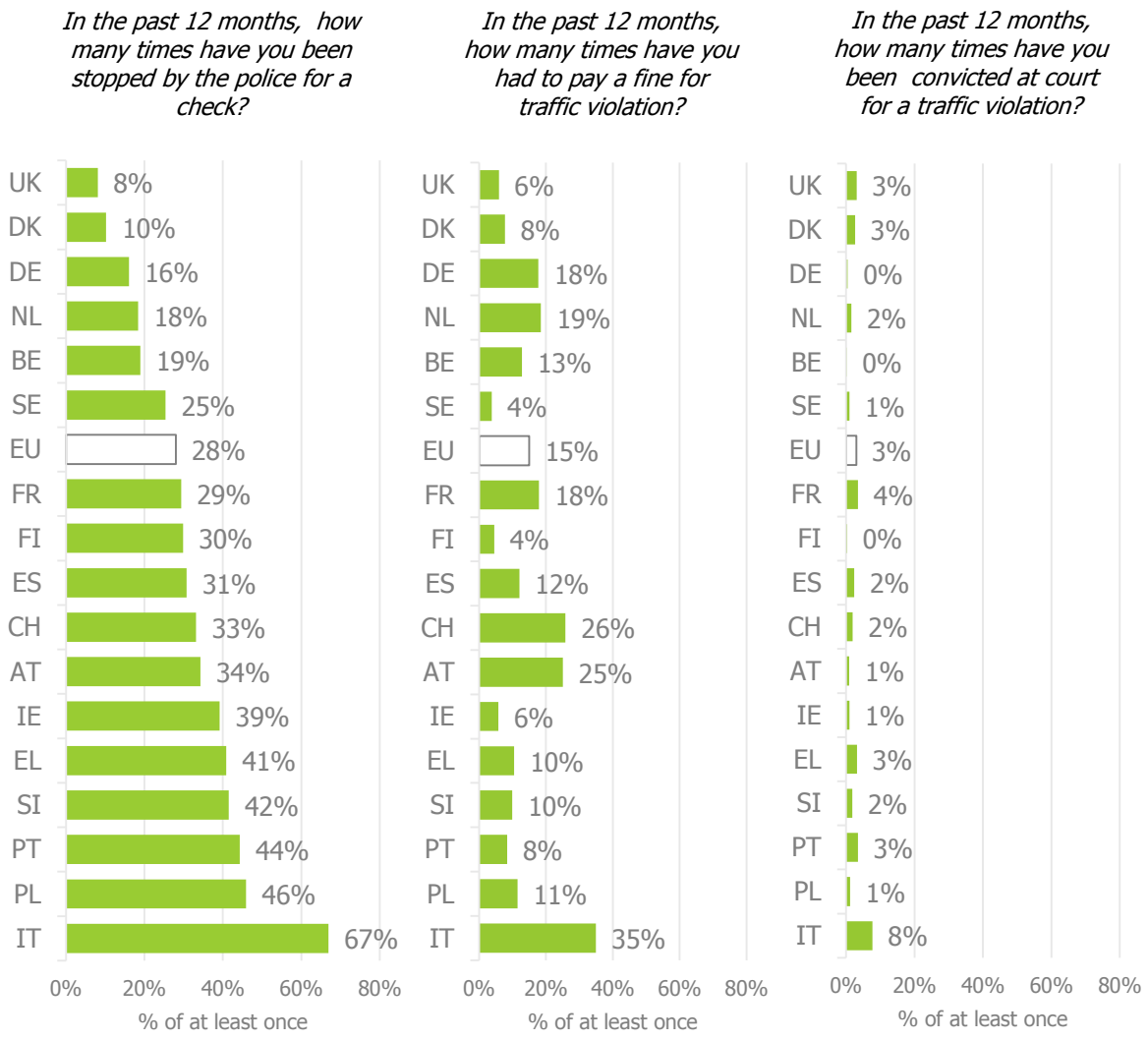

Figure 2: Percentage of people stopped for a roadside check, punished with a fine and convicted in court for traffic offences in selected European countries over the last 12 months.
Note: European weight B.

While there are differences between the countries2, not all of them are statistically significant.

The UK and Denmark clearly came as a surprise. In recent years these countries have been considered successful with their road safety performance. In 2014 among 28 member states (rate: road deaths per million inhabitants (CARE, 2016)) the UK came second and Denmark was number five. This may suggest that road traffic enforcement as it is today is not a very important part of road safety policy. Perhaps it is losing its impact in countries that have successfully reduced traffic risk. Gaining clarity on this will require more detailed analyses. Today, however, the relation between a country's position among 28 countries and the intensity of enforcement based on a declared number of police checks by the respondents is weak (Pearson coefficient r=0.207; p<0.001).

[2] *Stopped by the police (Welsh test F(16.1718)=56.908; p<0.001), paid a fine (Welsh test F(16, 1784)=26.765; p<0.001), taken to court (Welsh test F(16.1779)=8.984; p<0.001). Statistic significance was tested with post hoc tests, multiple comparisons, T2 Tamhane test.*

3.2. The reason for fines for traffic offences

To maximise the effect, traffic enforcement should focus on reducing those violations that make a large contribution to fatalities or injuries, while paying less attention to violations that have a smaller effect on the risk of fatalities and injuries (Elvik, 2012). Over the years road safety programmes have considered speeding, drink-driving, and non-use of safety belts as the biggest risk to safety. These opinions were related to risks that are the result of this type of road traffic behaviour. According to the ETSC (2014) every year in the European Union excessive or inappropriate speed is a primary factor in about one third of road deaths, drivers with BAC levels over the legal limit cause as much as 25% of all road deaths, and more than half of the 8000 car occupants killed could survive the crash had they been wearing their seat belt. Another important factor that should be part of enforcement strategy planning is how prevalent risky behaviours are in a population. For this reason the road traffic enforcement analysis will be preceded with a short reminder of ESRA results in this area.

3.2.1. Prevalence of risky behaviour in the population of road users

The ESRA survey asked road users how often in the past 12 months they had engaged in specific road traffic behaviour. Figure 3 shows the responses. People who said they had not behaved in any of the ways listed, who did not answer any of the questions and those whose role in road traffic excluded any of the behaviours were not included. To make the results easier to read, they are presented separately for different groups of road users starting from the group's most prevalent behaviour.

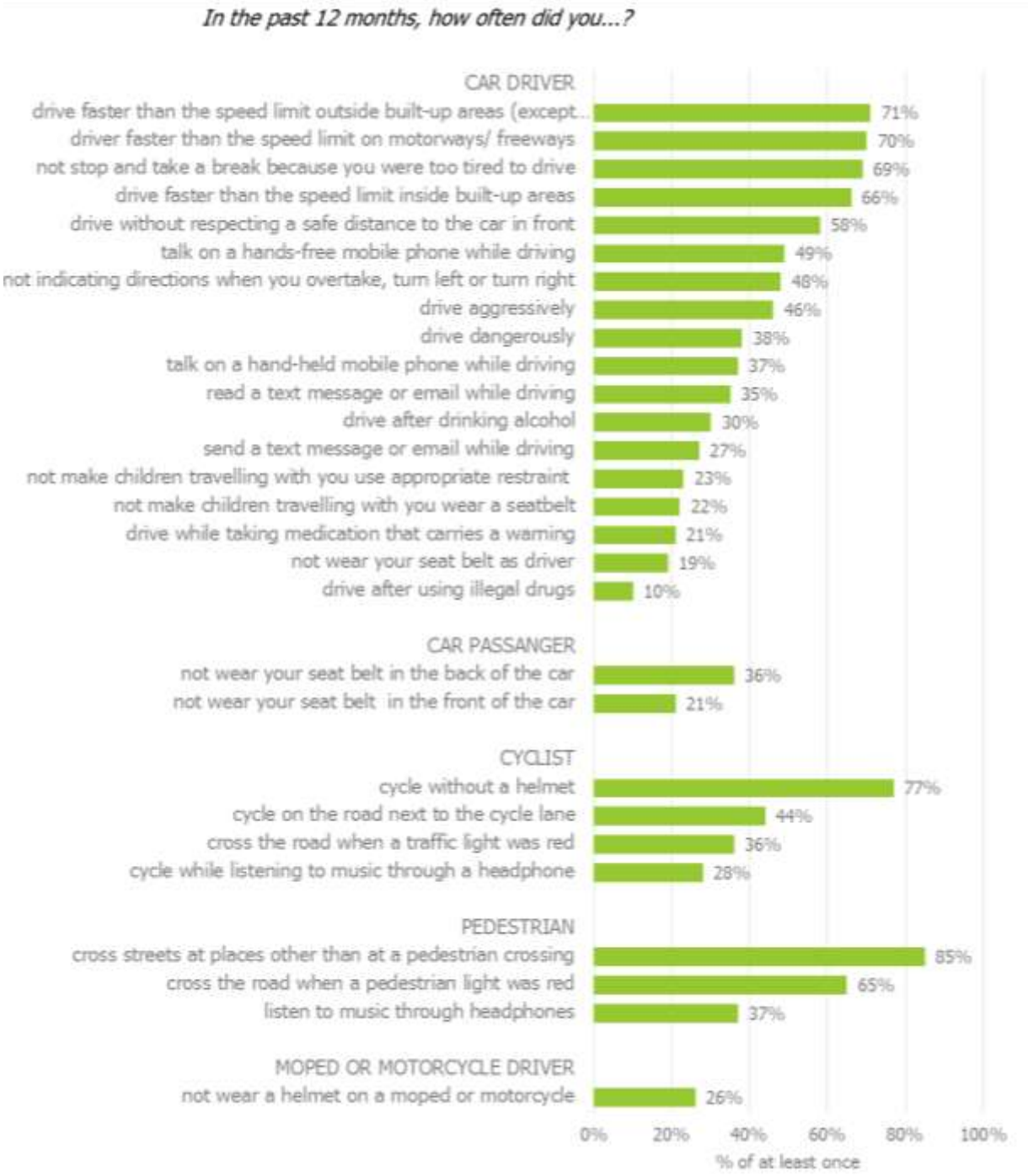

Figure 3: Prevalence of risky behaviours in the population of road users.
Notes: European weight B.

As we can see from the results, driving above the speed limit is the most common risky behaviour among drivers. Exceeding the speed limit outside built-up areas was claimed by 71% of drivers surveyed with 70% on motorways and 66% in built-up areas. Please note the high position of using mobile phones while driving, downplaying fatigue as a potential cause of road accidents and the relatively strong prevalence of a number of behaviours that could collectively be called bad driving manners (e.g. not indicating turns, choosing to drive aggressively or dangerously). What came as a negative surprise is the number of drivers who admitted to driving after drinking (30%)[3], after taking

[3] *Please note that in answering another ESRA question (Over the last 30 days, how many times did you drive a car, when you may have been over the legal limit of drinking and driving) 11.6% of drivers admitted that it had happened to them.*

medication that carries a warning to say it may influence your driving ability (21%) and after taking illegal drugs (10%). These values are higher than those identified a few years ago in the DRUID programme (2010).

While it is difficult to say whether ESRA results give a true picture of the state of things on European roads, a recent study by the VINCI[4] foundation (2016) shows similar trends. The next section presents data that can be treated as enforcement's response to the developments in road traffic.

3.2.2. Types of traffic offences that were fined most frequently

The ESRA survey looked at the type of traffic offences that were fined most frequently. Figure 4 shows this on a chart.

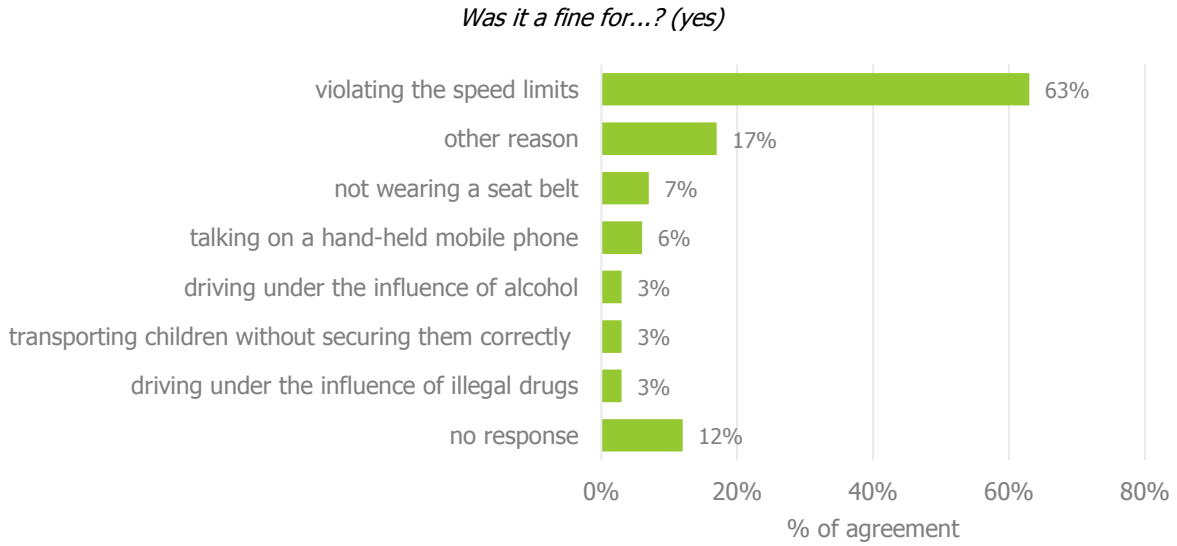

Figure 4: Type of traffic offences.
Note: European weight B.

In terms of the number of fines the enforcement of drivers exceeding the speed limit is the most frequent police activity. Those who said they have paid a fine in the last year (15% of road users surveyed), 63% paid it for exceeding the speed limit and another 7% for not wearing seat belts. Offences that are very rarely punished include driving under the influence of illegal psychoactive substances, driving under the influence of alcohol and carrying children without proper restraints (3% respectively).

It is difficult to say whether the reason for traffic fines has changed over the recent years because SARTRE4 (Cestac et al., 2012) only asked about some of the offences. Within SARTRE4, 23.5% of drivers surveyed admitted to a speeding fine but the period under analysis was the last 3 years. In the ESRA survey the same offence in the last year was claimed by 7.7% of road users surveyed. In SARTRE4 (Cestac et al., 2012) 0.8% of drivers said they had been fined for driving under the influence of illegal psychoactive substances compared to 0.22% in ESRA (2015). While this result might suggest a reduction in drug-driving offenders, it is in fact difficult to explain why.

The reason for fines for men and women is very similar with any differences being statistically insignificant. Women are less frequently stopped for roadside checks, but if they are, the fines they

[4] *Online survey conducted in 11 European countries (Belgium, France, Germany, Great Britain, Greece, Italy, Netherlands, Poland, Slovakia, Spain, Sweden) from 1 February to 7 March 2016, 13,634 individuals, representative samples of the population aged 15 years and over in each of the surveyed countries, including at least 1000 individuals in each of the surveyed countries. Quota method: gender, age, interviewee occupation, region and town category.*

are given are for offences similar to those of men. The age structure of those fined for speeding is clearly surprising (Figure 5).

