European Commission

Safety Performance Indicator (SPI)

Distraction

Mobility and Transport

The purpose of the Safety Performance Indicator reports is to provide an overview of recent statistics on road safety performance indicators that are linked to traffic safety.

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1. Summary

Distracted driving is one of the main traffic risks. This report provides an overview of available data on distracted driving for EU member states and EFTA countries. Moreover, it provides information on the legislation and enforcement and complements the ERSO thematic report on the same topic.

The SPI Distraction in this report is defined as: *Percentage of drivers using a handheld mobile device.*

In general, data on distracted driving in European countries are scarce and large differences exist in the definition of driver distraction and data collection methods. For this report, data from the ESRA project (survey data) and the Baseline project (roadside observations) are used. Based on these data sources the following conclusions can be reached:

1. The percentage of drivers who are holding a mobile phone while driving ranges from 1.7% to 9.4%, based on on-road observations.
2. The percentage of drivers that reported having talked on a handheld mobile phone in the past 30 days vary between 12% and 59%. For texting while driving, the percentages vary between 17% and 53%.
3. A higher share of drivers talks on a handheld mobile phone than texts.
4. Driver distraction is more common among drivers of light goods vehicles compared to cars drivers. Bus/coach drivers are less likely to be distracted than car drivers.
5. The younger the driver, the higher the share of talking on the phone and texting.

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2. Introduction

2.1 Safety Performance Indicators (SPIs)

The most common indicators used for evaluating traffic safety are the number of traffic crashes, or the number of fatal/serious injuries due to a traffic crash. However, these numbers insufficiently reflect the actual problem and the underlying factors that lead to the crash. Moreover, crashes are relatively rare events, and are under-registered. Therefore, alternative proactive approaches have been adopted to evaluate safety. For example, events/behaviours/attitudes which have a recognized relationship with crash frequency, and that are sensitive to policy measures, can be used as a proactive approach to evaluate safety. Since the 90's these so-called safety performance indicators (SPIs) are increasingly used to develop traffic safety policies.

The following *SPIs* are detailed in ERSO SPI reports:

- Speeding
- Distraction
- Fatigue
- Driving under the influence of alcohol and drugs
- Protection – the use of seat belts, helmets, and child restraint systems
- Support for policy measures
- Subjective safety/risk perception

Distracted driving, speeding, and using protective equipment are behaviours which can be observed, through roadside observations or measurements. For the SPI driving under the influence of alcohol and/or drugs, police-assisted random breath testing during roadside alcohol checks provide potentially the best data.

On the other hand, fatigued driving, support for policy measures or subjective risk perception are (practically) not observable. For those ones well-designed questionnaire surveys may provide valuable data on road safety performance.

2.2 Aim of the ERSO SPI reports

The ERSO SPI reports provide an overview of the available data in the EU Member States as well as EFTA countries for each listed SPI. The reports aim to give insight into the differences between (groups) of countries regarding their road user behaviour or attitude. Where feasible, the reports look at whether SPIs are related to existing policies and regulations, providing possible effective interventions to increase

safe behaviour, or discourage unsafe behaviour. In addition to identifying relevant interventions, SPI data can be used to evaluate these measures and interventions.

For most SPI subjects an ERSO thematic report exists as well. In these reports background information of risks, effects and causes are provided (see: Thematic reports (europa.eu)).

2.3 SPI Distraction

This report is on the road safety effects of driver distraction based on the use of handheld mobile devices. There are however numerous other sources of distraction, e.g., interaction with passengers, eating, adjusting in-vehicle systems, or looking at objects outside the car.

The use of mobile devices, mostly mobile phones, is often used as proxy for the driver distraction problem (see Boets, 2023; Pires, Areal & Trigoso, 2019). This has to do with the widespread use of mobile devices by drivers and the concerns about the consequences of that (handheld) use (see also section 4). In line with recent research into safety performance indicators (also called key performance indicators or road safety indicators, see Boets, 2023; Pires, Areal & Trigoso, 2019), the **SPI Distraction** in this report is defined as:

Percentage of drivers using a handheld mobile device.

SPIs are defined 'positively', that is the percentage of drivers that performs the behaviour that is considered safe. However, presenting the percentage of unsafe behaviour conveys a better picture of the differences between countries. Therefore, percentages of distracted drivers are presented in this report. See the Thematic Report on Distraction (European Commission, 2023) for background information about driver distraction.

2.4 Overview of Data Sources

Data on driver distraction presented in this report are based on two data sources: ESRA (E-Survey of Road users' Attitudes), and the European Baseline project.