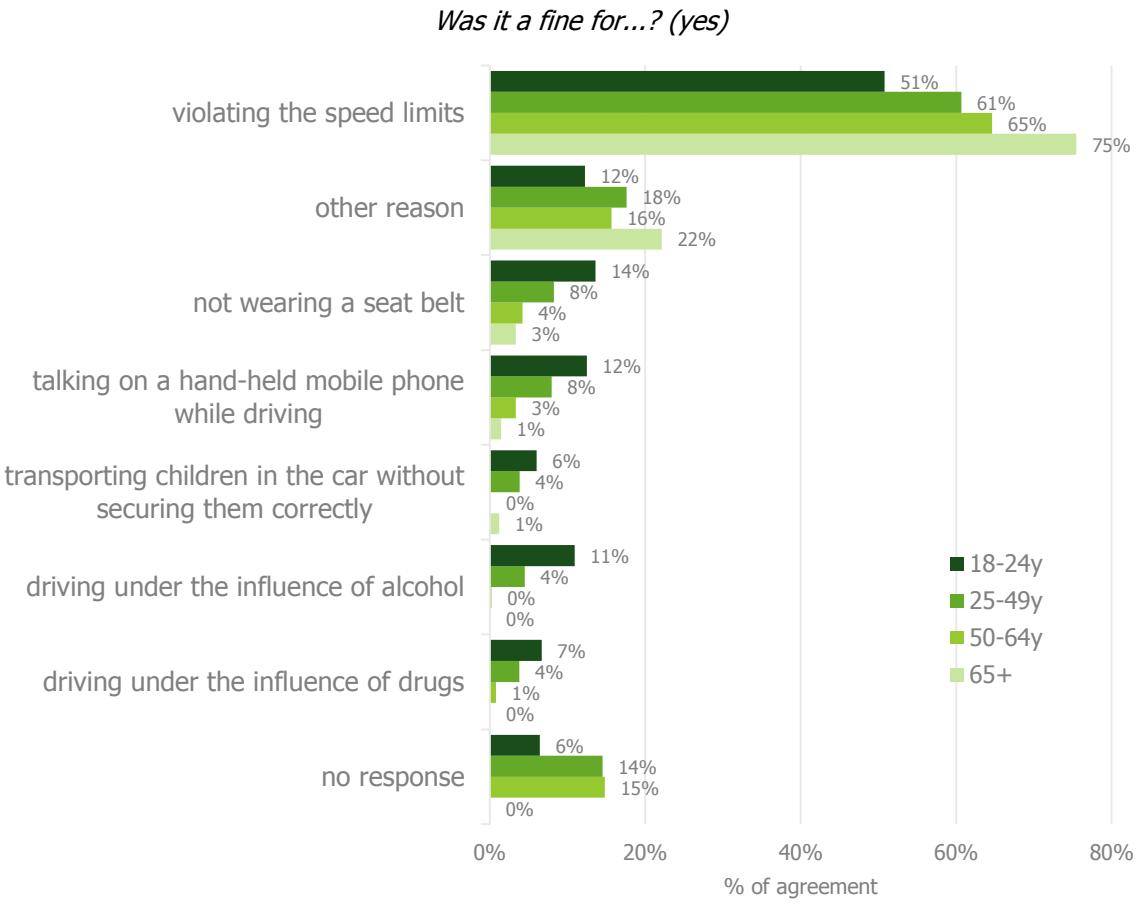

Figure 5: Penalties for road traffic offences by age of those fined.
Note: European weight B.

Traditionally, speeding is associated with 'young drivers', a group that considers fast driving as a way to satisfy their need for excitement or impress their peers. The ESRA survey established that while the percentage of people fined for speeding in this age group is definitely high (51%), it is relatively lower than in the other age groups.

The next figure presents the reason for fines per country. To help with the analysis of the results, the chart shows the first four most frequently fined offences. Note that the countries are ordered by the speeding fine.

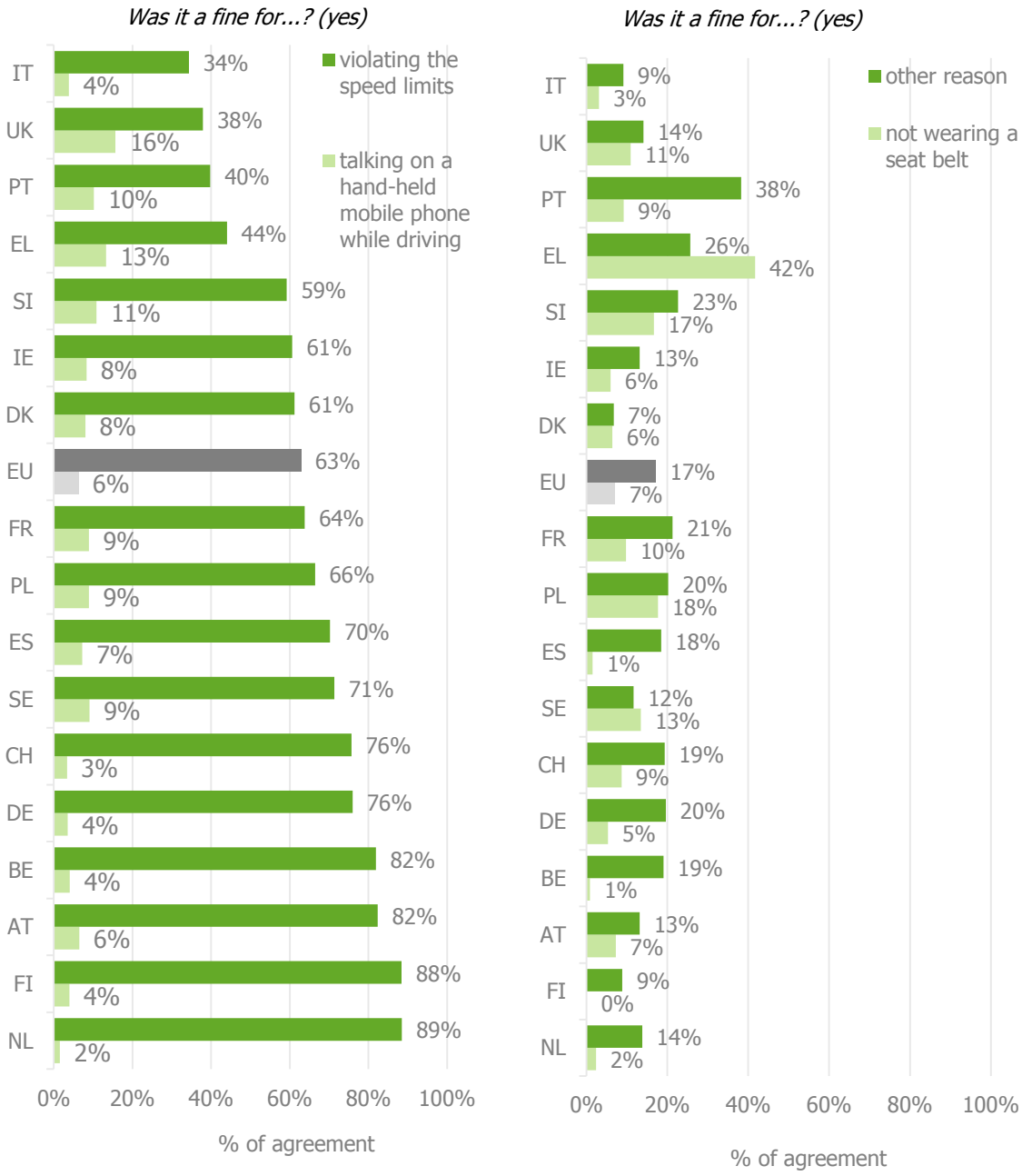

Figure 6: Reason for traffic offence fines in selected European countries (Part 1).
Note: European weight B.

In all the countries the most frequent fines are for driving over the speed limit, which is not really surprising considering the widespread nature of this behaviour among drivers. It is interesting to note, however, that in so many European countries the police focus on speed limit enforcement. The highest number of fines is in the Netherlands (89%) and Finland (88%). It is important to note that while the Netherlands has one of the relatively lowest numbers of police checks (only 18% of road users surveyed were stopped for a police check in this country), the checks that do happen are most likely in connection with speeding. According to the Dutch SWOV institute (2013) the enforcement of speeding is one of the spearheads of the Dutch police policy. In recent years e.g. the number of speeding fines within the framework of the Mulder Law has become four or five times higher than in 1995. The least amount of speeding fines is in Italy[5] (34% of all fines in the last year were for

[5] *These results should be treated with a lot of caution. In this country 56% of respondents did not give a reason for their fine.*

speeding), UK (38%), Portugal (40%) and Greece (44%). The latter also has a relatively high number of drivers fined for not using seat belts.

Recent years have seen an increased focus on driver distraction, especially on drivers using mobile phones. The current estimate for the impact of road user distraction on accidents in the European Union is that it is a contributory factor in around 10-30% of road accidents (TRL et al., 2015). While all European Union countries have introduced a ban for hand-held calling while driving, ESRA results show that police enforcement of mobile phone laws is not very strong. Fines for using a mobile phone while driving are most frequent in the UK (16% of all drivers fined in the last year), Greece (13%) and Slovenia (11%). It is difficult to say whether the number of drivers using mobile phones while driving has changed in recent years. SARTRE4 did not ask that question at all.

The next figure shows the results for drivers fined for drink-driving, drug-driving and transporting children without securing them correctly. The percentage of drivers fined for these offences differs significantly from country to country. In the UK, among those fined, 15% were drivers who took the decision to drive after drinking with the Netherlands and Belgium representing less than 1%. In Denmark nearly 16% of drivers fined were given the ticket for transporting children in the car without proper restraints and less than 1% in the Netherlands, Belgium, Greece, Finland and Portugal. The results seem to suggest that certain risky behaviours are difficult to enforce in the individual countries or that the same offences are assigned a different weight in different countries.

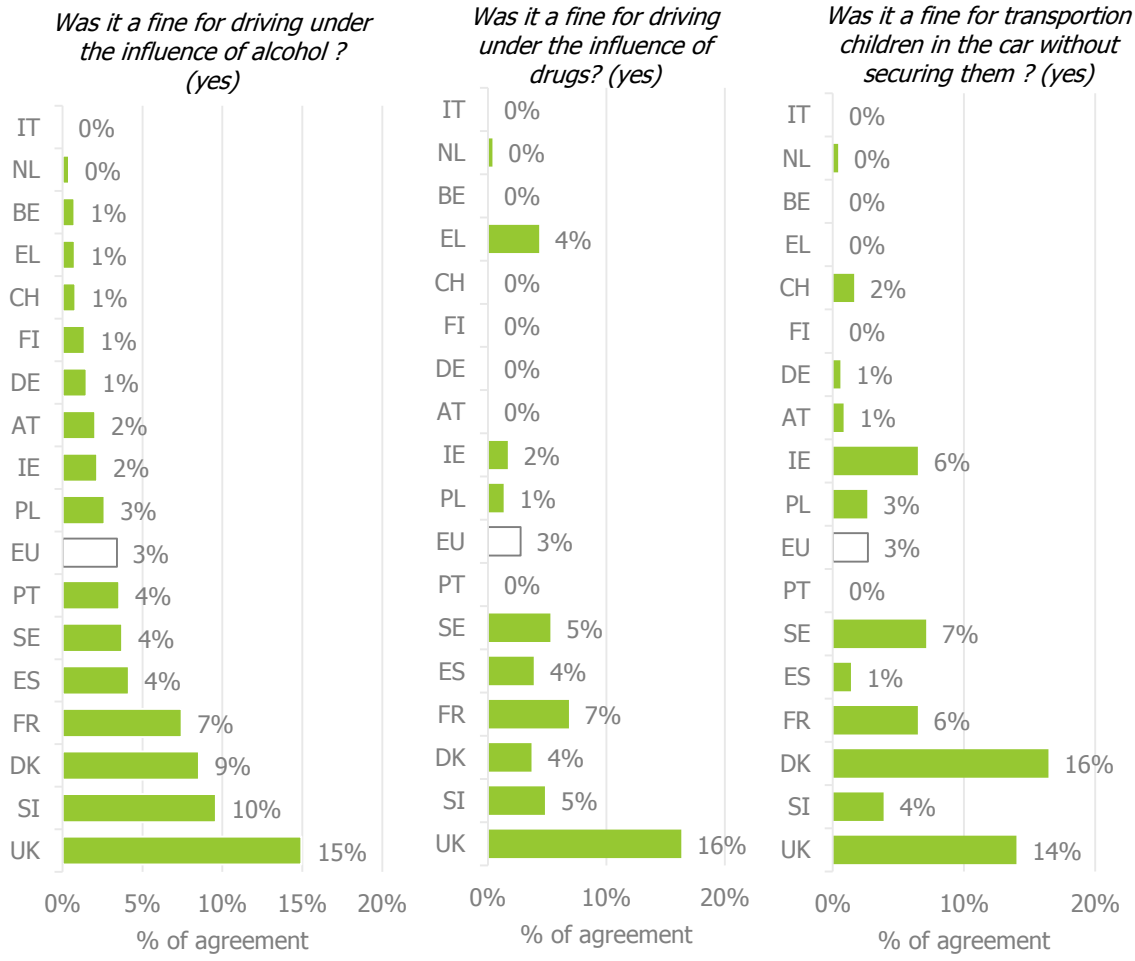

Figure 7: Reason for traffic offence fine in selected European countries (Part 2)
Note: European weight B.

3.2.3. Specific case – alcohol and other psychoactive substances

The ESRA survey included two additional questions about alcohol and other psychoactive substances in drivers. It shows that in the last 12 months 19% of road users surveyed have been checked for alcohol (of which 7.8% more than once). It is not a bad result because experts frequently recommend a sobriety check intensity at a level that will allow one in five drivers to be checked annually (see: e.g. Van Schagen I. et al., 2012). Illegal psychoactive substances are checked much less frequently with only 4% of respondents having been controlled in the last 12 months (of which 2% more than once). This is the right moment to point out again that 30% of drivers surveyed admitted to having driven after drinking (at least once in the past year), after taking medication that carries a warning to say it may influence your driving ability (21%) and after taking illegal drugs (10%).

More men are stopped by police for sobriety checks than women (23% of men said that in the last 12 months they have been stopped by police at least once compared to 15% of women). These differences are statistically significant (χ^2 (N=12,908; 2)=149.05; p<0.001). Men are also checked for illegal psychoactive substances more often (5% and 2% respectively) (χ^2 (N=12,319; 2)=40.43; p<0.001).

As we can see in Figure 8 checks for alcohol and checks for psychoactive substances involve primarily drivers in the younger age groups. This line is considered to be the police's most effective strategy in this area (see: TISPOL's (2012) target-oriented (age-group-related) approaches), and one that is scientifically grounded. Research has shown that while young drivers are less likely to drink and drive than older drivers, but when they do, the combination of alcohol and lack of experience has particularly severe consequences.

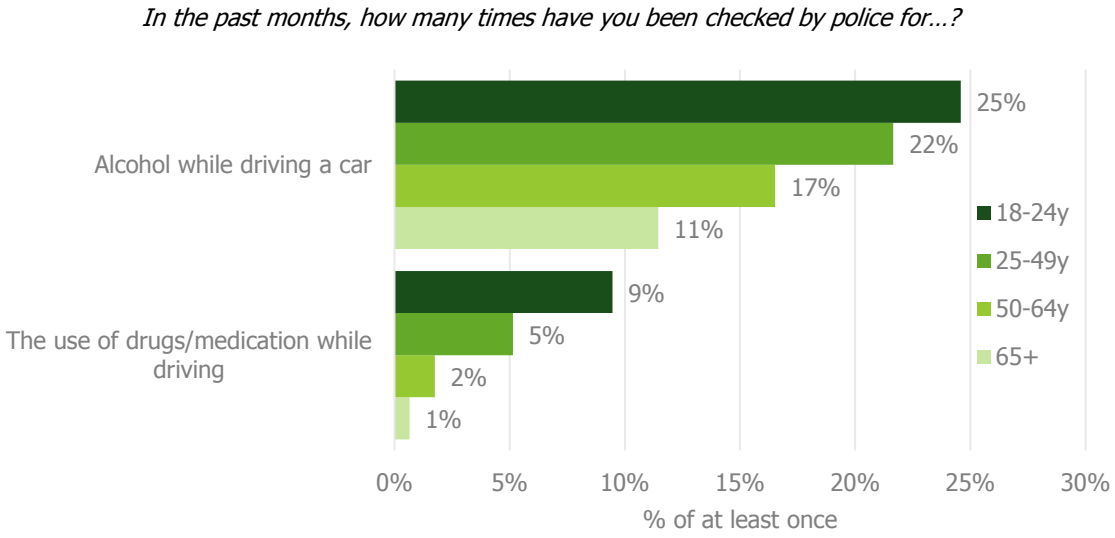

Figure 8: Frequency of checks for alcohol and other psychoactive substances by age of those controlled.
Note: European weight B.