2.4.1 ESRA

Within ESRA (www.esranet.eu) a joint collective of road safety institutes, research centres, public services, and private sponsors collect and analyse comparable data on road safety performance, in particular on road safety culture and behaviour of road users worldwide.

ESRA data are collected by means of online panel surveys, providing a

representative sample of the national adult population in each participating country (at least N = 1,000 per country). The extensive survey is conducted in 68 participating countries, covering 6 continents. Data on driving under the influence of alcohol and drugs are collected across 24 European countries, 22 of which are among the European Union and/or EFTA countries. In this report, the ESRA data for these 22 European countries are presented, i.e., Austria, Belgium, Bulgaria, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Poland, Portugal, Slovenia, Spain, Sweden, and Switzerland. The data in this report are restricted to car-drivers. For details on the methodology of the data collection and analysis see: Pires, Areal & Trigoso(2019); Meesmann, Torfs, Wardenier, and Van den Berghe (2023).

2.4.2 Baseline

The EU has made funding available to support the EU Member States in the collection and analysis of the mentioned SPIs. Eighteen Member States participated in a common project, called Baseline (see: Baseline (vias.be)), with the aim to support Member State authorities to collect and report SPI data in a harmonized way, helping to gain more insight in in the underlying factors of traffic safety. Based on the findings, future European goals and targets can be set. Baseline has ended in 2023. Its successor is the Trendline project (trendlineproject.eu), which started in 2022 and will continue until 2025.

The Baseline data on distracted driving was collected through on-road observation, either by trained observers or by using camera images (Boets, 2023). Fifteen countries collected data within the Baseline project. The countries were: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Finland, Germany, Greece, Latvia, Lithuania, Malta, Poland, Portugal, Spain, and Sweden. Due to major deviations from the common methodology, the data of Latvia and Spain were not included in the present report (see Boets, 2023 for details). The data from Germany were only used for the analysis of distraction by vehicle type (see section 3.1.1), as this country only collected distraction data on passenger cars. For details on the methodology of the data collection and analysis see Boets (2023).

3. The occurrence of driver distraction in Europe

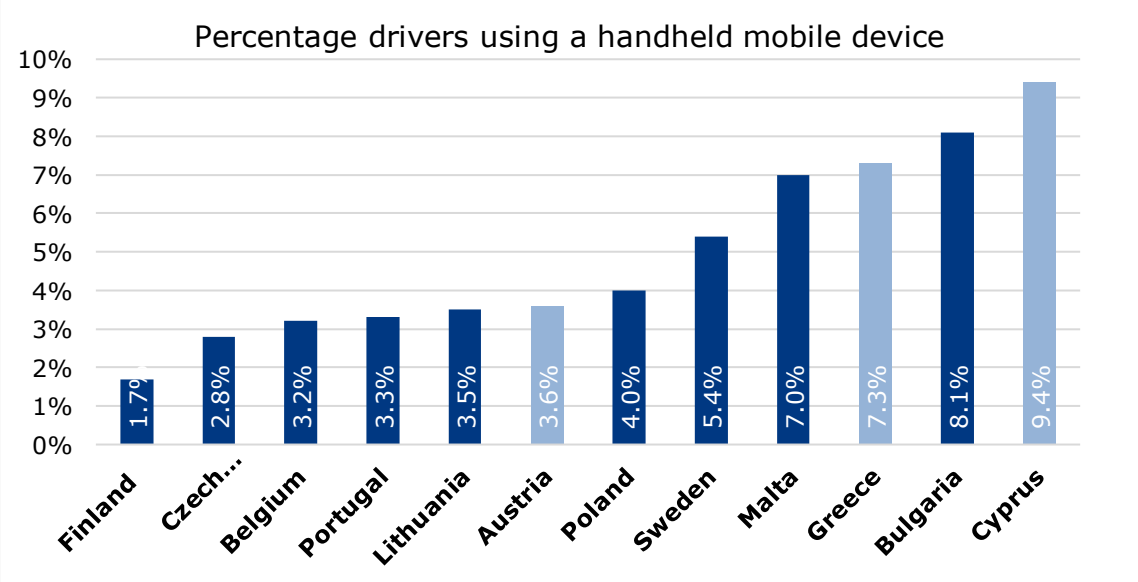
Both the ESRA project and the Baseline project collected data on driver distraction. The results in this section are presented per data source.

3.1 On-road observations (Baseline)

Figure 1 shows the percentage of drivers using a handheld mobile device, except for three countries (i.e., Austria, Greece and Cyprus, marked light blue) which collected data on using a handheld mobile phone, applying a less broad definition of distraction.

This main indicator is based on the collected results on weekdays for three vehicle types together (cars, light goods vehicles and buses/coaches) and three road types (urban roads, rural roads, and motorways, except for Malta where no motorways are present). For disaggregated results per vehicle type, see 3.1.1.

Figure 1. *Percentage of drivers using a handheld mobile device while driving (Source: https://www.baseline.vias.be)*



Notes: Malta: no motorways. Finland, Lithuania: analysis of camera images; other countries: observations by trained observers.

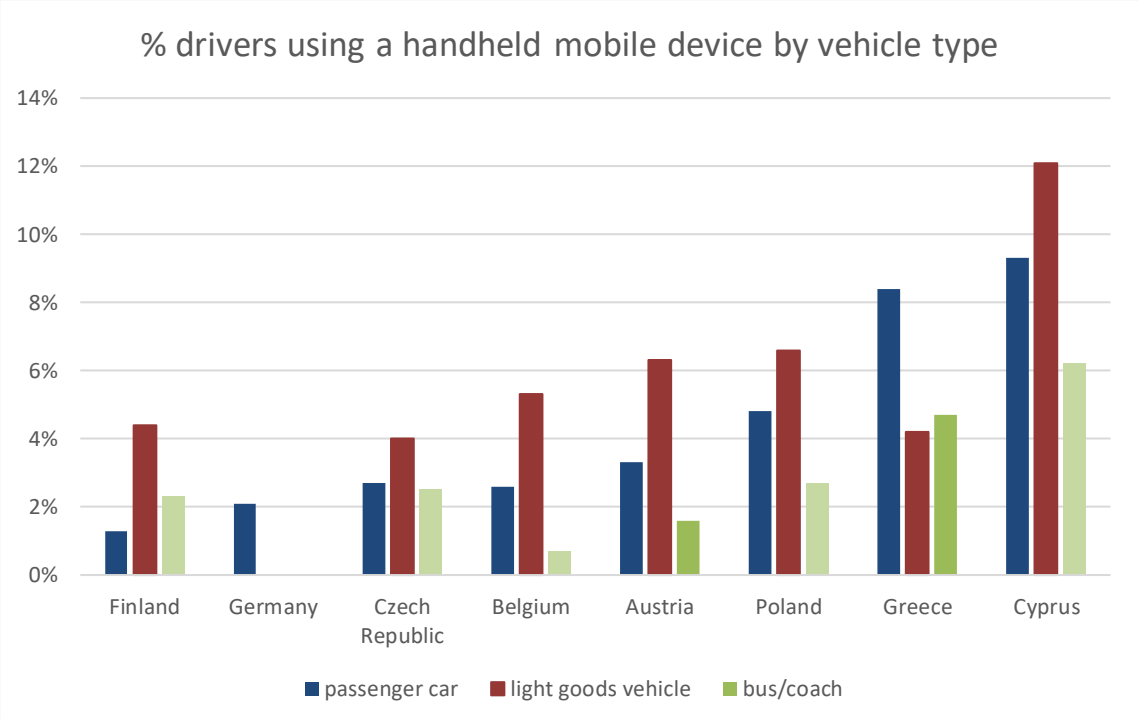
The lowest percentages of driver distraction were observed in Finland (1.7%) and Czech Republic (2.8%), the highest were recorded in Bulgaria (8.1%) and Cyprus (9.4%).

3.1.1 Differences in vehicle types

Figure 2 shows the percentage of drivers using a handheld mobile device, per vehicle type: passenger cars, light goods vehicles and buses/coaches. Data for the separate vehicle type(s) were available for eight countries. All eight countries provided data for passenger cars and seven countries for light goods vehicles. Seven countries provided data for bus/coach drivers, however five countries with insufficient sample sizes. These are marked light green in Figure 2.

In all but one country (Greece), the highest percentages of distraction were observed among drivers of light goods vehicles. Driver distraction was generally less common among bus/coach drivers than among car drivers (except in Finland).