A strategy of more frequent alcohol checks in the youngest drivers has been implemented by police from Austria, Switzerland, Germany, Denmark, Greece, France, Slovenia, United Kingdom and Italy, although the latter has relatively frequent sobriety checks of drivers aged 65+ which is surprising. In Belgium, Spain, Ireland and the Netherlands checks are most frequent among drivers aged 25-49 and in Finland, Poland, Portugal and Sweden sobriety checks are also frequent for drivers aged 50-64. There are differences between the age groups (Alcohol: Welsh test F=42.975; p<0.001; Drugs: Welsh test F=39.998; p<0.001) and except the pair 18-24 and 25-49 and the pair 50-64 and 65+ they are statistically significant (Testy post hoc, Multiple comparisons with the test T2 Tamhane; p<0.05).

The results are difficult to interpret primarily because there is a shortage of reliable data on the prevalence of alcohol and illegal psychoactive substances in different age groups of drivers to use as a point of reference. The most recent survey of this kind was conducted in 2010 under the European Union DRUID project (2012). It showed that there is no general pattern in the distribution of drivers testing positive for alcohol over the different age groups between the countries. In Denmark, Spain, and the Netherlands the share of drivers younger than 35 years old is smaller than the share of older drivers. In Belgium, Finland, Italy and Poland the distributions of shares are similar, while in Portugal the share of alcohol positive drivers was the highest among young drivers. No results were available for Sweden (Houwing et al., 2011). The prevalence of other psychoactive substances among drivers produced similar results.

A comparison between ESRA results and SARTRE4 results is difficult, because the SARTRE4 sobriety checks question asked about the last three years, not about the last year, which is what ESRA did. In 2015 in the ESRA survey 81% of drivers said that in the past year they have not been checked for alcohol at all while 11% said that there was one such check and 8% reporting more than one check. The 2010 SARTRE survey showed that 58% of drivers were not checked for alcohol when they were behind the wheel, another 23% only once, and the remaining 18% more than once. As regards checks for the use of drugs – in the SARTRE4 survey only 1% of the respondents said in 2010 they had been checked for drug driving in past year and less than one per cent had been punished for usage when driving (Cestac et al., 2012). The ESRA survey showed that in the past year about 4% of drivers surveyed had a similar check. So it is probably safe to say that the intensity of drug driving checks in the last 5 years has increased slightly.

Police are encouraged to check all drivers of vehicles for their alcohol consumption as often as possible. The goal of this policy is to convince drivers that police controls on alcohol do have a high priority (TISPOL, 2012). Figure 9 shows the frequency of sobriety and illegal psychoactive substances checks in ESRA countries. The results of the ESRA survey suggest in all countries (except the UK) checks for alcohol are more frequent than checks for other psychoactive substances. In the last case (UK) this may be temporary and come as a result of new regulations which came into force on March 2, 2015 setting legal limits for drivers for blood level of drugs (both illegal and prescription). It seems clear, however, that British police spends the least amount of time on checking alcohol and illegal psychoactive substances in motorists.

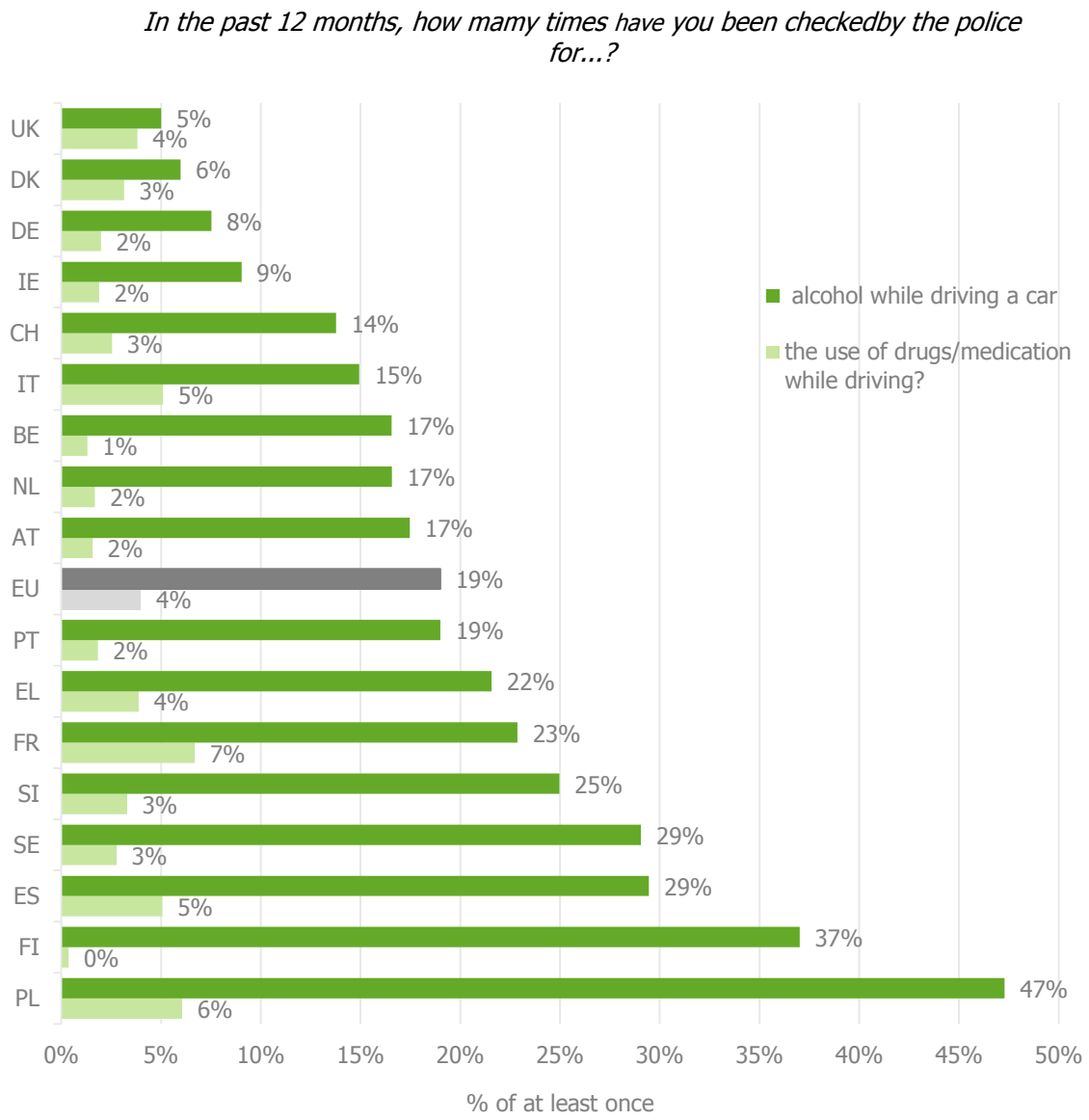

Figure 9: Frequency of checks for alcohol and other psychoactive substances in selected European countries.
Note: European weight B.

The results of DRUID (Bukasa et al., 2011) show that although the legal measures to combat substance impaired driving applied in European countries are often similar, they differ in how they are implemented and enforced. ESRA results confirm that. Sobriety checks are the most frequent in Poland (0.2 g/l BAC limit, 47% of drivers surveyed said they have had at least 1 sobriety check in the last year)6 and in Finland (0.5 g/l BAC limit, 37% respectively), with the least checks in the UK (0.8 g/l BAC limit, 5% respectively), Denmark (0.5 g/l BAC level; 6% respectively) and in Germany (0.5 g/l BAC level; 8% respectively). Just as in the previous rankings, there are differences between the countries, with some of them statistically significant.

The highest number of checks for other psychoactive substances has been in France (7% of drivers surveyed have had such a check at least once in the last year), in Poland (6%), Spain and Italy (5%). There is a lot to suggest that the low intensity of drug driving checks has a very small effect on changing driver behaviour.

[6] *According to official data in 2014 in Poland there were 15.5 m sobriety checks, and in 2015 – nearly 18 m.*

In 2011 the DRUID programme looked at the prevalence of alcohol and other psychoactive substances in drivers in 9 European countries. The random checks revealed the highest number of drivers over the legal alcohol limit in Italy (8.6%), Belgium (6.4%), Portugal (4.9%), Spain (3.9%), Denmark (2.5%), Netherlands (2.2%), Poland (1.5%) and Finland (0.4%). In theory it is assumed that the intensity of police checks should match the rate of prevalence of a particular offence in the population. The results of alcohol prevalence were then checked for how this was reflected in the intensity of police alcohol enforcement. The results are presented graphically in Figure 10. The numbers in parenthesis next to country symbols provide the percentage of drivers who admitted to have been drinking and driving in the past year at least once and the percentage of drivers who have had a sobriety check. The blue lines show mean values.

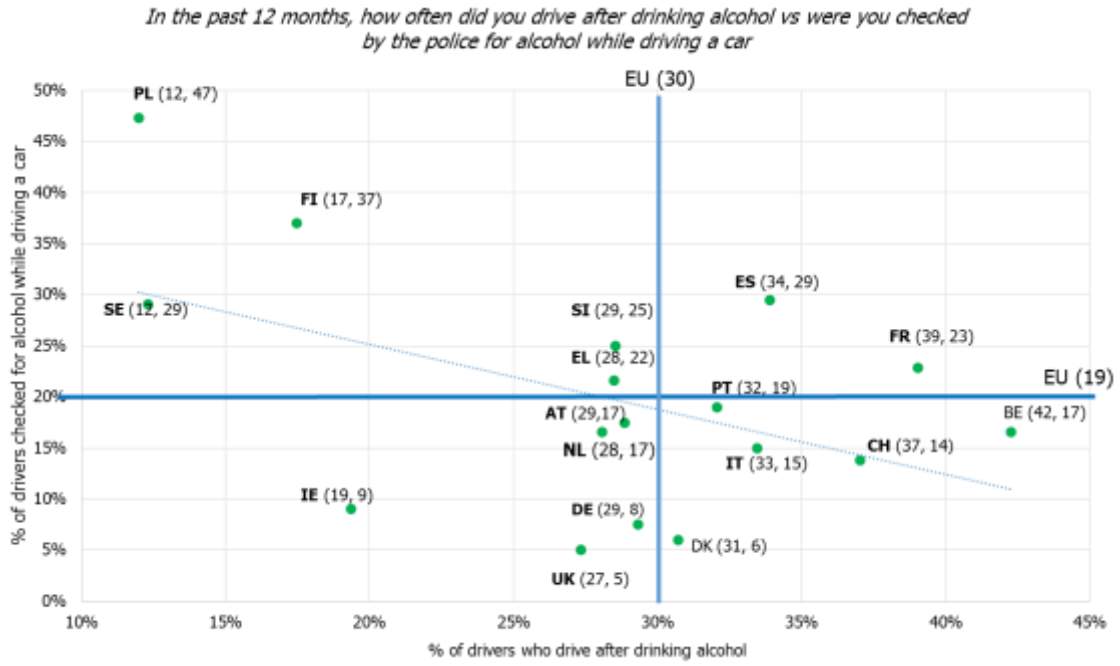

Figure 10: Percentage of drivers declaring drinking and driving and sobriety checks in the last 12 months in selected European countries.
Note: European weight B.

The results showed that the increase in alcohol prevalence among drivers in many countries is not followed by more frequent police checks for alcohol (Pearson coefficient r=-0.405; p<0.001). The relations are slightly better in the case of illegal drugs (Pearson coefficient r=0.537; p<0.001) and medication that carries a warning to say it may influence your driving ability (Pearson coefficient r=0.346; p<0.001).

A final problem in this chapter is presented graphically in Figure 11. The horizontal axis shows the percentage of respondents in the particular countries who said they have had an alcohol check in the last year. The vertical axis gives information about the percentage of people who were found to have exceeded their country's legal alcohol limit.

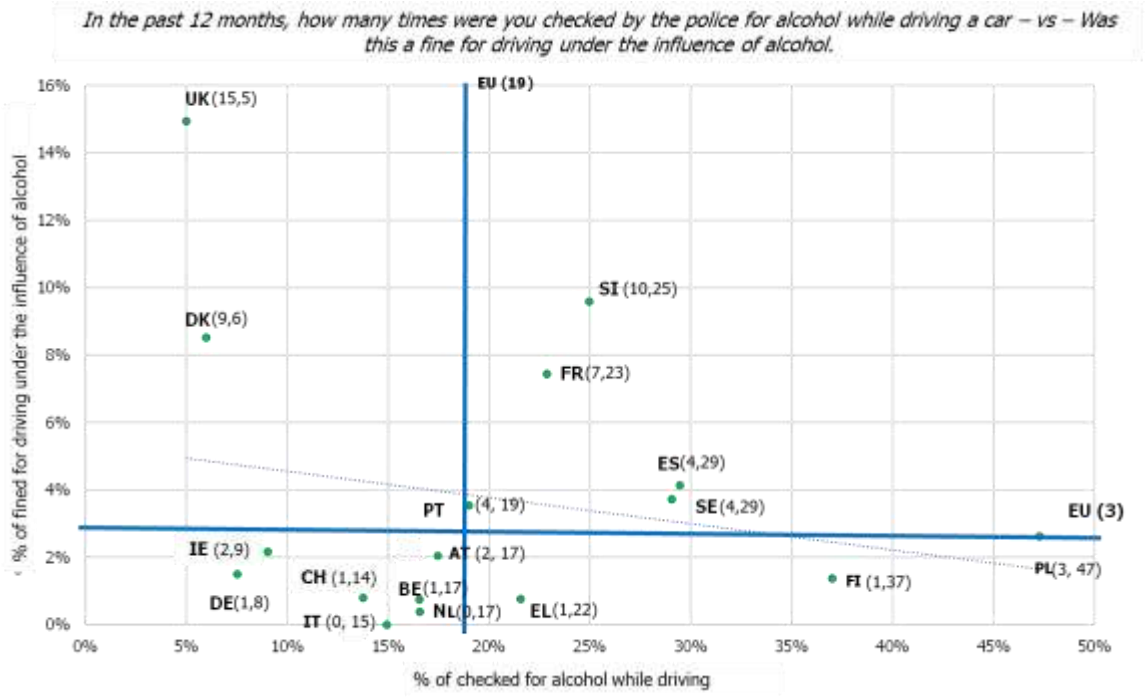

Figure 11: The effectiveness of traffic police checks in selected European countries.
Note: European weight B.