Figure 2. *Percentage of drivers using a handheld mobile device by vehicle type. (Source: https://www.baseline.vias.be)*



3.2 Survey data (ESRA)

Within ERSA, three types of mobile phone use while driving are distinguished, i.e., the use of a mobile phone for: (1) handheld talking, (2) hands-free talking and (3) reading a text message/email or checking social media (texting). Given the definition of the SPI Distraction in this report, data on handsfree talking on a mobile phone are not presented. Although reading a text message/email or checking social media has not been specified in ESRA as (solely) handheld

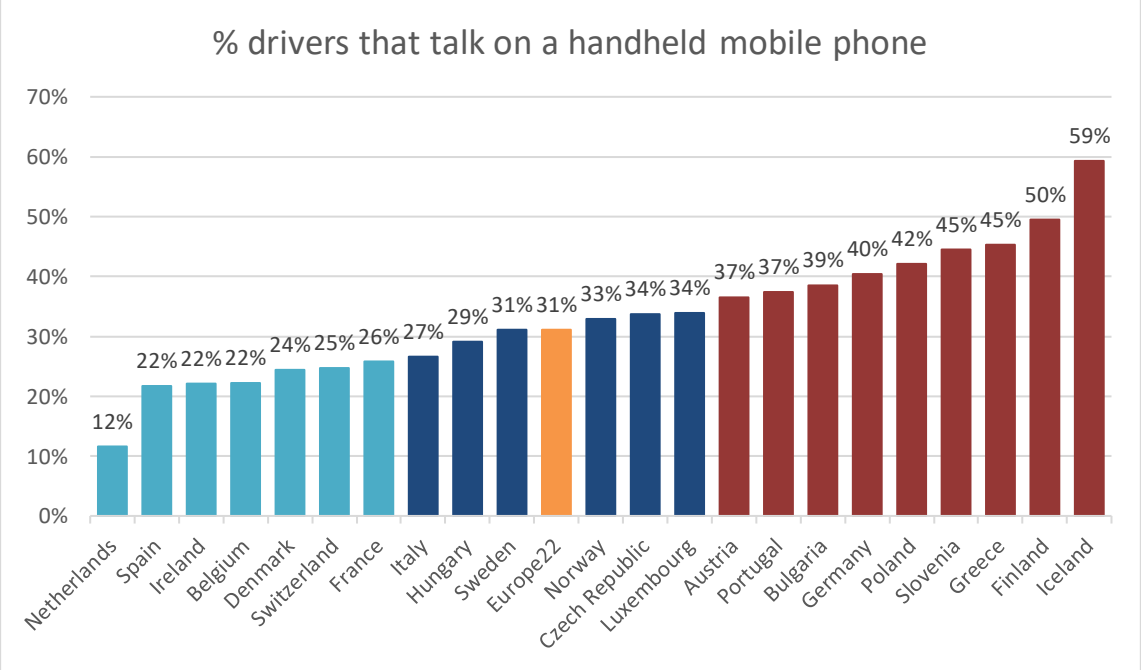
activities, we can assume that it is usually the case. Therefore, in this report two types of mobile phone use are discussed. The precise questions concerning those two distraction types within the ESRA survey were:

Over the last 30 days how often did you as a car driver:
- *talk on a handheld mobile phone while driving?*
- *read a text message/email or check social media while driving?*

The answer options ranged from 1 'never' to 5 '(almost) always'. The data represent the percentage of car drivers that answered values 2 to 5 (at least once) on the above questions.

Figure 3 shows the percentage of drivers that indicated having talked on a handheld mobile phone. On average, 31% of European drivers reported being engaged in this activity. The scores per country varied between 12% (The Netherlands) and 59% (Iceland). Of the 22 countries, 7 countries were more than 5 percentage points below the European average (bars in light blue), and 9 countries scored more than 5 percentage points above the EU average (bars indicated in red).

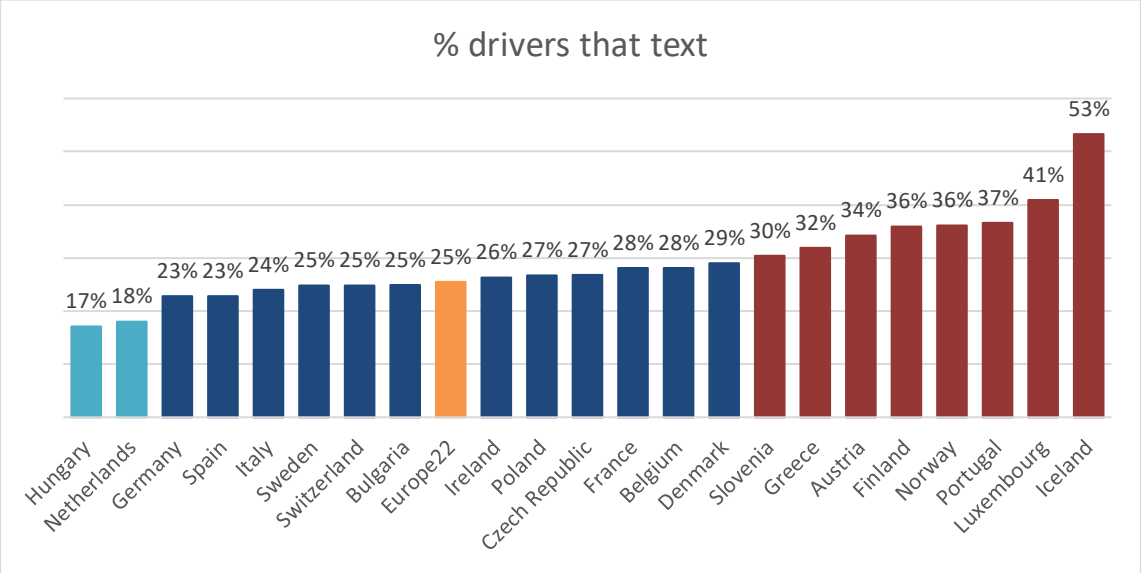
***Figure 3**. Percentage of drivers that indicated having talked on a handheld mobile phone in the past 30 days. (Source: https://www.esranet.eu/)*