As illustrated, the chart shows that the majority of the countries, irrespective of alcohol check intensity, reveal about 1-4% of those drinking and driving. Reports on road police work often say that the low numbers of drink-driving cases prove how effective the police is, the premise being that the role of enforcement is to deter drivers from drinking and driving rather than focus on stopping those drivers. Therefore a relatively low number of drivers found to be over the limit means that there are not many of those drivers in the driver population. The results of the prevalence of road user risky behaviours from the beginning of this chapter do not confirm this conclusion. This is definitely the kind of information we need to discuss regarding the effectiveness of police enforcement.

3.3. Subjective risk of being checked

It is generally thought that significantly increasing the actual level of enforcement activity is the most effective means of increasing the perceived risk of apprehension. Most studies show that road users commit fewer offences when confronted with a greater likelihood of being apprehended and punished. This applies to various violations such as speeding, drink-driving, driving without using a seat belt (SWOV, 2013). The chapter so far has presented road users' experience in the area of police enforcement with focus on how that experience has influenced road user opinions.

The ESRA survey asked respondents about the perceived likelihood of being checked for different violations on a typical journey. To assess that likelihood respondents selected one of five answers where 1 meant very small chance, and 5 = very big chance. Further analyses considered only those answers which assess the likelihood of a police check as very low (responses 1 and 2). Respondents thought that the lowest likelihood was of checks of illegal drugs (71% think such checks are unlikely), alcohol (60%), seat belt use (58%) and speed (38%). SARTRE4 produced similar results (Cestac et al., 2012). In 2010 54% of drivers surveyed thought that a speed check is not likely and 71% thought the same about sobriety checks. So it is probably safe to say that while within the last five years driver opinions about police work have improved, the scale remains insufficient. Respondents' opinions on how likely a specific offence may be checked has very little to do with a fine they had received for that same offence[7]. It may be that relatively few people have been fined at all for any

[7] *Spearman coefficient for alcohol (rho=-0.190; p<001), respecting speed limit (rho=-0.127; p<0.05), the use of illegal drugs (rho=0.91; ns), seat belt wearing (rho=0.120; p<0.01)*

offence (15% of respondents). It seems that being fined is considered bad luck rather than a signal of a stronger police presence on the roads, a subjective probability of detection seems determined rather by coverage in the media, public information campaigns and stories told by friends and acquaintances (ETSC, 2011; SWOV, 2013) than by the objective probability of detection.

The difference between how men and women perceive the likelihood of a police check is small and statistically insignificant. The next figure shows opinions about the likelihood of a check by age of respondents.

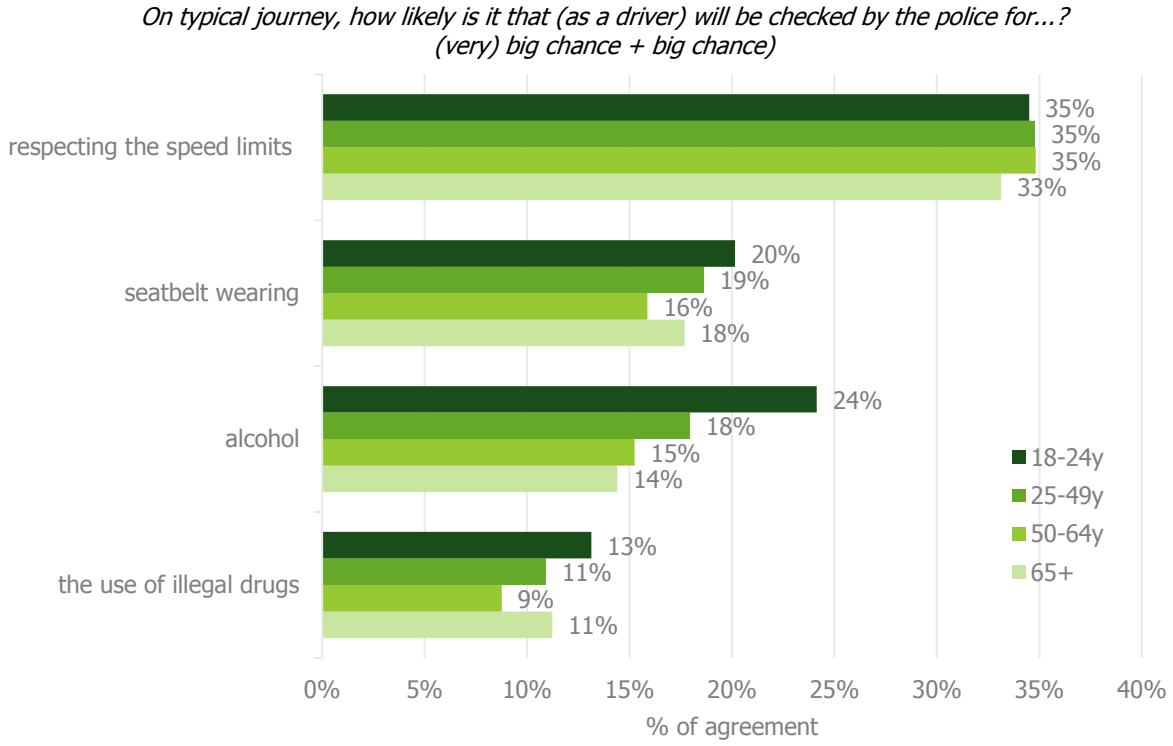

Figure 12: How likely are the traffic offences to be checked by police by the age of respondents.
Notes: *(1)* % of agreement: scores 4 and 5 on a 5-point scale from 1 *'very small chance' to 5 'very big chance'. (2) European weight B.*

In all four analysed cases young people think a police check is more likely than do more experienced drivers. Significant differences were found between age groups as regards the checks of: alcohol ($F(3.15037)=59.890$; $p<0.001$)), illegal drugs ($F(3.14909)=31.779$; $p<0.01$), seat belt wearing ($F(3.15131)=19.887$; $p<0.001$) and speed limits ($F(3.15221)=11.965$; $p<0.001$).

The next figure shows data about the perceived likelihood of a police check in selected European countries. Note that the countries are ordered by the opinion about probability of seat belt wearing and the use of illegal drugs.

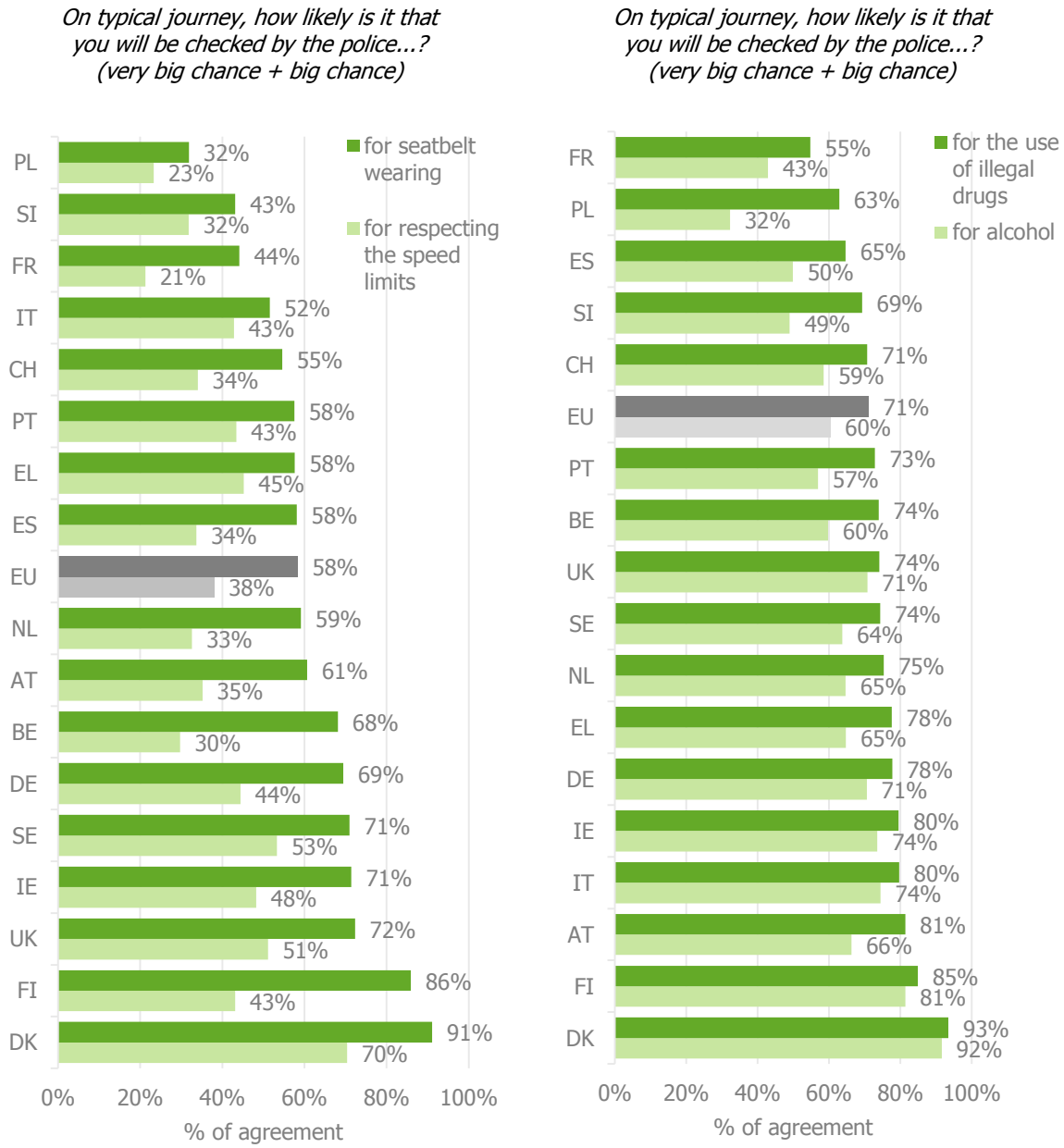

Figure 13: Subjective assessment of the likelihood of a police check for selected traffic offences.
Note: European weight B.

While there are differences from country to country, not all of them are statistically insignificant. ESRA results show that the perceived likelihood of a police check is the lowest for drivers from Denmark, Finland, Ireland, United Kingdom and Germany and the highest for drivers from Poland, France, Slovenia and Spain. Understanding the differences will require more detailed analyses because there is a lot to suggest that the hypothesis that there is a simple relation between the number of police checks and subjective feeling that a check is likely does not always work in reality. The correlation between the share of drivers checked for alcohol by police and the assessment of how likely such checks are during a typical journey is moderate (Pearson coefficient $r=0.246$; $p<0.01$). More discussion about this problem may be prompted by results from two countries, that is Poland and Finland. Drivers from these countries declare that they are relatively frequently checked for alcohol (see: Figure 9), but the fact is reflected in assessments of the likelihood of a sobriety check in Poland only.

3.4. Opinions about traffic enforcement

Two questions asked ESRA respondents to say what they think about the quality of police enforcement. The first question was about the effectiveness of enforcing laws about speed limits, drink-driving, drug driving and failure to wear seat belts; the second question was about the severity of the penalties.

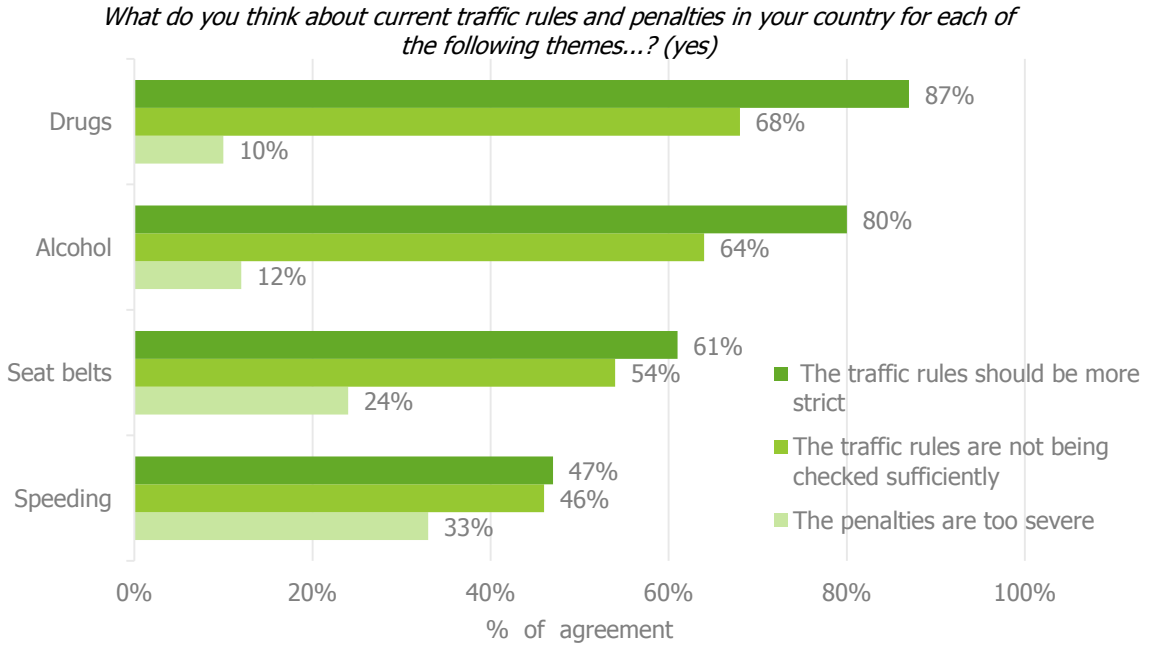

Figure 14: Assessment of current traffic rules and penalties.
Note: European weight B.

The results of ESRA show a strong consistency in what road users think about the current traffic regulations, how they are being enforced and the penalties for offenders. It is clear that road user opinions depend on the type of offence and, what is perhaps more important, the prevalence of the specific traffic behaviour. To use a simple interpretation, we can say that the rarer a risk behaviour is, the tougher the stance on enforcement. And so 87% of all respondents think that drug driving regulations should be more rigorous, enforcement should be more intense and the penalties more severe. With this as the background, the opinions on how to tackle those speeding are much milder. Women are tougher on all the cases they were asked about. The differences between men and women are statistically significant. They are particularly marked when respondents were asked to say what they think about speed enforcement (52% of women surveyed and 41% of men expected stricter regulations; (χ^2 (2, N=170,823)=272.933; p<0.001)) and drink-driving (84% and 76% respectively; (χ^2 (2, N=17,082)=249.456; p<0.001)). Unlike men, women tend to disagree with the opinion that traffic offences are punished too severely. Speeding penalties are considered too severe by 37% of men and 29% of women (χ^2 (2, N=17083)=148.448; p<0.001), not wearing seat belts – 26.8% of men and 20.8% of women (χ^2 (2, N=17083)=120.704; p<0.001) and drink-driving – 13.8% of men and 9.4% of women (χ^2 (2, N=17083)=91.101; p<0.001), drug-driving – 11.4% of men and 8.1% of women (χ^2 (2, N=17083)=65.363; p<0.001). An analysis of the results also shows that the youngest respondents were the happiest with the current enforcement but with age more and more respondents are not happy with how the regulations are enforced. Those who already have been punished for an offence, are less likely to demand a tougher enforcement, but the correlation coefficient between the two factors is not strong. The following charts present road user opinions from different countries.

3.4.1. The traffic rules should be more strict

ESRA results are very consistent. In all the countries (except Greece) road users demand tougher regulations on drug-driving. Even in the United Kingdom, which has recently introduced new legal measures on drugs (March 2015), nearly 62% of respondents believe that the laws should be stricter. Opinions about tougher speeding regulations are an interesting case. This proposal has the least support from ESRA respondents. The lowest number of supporters is in Denmark (22% of respondents support tougher speeding laws), in Austria (31%), Switzerland (32%) and the Netherlands (33%). Greece is a positive example (80% support tougher speeding rules) as is Poland (66%). In recent years both countries have done a lot to improve road safety and ESRA results may be sending a signal that he long-awaited change in road user opinions is finally taking place.

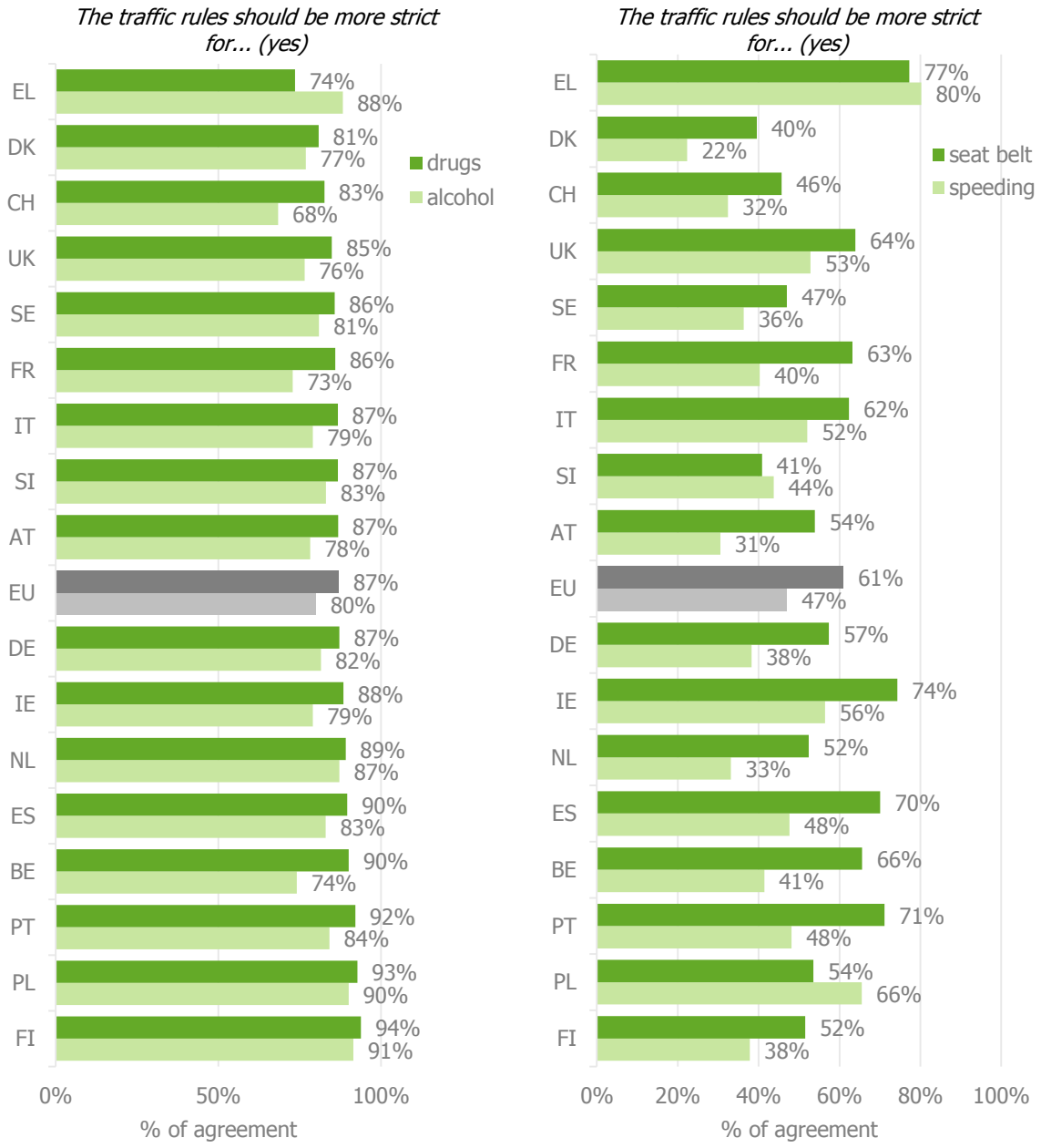

Figure 15: Assessment of the strictness of traffic law enforcement in selected European countries.
Note: European weight B.

3.4.2. The traffic rules are not being checked sufficiently

There are marked differences between driver opinions in different countries on how strong enforcement is with regard to specific offences. Except Greece, all other countries are the least happy with drug-driving enforcement followed by drink-driving.

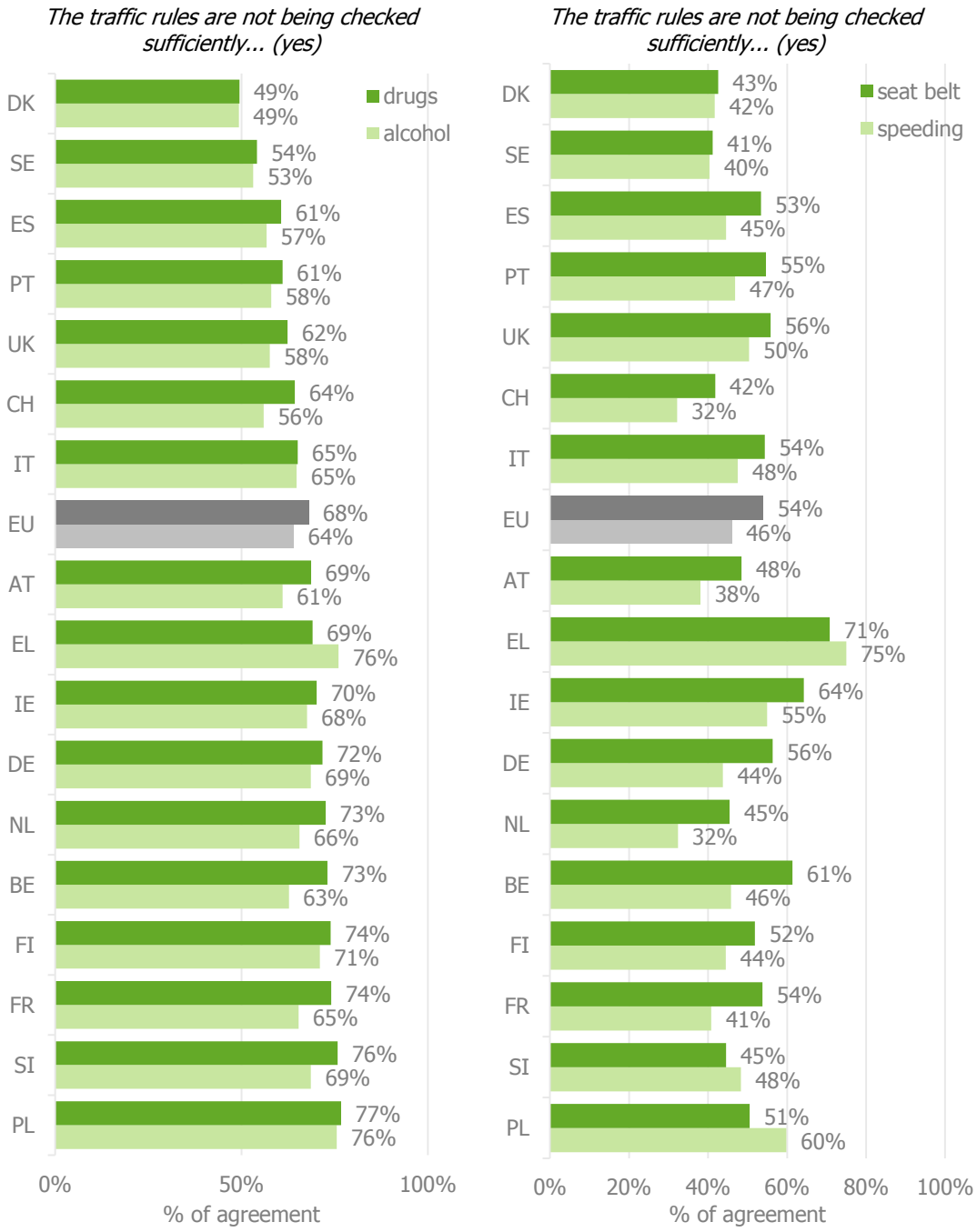

Figure 16: Assessment of the effectiveness of traffic law enforcement in selected European countries.
Note: European weight B.

While drug-driving enforcement criticism is fairly understandable (it is a relatively new problem, not much is known about it, preventive measures are difficult to implement), critical views on how drink-driving is enforced is somewhat surprising. For example in Poland 76% of respondents, think that the current drink-driving regulations (the legal alcohol limit in Poland is 0.2 g/l) are not enforced

rigorously enough. In fact, in 2015 Poland introduced even stricter drink-driving penalties with an increasing number of random alcohol checks. Despite these changes Polish people still think that drink-driving regulations are not being sufficiently enforced.

3.4.3. Penalties are too serve

Figure 17 shows road user opinions about the severity of penalties for four traffic offences in selected European countries. The countries are arranged by opinions about speeding penalties.

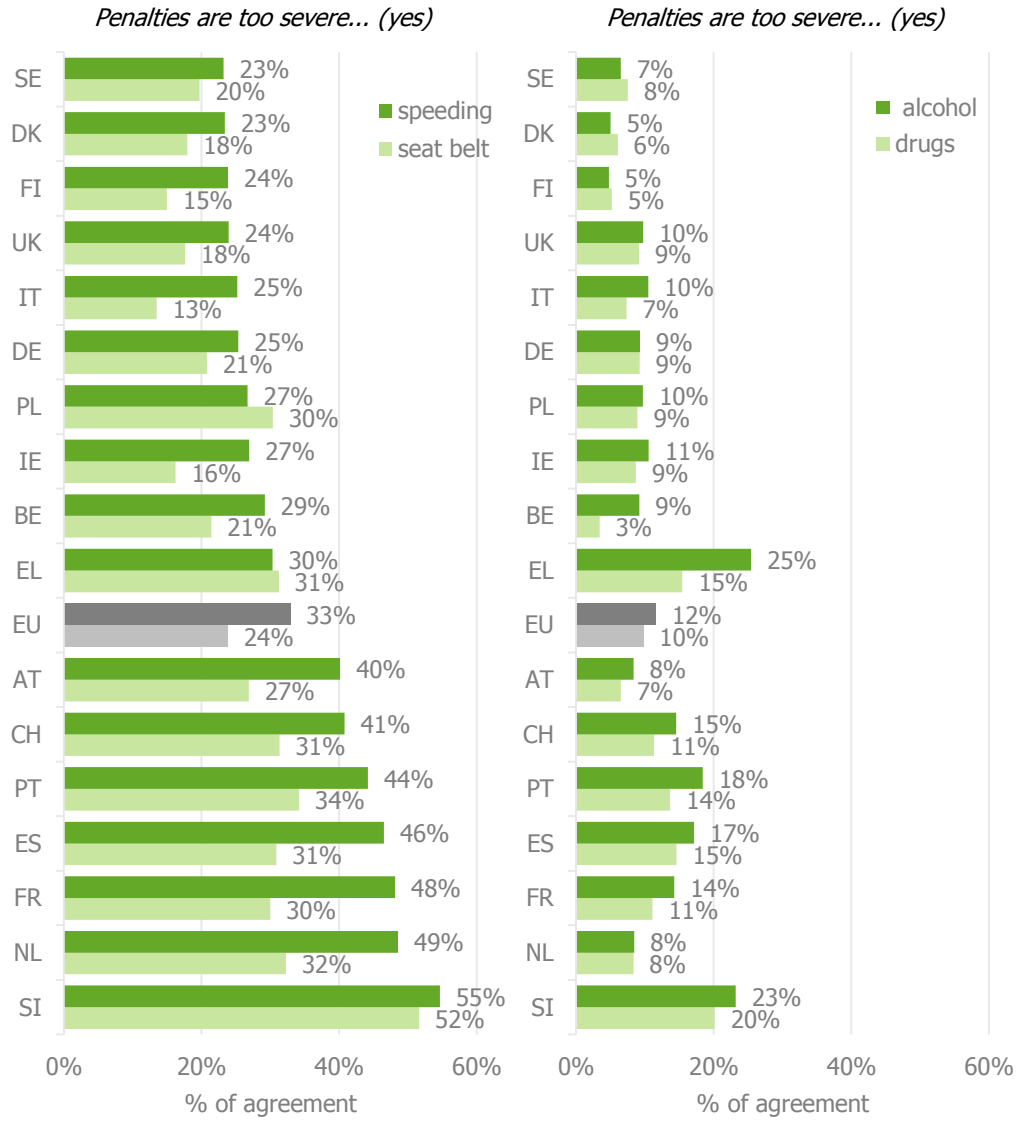

Figure 17: Opinions about the severity of penalties for different traffic offences in selected European countries.
Note: European weight B.

Penalties for speeding attract most of the criticism. Opinions on the severity of penalties have very little to do with a speeding ticket the person has received (Spearman coefficient rho=-0.83; p<0.001). The results were similar for the other three offences. It is difficult to interpret the differences shown in the chart – the penalty systems differ from country to country as does the intensity of enforcement. A few countries, however, are strongly critical of the severity of speeding penalties (in Slovenia – 55% of respondents think the penalties are too severe, in the Netherlands – 49%, and in France – 48%)

and for not wearing seat belts, although to a lesser degree (again in Slovenia 52%). It may be that Slovenian road users believe so because of the 2011 introduction of new tougher regulations.

3.5. Road users' opinions about additional preventive countermeasures

Finally, a few words about road user opinions on additional preventive countermeasures designed to make traffic enforcement more effective and change people's attitude and behaviour. The ESRA survey asked respondents to assess 11 preventive measures, some of which are already being implemented, others still under discussion (Figure 18). The downside of the list below is that it does not address drug-driving and ways to make drug-driving enforcement more effective.

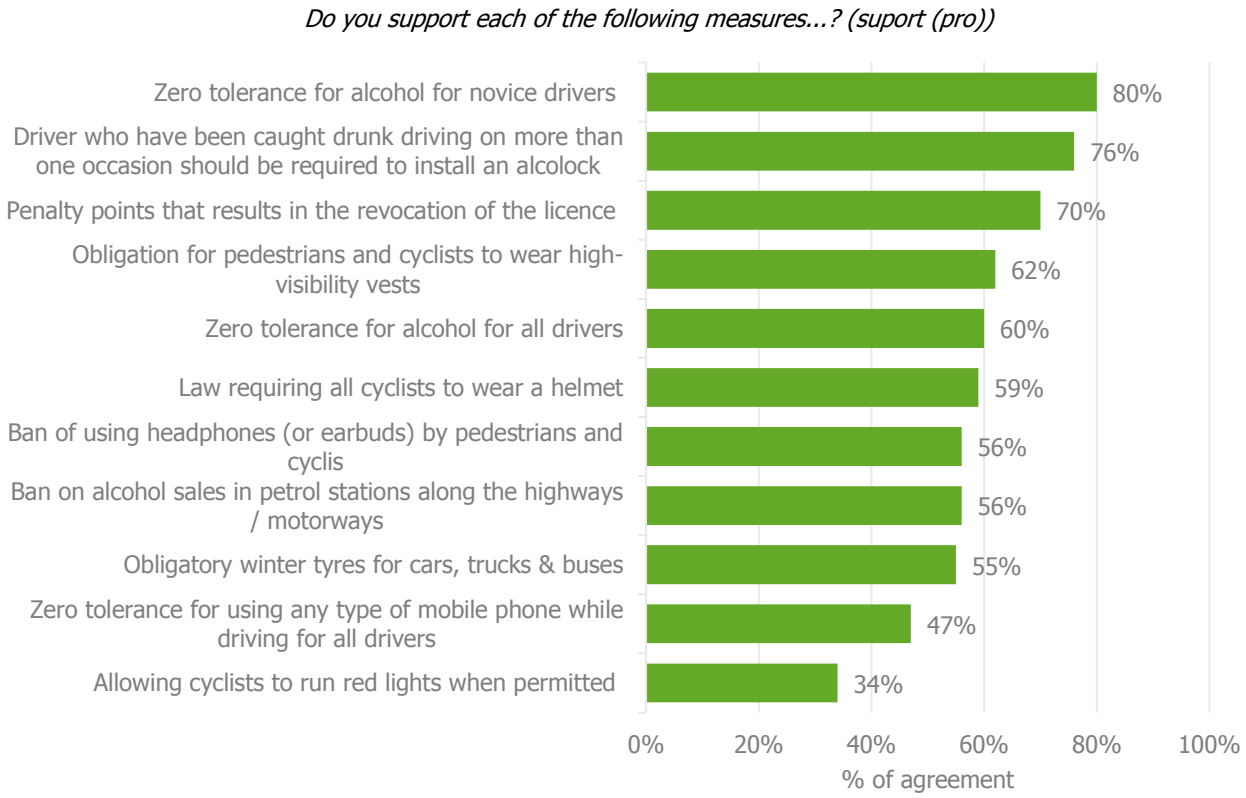

Figure 18: Support for different preventive countermeasures.
Note: European weight B.

Most respondents supported the introduction of zero tolerance for alcohol for novice drivers with 80% of respondents choosing it. ESRA participants were also keen on alcohol interlock for repeat drink-driving offenders (76%) and penalty points, which once exceeded would result in a driving ban (70%). The least support in ESRA survey was given to a proposal allowing cyclists to run red lights when permitted by specific road signs with only 34% of respondents choosing it. 47% supported a complete ban on using mobile devices while driving and 55% supported the obligation to use winter tyres for cars, trucks and buses. Women usually give stronger support to new proposals which can be seen in 10 out of 11 solutions which they were asked to assess. Road users from younger age groups (aged 18-24) are less supportive of the solutions while the oldest age groups (65+) are the most supportive. The biggest differences between the two extreme age groups could be seen in the question about a ban on using headphones (or earbuds) by pedestrians and cyclists. Only 30% of young respondents supported this ban compared to more than 70% of the oldest respondents.

It is difficult to say whether the level of support for the proposals in ESRA has changed in recent years. Earlier and comparable surveys are not available and those that are have formulated their questions differently. And so in 2007 (EC, 2007) 73% of Europeans surveyed would agree to a lower blood alcohol level for young and novice drivers of 0.2 g/l. Moreover 51% responded even 'totally

agree' to this inquiry. In 2010 in SARTRE4 among car drivers 59% of them think that alcohol limit should be less than present (i.e. no alcohol at all + less alcohol than present), 46% think drivers should not drink any alcohol before driving (Bimpeh et al., 2010). A survey conducted in October 2014 'Quality of transport' (European Commission, 2014) asked whether 'Zero alcohol tolerance' should be the priority for improving safety on roads in (your country) and received positive answers from 49% of respondents. There is a lot to suggest that Europe is now inclined to introduce a gradual reduction of alcohol limits not just for novice drivers but for the entire driver population.

The charts below show support for different preventive measures by ESRA country. The solutions proposed in ESRA are divided into three groups: activities to reduce the risks involved in drink-driving, solutions aimed at drivers and activities targeting vulnerable road users (mainly pedestrians and cyclists). The countries are arranged by the most popular solution in the group of solutions.

3.5.1. Activities to tackle drink-driving

Respondents were asked about four solutions designed to reduce drink-driving: zero tolerance for alcohol for novice drivers (licence obtained less than two years), obligation to have an alcohol interlock in the car for drink-driving reoffenders (more than once), zero tolerance for alcohol for all drivers and ban on alcohol sales in service / petrol stations along the highways / motorways. As usual men and women have differences of opinion. The variance is the strongest for the proposal of zero alcohol tolerance for all drivers. It was supported by 68% of women and 53% of men ($\chi^2(2.17083)=449.989$; $p<0.001$). The smallest differences between these two groups could be seen in their views on the obligation to install alcohol interlocks if drink-driving happened on more than one occasion; this solution gained the support of 79% of women surveyed and 74% of men ($\chi^2(2.17083)=161.721$; $p<0.001$). The youngest age groups (aged 18-24) tend to be less enthusiastic. Their support was the lowest for banning the sale of alcohol in service or petrol stations along highways and motorways (only 45% of respondents from this age group supported the proposal) and the introduction of zero alcohol tolerance for all drivers (50%). Figure 19 shows the support for drink-driving proposals among ESRA countries.

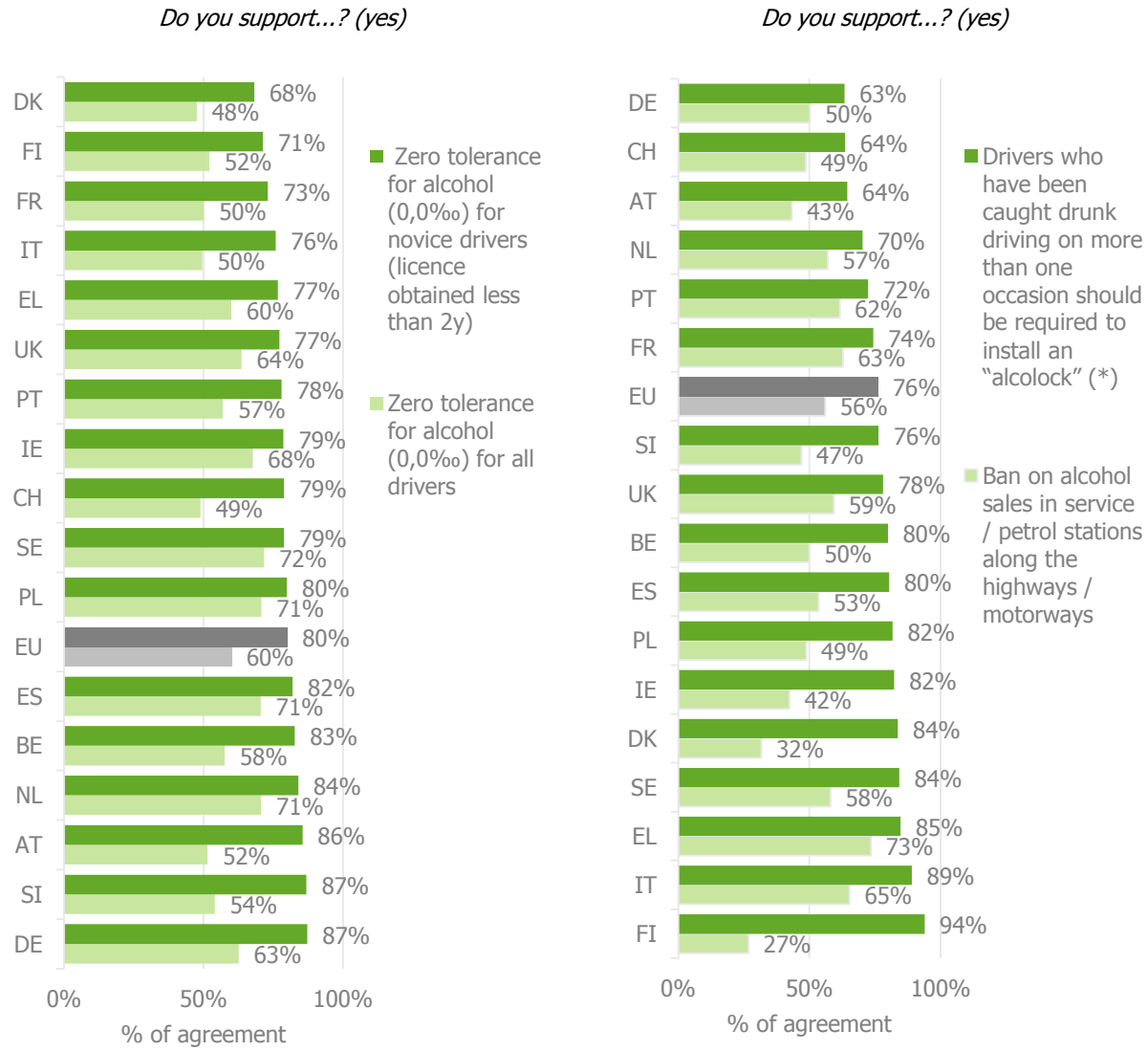

Figure 19: Support for preventive countermeasures designed to reduce the prevalence of alcohol in road traffic in selected European countries.
Note: European weight B.

In height countries the most popular proposal was zero tolerance for alcohol for novice drivers, in nine - alcohol interlocks for reoffenders had the most support. The strongest support for zero tolerance for alcohol for novice drivers was recorded in Germany (87% of all respondents), Slovenia (87%) and Austria (86%). All of these countries have already introduced this solution. A lower alcohol limit for novice drivers was also introduced in Austria (0.1 g/l), Greece (0.2), Spain (0.3), Ireland (0.2) and Slovenia (0.0), but the relation between lower limits for novice drivers and support is not strong (Spearman coefficient rho=0.090; p<0.01). The least support for a lower alcohol limit for novice drivers was reported in Denmark (64%), Finland (71%) and France (73%).

The second proposal – the obligation to install alcohol interlocks in cars of reoffending drivers – has the most supporters in Finland (94% of all respondents support this), in Italy (89%) and Greece (85%). Alcohol interlocks are least popular in Germany (63% support), Switzerland and Austria (64%). In 2010 the SARTRE4 survey showed that the introduction of alcohol interlocks in cars for recidivist drivers was approved by 84% of all drivers (i.e. 'very' or 'fairly'). In addition, 53% of the drivers were very much in favour and another 23% were fairly in favour of having an alcohol interlock in the car that prevents the driver from driving if over the legal alcohol limit (Bimpeh et al., 2010). The highest support for alcohol interlocks in the car for recidivist drivers was in Sweden (96%),

Finland (95%), the Netherlands (89%), Slovenia (89%) and Ireland (89%) and less than 70% support in Austria (Bimpeh et al., 2010). There is a lot to suggest that Europeans would accept this on a broader scale. So far seven countries introduced regulations that allow the use of alcohol interlocks to varying degrees (Belgium, Denmark, Finland, France, Netherlands, Poland and Sweden) and two countries are still working on it. The results from ESRA show that support for alcohol interlocks is not simply produced by introducing this law (Spearman coefficient rho=0.01; ns), but because road users are very clear about not tolerating drunk drivers.

3.5.2. Solutions targeting drivers

The next chart shows road users' opinions about three solutions addressed to drivers. They are: obligatory winter tyres for cars, trucks and buses, a licence system with penalty points for traffic violations that results in the revocation of the licence when a certain number of points is reached, and zero tolerance for using any type of mobile phone while driving (hand-held or hands-free) for all drivers. The second proposal has won the most support – a possible driving ban once a penalty point limit is reached. This has the support of 70% of respondents. While there are differences between men and women in the level of support (71% of women support this, 69% of men), they are small ($\chi^2(2.17083)=86.122$; $p<0.001$). Just as with the previous preventive countermeasures, younger people are more critical about them than older age groups (e.g. the support is 62% of young people aged 18-24 and 73% aged 65+).

Penalty points systems have been introduced in 11 out of 17 ESRA countries (Van Schegen et al., 2010; ETSC, 2011). The penalty point system has the longest history in Germany (41 years), France (23 years), and Greece and Poland (22 years). As we can see from the analyses, in all the national systems driving licenses are revoked once a certain number of points is exceeded and the driver usually has to take practical and theory tests and attend driver improvement courses (Van Schegen et al., 2010; ETSC, 2011).

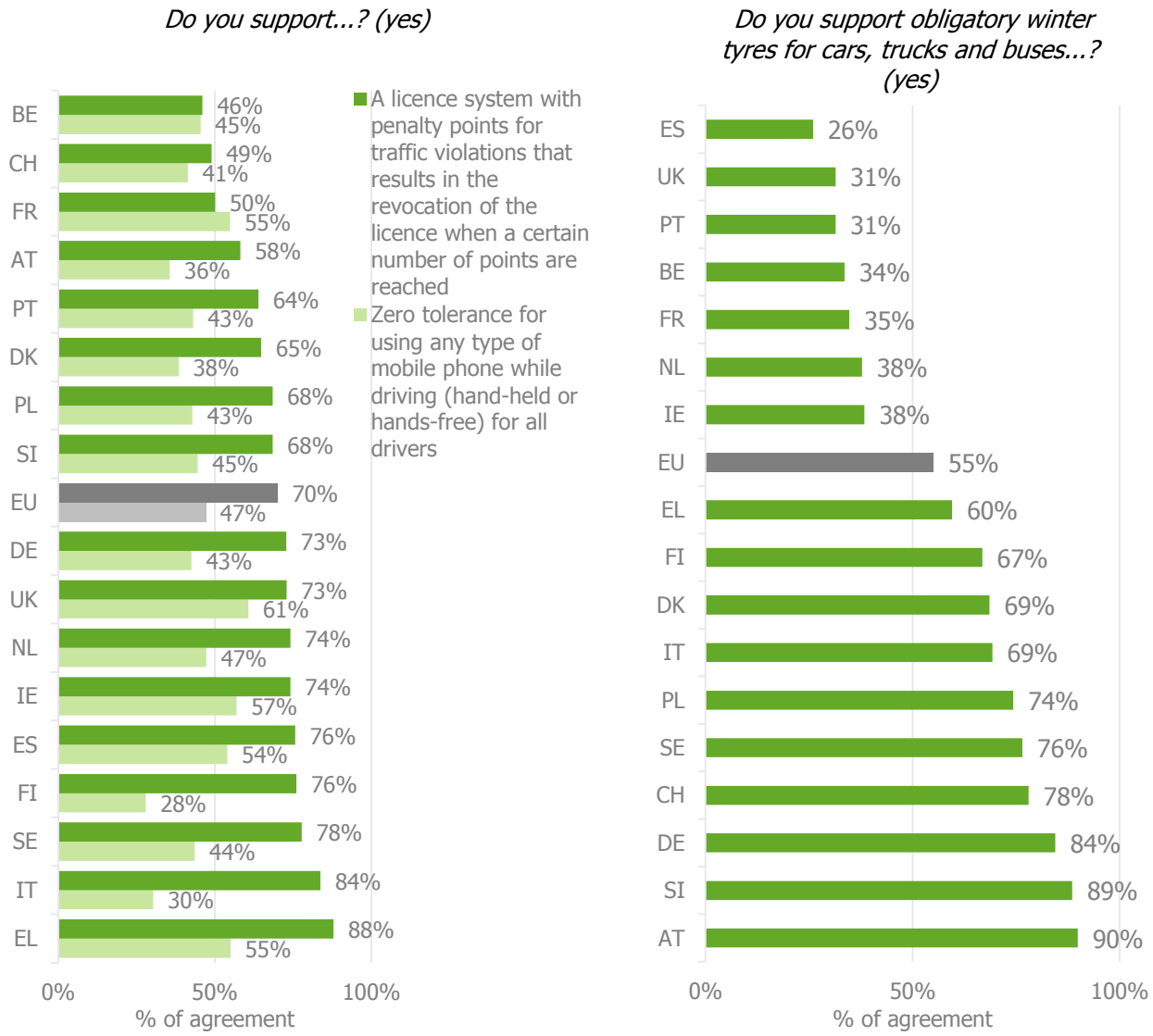

Figure 20: Support for driver-oriented preventive countermeasures in selected European countries.
Note: European weight B.

The strongest support for the penalty points system is in Greece (88% support this), Italy (84%) and Sweden (78%). All of these countries have already introduced this system. It is least popular in Belgium (46% of respondents support this), Switzerland (49%) and in France (50%). The first two countries have not introduced penalty points and if that decision were to be made, gaining public support for this will require a special effort. The situation in France definitely needs more analysis. It introduced the penalty points system 23 years ago amid public protests and it seems that the French still have not embraced it even though it has been in force for such a long time.

The second proposal is about a complete ban on using a telephone while driving. This proposal was supported by 47% of respondents. It was supported by 51% of female respondents and 43% of men ($\chi^2(2.15213)=120.740$; $p<0.001$). But the relation between gender and support is not strong. Results by age groups are similar to the previous solutions. People aged 18-24 are the most critical; only 37% of them supported the ban. Among older people (65+) the percentage was 60. The biggest number of supporters of a ban on using a phone while driving is in the UK (61% of respondents support this), Ireland (57%), Greece and France (55%), the least in Finland (28%), Italy (30%) and Austria (36%). In all the countries, except Sweden (44% support this) regulations are already in place banning the

use of hand-held mobile phones. The results collected in ESRA suggest a need for a more intensified awareness campaign. Unique subscriber penetration in Europe is very high and approaching saturation standing at 79% at the end of 2014 (GSMA, 2015), and there is a lot to suggest that talking on the phone while driving is probably one of the most common offences. Reducing the risk of distraction while driving is going to be one of the most important challenges in the future.

Finally, a few words about the last proposal – obligatory winter tyres for all vehicles. 55% of respondents support the measure. The differences between men and women and people of different ages are small. The strongest support was recorded in Austria (90% of people support this), Slovenia (84%) and Germany (84%). As shown in a report by the European Union Road Safety Observatory all of these countries are already regulating the use of winter tyres. Countries with the least support for obligatory winter tyres include Spain (only 26% of respondents support this), the UK and Portugal (31%). No winter tyres are required in these countries and the opinions of respondents are heavily influenced by the country's climate.

To end this part of the report, user opinions are presented on ways to improve the safety of vulnerable road users.

3.5.3. Solutions addressing vulnerable road users

The next chart shows road users' opinions from 17 European countries on a possible introduction of the following solutions: allowing cyclists to run red lights when permitted by specific road signs, having a law requiring all cyclists to wear a helmet, obligation for pedestrians and cyclists to wear high-visibility vests when in the dark and ban of using headphones (or earbuds) by pedestrians and cyclists. The majority of these solutions have not been introduced yet or are still being debated. Support was the greatest for the proposed obligation for pedestrians and cyclists to wear high-visibility vests when in the dark (62% of those surveyed supported this) and helmets for cyclists (59%). Again, women showed stronger support than men and younger people showed less support than older age groups as regards these preventive countermeasures.

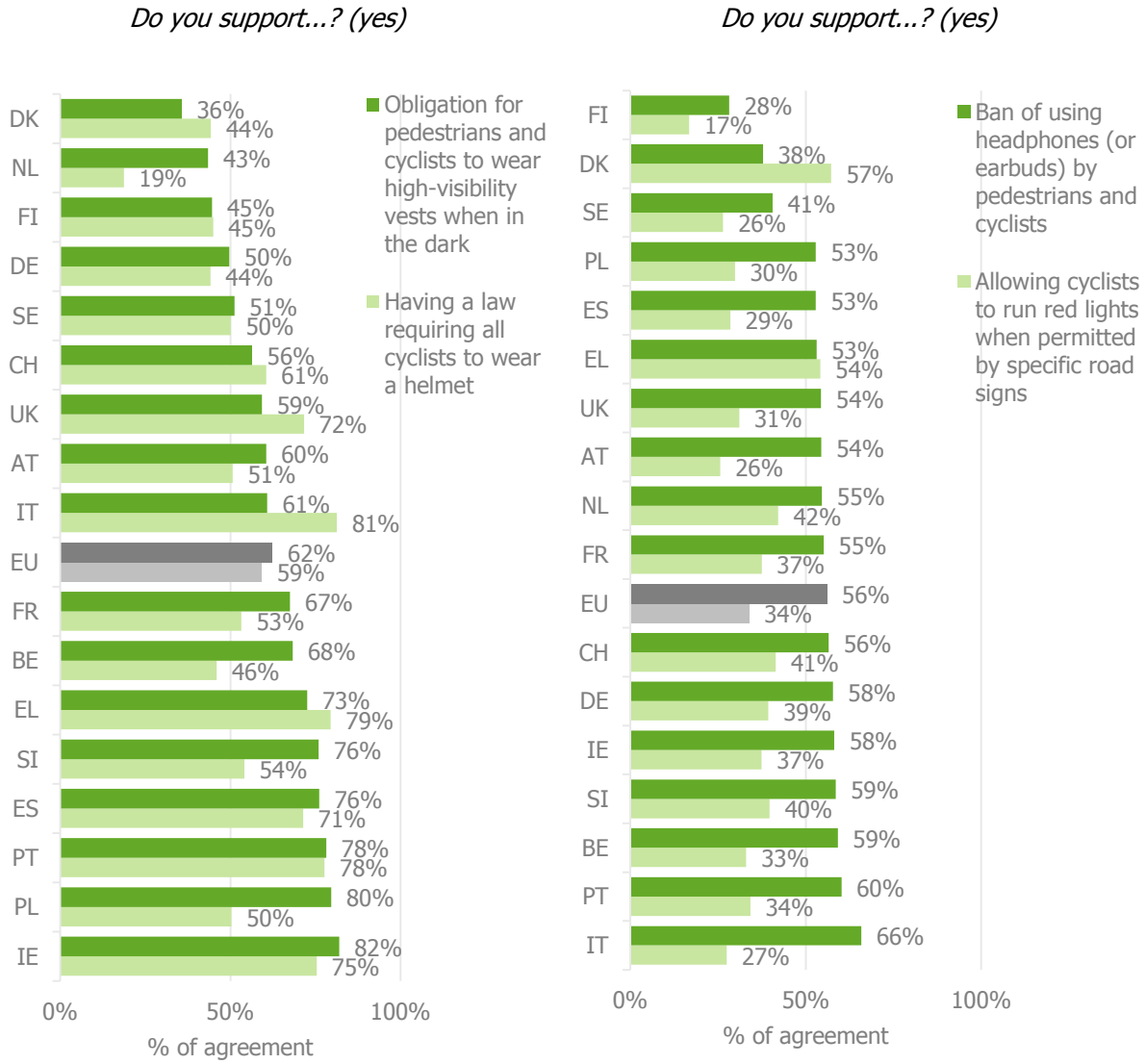

Figure 21: Support for preventive countermeasures for vulnerable road users in selected European countries.
Note: European weight B.

As regards the proposal for pedestrians and cyclists to wear high-visibility vests, the differences from country to country are very strong. The strongest support was recorded in Ireland (82%)[8], Poland (80%) and Portugal (78%), the least in Denmark (36%), Netherlands (45%) and Finland (45%). Not much is known about how this proposal is introduced in practice. As published by the ETSC (2006) in Spain and in Italy from 2010 year retro reflective equipment is compulsory for cyclists and pedestrians at night and outside urban areas (76% of ESRA respondents supported this), and in the UK the Highway Code recommends the use of retro reflective materials for pedestrians and cyclists in the dark (59% respectively). In Poland (80% of support) a law introduced in September 2014 requires all pedestrians using a road after dusk outside a built-up area to wear a reflective element that is easy to see for drivers.

The proposed law requiring all cyclists to wear a helmet was the most popular in Italy (81% of respondents supported this), Greece (79%) and Portugal (78%), and the least in the Netherlands

[8] *In 2015, there was public discussion on the possibility of introducing this solution in Ireland.*

(19%), Germany and Denmark (44%). These results are somewhat surprising because the Netherlands and Denmark are known for their use of cycles as an alternative mode of transport. The problem, however, is that cyclists themselves question this solution (see: e.g. EFC position, 2014) and are not clear whether helmets provide effective protection in the event of a crash and whether obligatory helmets for cyclists reduce road traffic risk and how this move would change the number of people cycling.

The least support was given to the proposal allowing cyclists to run red lights when permitted by specific road signs. Only two countries recorded support in excess of 50% (Denmark 57%, Greece 54%). It seems that, at least for now, road users are more willing to support solutions that introduce new obligations for vulnerable road users rather than give them more rights.

4. Conclusions and recommendations

4.1. Conclusions

The chapter aims to assess the effects of police work in selected European countries based on road user opinions. Because the ESRA survey covers police enforcement in just a few questions, the conclusions presented below should be seen as a point of departure to more discussion rather than a diagnosis of the current situation. Indeed, they are quite general in nature due to the lack of data from some of the countries. As a result, a thorough interpretation was not possible. However, because the report provides user opinions from multiple angles, the readers from the participating countries should be able to formulate relevant national level recommendations. The other ESRA reports and the general recommendations provided below will provide a valuable source of information to help with this task.

1. **No clear-cut assessment of traffic enforcement.** Enforcement is traditionally treated as an integral part of the European Union road safety policy. It is now customary to assume that countries with a good record of road accident reduction have an efficient and effective enforcement. Public opinion on the quality of enforcement is not that optimistic. The results of the latest Eurobarometer survey on road safety (2010) show that Europeans expect a better traffic law enforcement. 20% of respondents said that a better enforcement should be the first government priority in order to increase road safety. The next 20% said that it should be priority number two. ESRA (2015) survey results show that 68% of road users surveyed claimed that drug enforcement was poor, 64% were of a similar view on drink-driving, 54% - about seat belt usage and 46% - about speed enforcement. Road users were not happy with how lenient road traffic laws are with those committing the above offences. These results may very well be the signal to start a discussion on how to change traffic enforcement and increase its influence on road safety. As the discussion unfolds, we need to remember that road users from across Europe have different views on whether it is reasonable to introduce harsher and harsher penalties. This is why some caution is advised when addressing this.
2. **Lack of reliable information about police road safety activities.** There is a lot to suggest that any assessments of the effectiveness of police road safety activities should be based on a simultaneous analysis of three sources of information: data on how active the police actually are and the effects of that, understanding the prevalence of road users' dangerous behaviour and the results of relevant public surveys. Data collected during the ESRA project show a number of weak points in all of these areas. Police activity data are usually difficult to access, they are fragmented and incomparable (see: the experience from the ETSC's PIN programme). Very few European countries run non-police regular surveys to understand the real behaviour and opinions of road users. With no data, a professional assessment of the effectiveness of road police work is not possible. To address that, a short set of indicators for assessing police activity should be drafted in the near future and consistently implemented in all European countries. A good solution would also be to recommend quantitative targets to be included in annual police programmes designed to reduce the prevalence of risky behaviour within the road user population and consistent monitoring of the results.
3. **The need to add new road police powers**. Traditionally it is assumed that the success of enforcement is dependent on its ability to create a meaningful deterrent threat to road users (Zaal, 1994; ETSC, 2011). To achieve this, increasing surveillance levels are introduced to ensure that perceived apprehension risk is high, as is rising penalty severity and that procedures are in place to enable a quick and effective way to punish road traffic regulations violators. While this is not negated, ESRA results show that in the future this assumption may have to be modified. For example it has been shown in the ESRA project that in the group of countries surveyed the percentage of road users stopped for a police roadside check was the lowest in the United Kingdom, Denmark, Germany, Netherlands and Belgium. At least some of these countries are the top performers. ESRA results also show that more intensive police efforts are not always reverberated in road user opinions. For example, despite a clear increase in alcohol checks in Poland, Poland's road users continue to believe that alcohol-related offences are not enforced

with sufficient rigour. Finally, simply increasing surveillance levels has its limits (e.g. staffing and/or funding). It may be a good idea to introduce the cost-benefit analysis when assessing police work. ESRA results have shown for example that only 1-5% of the drivers surveyed were punished in the last year for drink-driving although in that same period 5% to 47% of the population surveyed in the different countries were involved in a sobriety check.

4. **The need to modify how drivers breaking road traffic laws are tackled.** For years police in European countries have been focussing on reducing the prevalence of risky road user behaviour (including, primarily: drinking and driving, failure to use seat belts, speeding). ERSA data show that police work produces a variety of effects. As regards drink-driving, for example, while the support for countermeasures is strong, about 30% of drivers surveyed admitted to drinking and driving at least once in the past year. Even if some of them stayed within the country's BAC limits, the results show that the problem is far from being under control. Speeding remains a challenge. As we can see from the ESRA survey in all the countries the most frequent risky behaviour is driving over the speed limit, despite being one of the most frequently punished offences in all the countries. It seems that although speed limit checks are now more intensive (thanks to automatic enforcement becoming more and more widespread), they do nothing to reduce the problem but simply increase the number of offenders caught speeding. Please note that proposals to toughen up the speeding policy and introduce harsher penalties have the least support among road users. There is a lot to suggest that if road user behaviour is to change more substantially, the traffic enforcement will have to be modified accordingly.

5. **Expectations regarding a more effective drug driving enforcement.** ESRA results show that road users are not satisfied with how the law treats drug-driving, how effective the police are and how tough the penalties are. 10% of ESRA respondents admitted to illegal drug driving in the past year. This rate of prevalence of illegal drugs in the population of drivers is higher than estimated based on DRUID results (Houwing, S. et al.; 2011). In addition, with the ageing of Europe's populations, the prevalence of legal psychoactive substances among road users may be a problem. In the ESRA survey 21% of drivers said that in the past year they had driven after having consumed medication which is known to affect driving. Considering the signals of the growing use of psychoactive substances by road users and the public expectations it would make sense to start work in Europe and prepare the first set of recommendations for this area as guidance for the individual countries and to implement procedures for monitoring the prevalence of legal and illegal psychoactive substances in the population of road users.

6. **The new problem of enforcement – distractions.** Recent years have seen a number of scientific reports on the risks of using mobile phones while driving. ESRA results show that in 2015, 49% of drivers surveyed talk on a hands-free mobile phone while driving, 37% - on a hand-held mobile phone, 35% read a text message or e-mail while driving, and 35% - send a text message or e-mail. Within the same period only 6% of drivers checked (15% of all drivers surveyed) were punished for talking on a hand-held mobile phone. Finally, the results of public surveys are not quite clear-cut. In the ERSA survey 47% of respondents supported zero tolerance for using any type of mobile phone while driving (hand-held or hand-free) for all drivers. The results of a survey by the VINCI foundation (2016) are similar; while 74% of respondents supported a ban on using mobile phones while driving (the majority of European countries have banned this), 80% believe that a Bluetooth car kit with built-in speakerphone should be allowed. It seems that in the future this ban will require more enforcement along with a stronger road user educational campaign to get more buy-in.

7. **Strong public support for new preventive measures.** ESRA results show that measures targeting drinking and driving are the most popular. 80% of road users surveyed supported the introduction of zero tolerance for alcohol (0.0‰) for novice drivers (licence obtained less than 2y), 76% - mandatory alcohol interlock in the cars of drivers who have already been stopped for drink-driving and 60% - introduction of zero tolerance for alcohol (0.0‰) for all drivers. These measures have had a strong support in Europe for a long time (see: SARTE 4; 2010). Other popular measures included the mandatory use of high-visibility vests by pedestrians and cyclists (62% of respondents support this) and mandatory use of helmets for all cyclists (59% of respondents support this). With the number of cyclists using roads continuing to grow, now is the right time to start a discussion on possible solutions.

4.2. Recommendations[9]

4.2.1. Policy recommendations at European level

- Launch a discussion on how traffic enforcement should be changed in order to increase its influence on road safety, including the desirability and need to introduce more effective.
- Develop models and mechanisms for cost-benefits assessments for assessing traffic law enforcement by the police.
- Define enforcement related indicators and set targets at European Union level, such as the number of people controlled, the subjective perception of enforcement and the reduction of risky behaviour resulting from enforcement and penalties.
- Support more research on understanding how road user behaviour, in particular of road users with very risky behaviour, could be more substantially influenced by enforcement activities.
- Facilitate and support the exchange of best practice in terms of effective and efficient enforcement across Member States.

4.2.2. Policy recommendations at national and regional level

- Monitor systematically data on police enforcement activities and ensure that these are comparable with those of other European countries.
- Run regular surveys to understand the real behaviour and opinions of road users.
- Inform the public on need for and the effects of police enforcement.

4.2.3. Specific recommendations to specific stakeholders

- *[To companies and research organisations]* Develop new measurement methods that can give high efficiency increases of police enforcement organisations.

The initial aim of ESRA was to develop a system for gathering reliable information about people's attitudes towards road safety in a number of European countries. This objective has been achieved and the initial expectations have even been exceeded. The outputs of the ESRA project can become building blocks of a road safety monitoring system in Europe that goes beyond monitoring road traffic casualties and also includes indicators for the underlying causal factors.

The ESRA project has also demonstrated the feasibility and the added value of joint data collection on road safety attitudes and performance by partner organizations in a large number of European countries. The intention is to repeat this initiative on a biennial or triennial basis, retaining a core set of questions in every wave allowing the development of time series of road safety performance indicators. This will become a solid foundation for a joint European (or even global) monitoring system on road safety attitudes and behaviour.

***

[9] *These recommendations reflect the common view of all authors of the ESRA core group.*

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Appendix - ESRA 2015 Questionnaire

Legend

Dichotomization of the variables has been indicated in green below the question; the reference category is indicated in italics.

Introduction

In the questionnaire, we ask about different traffic situations and your reactions to them. We would like to ask you when responding to **only be guided by your opinion on road safety in [COUNTRY]**, and to not take into account any experience with road safety abroad.

Thank you for your contribution!

Socio-demographic information (1)

Q1) Are you a… male - female

Q2a) In which year were you born?

Q2b) In which month were you born?

Mobility and exposure

Q3) Do you have a car driving licence or permit? yes – no

Q4) How often do you drive a car?
Items: At least 4 days a week – 1 to 3 days a week – A few days a month – A few days a year – Never – Don't know / no response

Q5a) During the last 12 months, which of the following transport modes have you been using in [COUNTRY]…
Items: walking (pedestrian; including jogging, inline skate, skateboard,…) - cycling on an electric bicycle / e-bike / pedelec – cycling (non-electric) – moped as a driver (moped: ≤ 50 cc) – motorcycle as driver (> 50 cc) – hybrid or electrical car as driver – car as driver (non-electrical or hybrid) – car as passenger – (mini)van as a driver – truck/lorry as a driver – public transport – other

Q5b) What were your most frequent modes of transport during the last 12 months?
Start with your most frequent mode first, followed by your second most frequent, and so on.
Items: only items marked in Q5a are displayed

Q6) Did you drive a car yourself in the past 6 months? yes – no

Q7) How many kilometres[10] would you estimate you have driven a car in the past 6 months? __ km in total

Q8) Think about all the trips you undertook yesterday, so not only as a car driver but also as a pedestrian or cyclist, as a car passenger,… . How many kilometres have you travelled using each of these transport modes?
Items: only items marked in Q5a are displayed

Road safety in general

Q9) How concerned are you about each of the following issues?

[10] *In the UK, miles instead of kilometres are used.*

You can indicate your answer on a scale from 1 to 4, where 1 is 'very concerned' and 4 is 'not at all concerned'. The numbers in between can be used to refine your response.
Binary variable: *concerned (1-2)* - not concerned (3-4)
Items: rate of crime – pollution - road accidents - standard of health care - traffic congestion – unemployment

Acceptability of unsafe traffic behaviour

Q10) Where you live, how acceptable would most other people say it is for a driver to….?
You can indicate your answer on a scale from 1 to 5, where 1 is 'unacceptable' and 5 is 'acceptable'. The numbers in between can be used to refine your response.
Binary variable: *acceptable (4-5)* – unacceptable (1-3)
Items (random)

- drive 20 km per hour over the speed limit on a freeway / motorway
- drive 20 km per hour over the speed limit on a residential street
- drive 20 km per hour over the speed limit in an urban area
- drive 20 km per hour over the speed limit in a school zone
- talk on a hand-held mobile phone while driving
- type text messages or e-mails while driving
- check or update social media (example: Facebook, twitter, etc.) while driving
- drive when they're so sleepy that they have trouble keeping their eyes open
- drive through a light that just turned red, when they could have stopped safely
- drive when they think they may have had too much to drink
- drive 1 hour after using drugs (other than medication)
- drive after using both drugs (other than medication) and alcohol
- drive with incorrect tyre pressure
- drive without insurance
- park their car where it is not allowed
- not wear a seat belt in the back of the car
- not wear a seat belt in the front of the car
- transport children in the car without securing them (child's car seat, seat belt, etc.)

Q11) How acceptable do you, personally, feel it is for a driver to…?
You can indicate your answer on a scale from 1 to 5, where 1 is 'unacceptable' and 5 is 'acceptable'. The numbers in between can be used to refine your response.
Binary variable: *acceptable (4-5)* – unacceptable (1-3)
Items (random): idem Q10

Support for road safety policy measures

Q12) Do you support each of the following measures?
Answering options: *support (pro)* – oppose (contra) – no opinion
Items (random):

- Obligatory winter tyres for cars, trucks and buses
- A licence system with penalty points for traffic violations that results in the revocation of the licence when a certain number of points are reached
- Drivers who have been caught drunk driving on more than one occasion should be required to install an 'interlock' *(*) interlock: technology that won't let the car start if the driver's alcohol level is over the legal limit*
- Zero tolerance for alcohol (0,0‰) for novice drivers (licence obtained less than 2y)
- Zero tolerance for alcohol (0,0‰) for all drivers
- Zero tolerance for using any type of mobile phone while driving (hand-held or hands-free) for all drivers
- Ban on alcohol sales in service / petrol stations along the highways / motorways
- Allowing cyclists to run red lights when permitted by specific road signs
- Having a law requiring all cyclists to wear a helmet

- Obligation for pedestrians and cyclists to wear high-visibility vests when in the dark

Q13) What do you think about the current traffic rules and penalties in your country for each of the following themes?
Answering options: *yes* – no – don't know/no response
Items (fixed order): each time for: speeding – alcohol – drugs – seat belt
- The traffic rules should be more strict
- The traffic rules are not being checked sufficiently
- The penalties are too severe

Self-declared behaviour

Q14) In the past 12 months, as a road user, how often did you…?
You can indicate your answer on a scale from 1 to 5, where 1 is 'never' and 5 is '(almost) always'. The numbers in between can be used to refine your response. (+ answering options: 'not applicable' and 'no response')
Binary variable: never (1) – *at least once (2-5)*
Binary variable for seat belt use: *(almost) always (5)* – at least once not (1-4)
Items (random; only items compatible with the road user types indicated in Q5a are shown):
- wear your seat belt as driver
- wear your seat belt as passenger in the front of the car
- wear your seat belt as passenger in the back of the car
- make children (under 150cm)[11] travelling with you use appropriate restraint (child seat, cushion)
- make children (over 150cm) travelling with you wear a seat belt
- listen to music through headphones as a pedestrian
- cycle without a helmet
- cycle while listening to music through a headphone
- cycle on the road next to the cycle lane
- not wear a helmet on a moped or motorcycle
- drive faster than the speed limit inside built-up areas
- drive faster than the speed limit outside built-up areas (except motorways/freeways)
- driver faster than the speed limit on motorways/ freeways
- drive after drinking alcohol
- drive after using illegal drugs
- talk on a hand-held mobile phone while driving
- talk on a hands-free mobile phone while driving
- read a text message or email while driving
- send a text message or email while driving
- realise that you were actually too tired to drive
- stop and take a break because you were too tired to drive
- drive while taking medication that carries a warning to say it may influence your driving ability
- drive aggressively
- drive too slow
- drive without respecting a safe distance to the car in front
- not indicating directions when you overtake, turn left or turn right
- drive dangerously
- as a pedestrian, cross the road when a pedestrian light was red
- as a cyclist, cross the road when a traffic light was red
- as a pedestrian, cross streets at places other than at a pedestrian crossing

Q15) Over the last 30 days, how many times did you drive a car, when you may have been over the legal limit for drinking and driving? (dropdown 0 – 30 + no response)
Binary variable: never *(0)* – *at least once* (1-30)

[11] *Adapted in each country to the correct legislation (e.g. in BE 135cm)*

Attitudes towards (unsafe) traffic behaviour

Q16) To what extent do you agree with each of the following statements?
You can indicate your answer on a scale from 1 to 5, where 1 is 'disagree' and 5 is 'agree'. The numbers in between can be used to refine your response.
Binary variable: *agree (4-5)* – disagree (1-3)
Items (random)

- Driving under the influence of alcohol seriously increases the risk of an accident
- Most of my acquaintances / friends think driving under the influence of alcohol is unacceptable
- If you drive under the influence of alcohol, it is difficult to react appropriately in a dangerous situation
- Driving under the influence of drugs seriously increases the risk of an accident
- Most of my acquaintances / friends think driving under the influence of drugs is unacceptable
- I know how many drugs I can take and still be safe to drive
- Driving fast is risking your own life, and the lives of others
- I have to drive fast, otherwise I have the impression of losing time
- Driving faster than the speed limit makes it harder to react appropriately in a dangerous situation
- Most of my acquaintances / friends feel one should respect the speed limits
- Speed limits are usually set at acceptable levels
- By increasing speed by 10 km/h, you have a higher risk of being involved in an accident
- It is not necessary to wear a seat belt in the back seat of the car
- I always ask my passengers to wear their seat belt
- The instructions for using the child restraints are unclear
- It is dangerous if children travelling with you do not wear a seat belt or use appropriate restraint
- For short trips, it is not really necessary to use the appropriate child restraint
- My attention to the traffic decreases when talking on a hands free mobile phone while driving
- My attention to the traffic decreases when talking on a hand-held mobile phone while driving
- Almost all car drivers occasionally talk on a hand-held mobile phone while driving
- People talking on a hand-held mobile phone while driving have a higher risk of getting involved in an accident
- When I feel sleepy, I should not drive a car
- Even if I feel sleepy while driving a car, I will continue to drive
- If I feel sleepy while driving, then the risk of being in an accident increases

Subjective safety and risk perception

Q17) How (un)safe do you feel when using the following transport modes in [country]?
You can indicate your answer on a scale from 0 to 10, where 0 is 'very unsafe' and 10 is 'very safe'. The numbers in between can be used to refine your response.
Items (random): only items marked in Q5a are displayed

Q18) In your opinion, how many road traffic accidents are caused by each of the following factors? Estimate a percentage of accidents for each factor. In other words, how many accidents out of 100 were caused by the following factors.
Provide a separate estimate for each factor. Always answer using a figure between 0 and 100 *(+ option: don't know)* The total sum of all the factors can be more than 100.
Items (random):

- Tiredness behind the wheel
- Driving under the influence of alcohol
- Driving too close to the vehicle in front

- Driving too fast
- Taking psychoactive medication and driving *(*) psychoactive medications: with side effect on the central nervous system (e.g. sedatives, antidepressants)*
- Taking drugs and driving
- Poorly maintained roads
- Poor road design
- Using a mobile phone to make a call while driving without using a hands-free device
- Congestion / traffic jams
- Bad weather conditions
- Technical defects in vehicles
- Aggressive driving style
- Inattentiveness
- Insufficient knowledge of the rules of the road
- Sending a text message while driving

Behaviour of other road users

Q19) Can you specify, for each of the following behaviours how often you, as a road user, are confronted with these behaviours?
You can indicate your opinion by means of a number from 0 to 10. '0' is 'never', and '10' is 'very often'. The numbers in between can be used to refine your answer.
Items (random):

- aggressive drivers
- distracted drivers (drivers who are busy with something else, e.g. phone, tuning the radio etc)
- road users who don't respect traffic rules
- speeding drivers / drivers who drive too fast
- drivers who drive too slow
- drivers who don't leave a safe distance to the car in front
- careless drivers (e.g., not indicating direction)
- drivers who don't take into account the needs of other road users (e.g., blocking an exit etc)
- drivers committing dangerous driving offences

Q20) Do you think the occurrence of the following behaviour has increased, decreased or not changed compared to 2 years ago?
Answering options: *increased* – no change – decreased
Items (random): idem Q19

Involvement in road crashes

Q21a) In the past three months have you been involved in a road traffic accident as a …
(if no accident: answering option: 'none of these')
Items (multiple responses possible; only items indicated in Q5a are displayed):
Extra sub-items for

- motorcycling: motorcyclist (50-125 cc) – motorcyclist (>125 cc)
- public transport: on the train – on the subway – on a tram – on the bus

Q21b) Please indicate the severity of the accident:
Answering options (multiple responses possible per transport mode (i.e.; if a respondent had multiple accidents as pedestrian e.g.)): Without material damage or any injured parties[12] – With only material damage – With only minor injuries to myself or others – In which someone had to be taken to hospital
Items: each transport mode indicated in Q21a

Enforcement

[12] *This option refers to an 'incident', not a crash → left out in the analysis*

Q22) On a typical journey, how likely is it that you (as a driver) will be checked by the police for…
You can indicate your answer on a scale from 1 to 5, where 1 is 'very small chance' and 5 is 'very big chance'. The numbers in between can be used to refine your response. (+ option: don't know/no response)
Binary variable: *big chance (4-5)* – small chance (1-3)
Items (random):
- … alcohol, in other words, being subjected to a Breathalyser test
- … the use of illegal drugs
- … seat belt wearing
- … respecting the speed limits (including checks by police car with a camera and/or flash cameras)

Q23a) In the past 12 months, how many times have you…
Answering options: number + don't know/no response
Items:
- been stopped by the police for a check?
- had to pay a fine for a traffic violation? (except a parking fee)
- been convicted at court for a traffic violation?

Q23b) Was this a fine for ….
Items (multiple responses possible): violating the speed limits – driving under the influence of alcohol – driving under the influence of drugs (other than medication) – not wearing a seat belt – transporting children in the car without securing them correctly (child's car seat, seat belt, etc.) – talking on a hand-held mobile phone while driving – other reason – no response

Q23c) Was this conviction for ….
Items (multiple responses possible): idem Q23b

Q24) In the past 12 months, how many times were you checked by the police for alcohol while driving a car (i.e., being subjected to a Breathalyser test)?
Binary variable: *at least once* - never

Q25) In the past 12 months, how many times have you been checked by the police for the use of drugs/medication while driving?
Binary variable: *at least once* - never

Socio-demographic information (2)

Q26) What is the highest qualification or educational certificate you obtained?
Items: None – Primary education – Secondary education – Bachelor's degree or similar – Master's degree or higher – No answer

Q27) What is the postal code of the municipality in which you live?[13]

[13] *If in a country no postal codes are in use, this question is rephrased as follows: In which county do you live?*

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