Compared to the handheld talking on the phone, the shares of drivers texting while driving were lower: on average 25% of drivers reported doing this (see Figure 4). The highest prevalence was again found in

Iceland (53%) and the lowest in Hungary (17%). Of the 22 countries, 2 countries were more than 5 percentage points below the EU average (bars in light blue), and 8 out of the 22 countries were more than 5 percentage points above the EU average (bars in red).

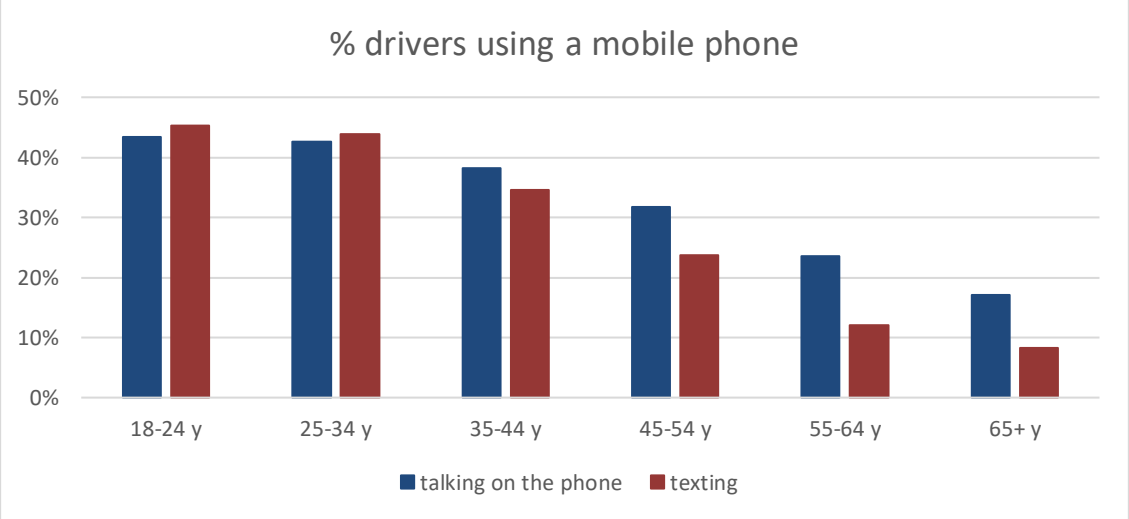
***Figure 4**. Percentage of drivers that indicated having texted in the past 30 days. (Source: https://www.esranet.eu/)*



3.2.1 Gender and age differences

With regards to gender, lower shares of females reported talking on the phone compared to males (27% and 35% respectively). This was also the case for texting: 23% of females, vs 28% of males.

***Figure 5**. Percentage of drivers that indicated having used a mobile phone in the past 30 days per age group. (Source: https://www.esranet.eu/)*



There were also age differences found both for talking on the phone and for texting. Younger drivers (the two youngest age groups) were more likely to report being involved in these activities than older drivers (see Figure 5). From age 35 on: the higher the age group, the lower the shares of driver distraction.

4. Consequences of driver distraction

The exact number of crashes caused by driver distraction in Europe is unknown. A large-scale American naturalistic driving research found that 68.3% of 905 crashes (injurious and property damage crashes) involved some type of observable distraction (Dingus et al., 2016). Distracting activities which involve road users taking their eyes off the road for longer stretches of time were found the riskiest. Performing visual-manual tasks on a mobile phone, such as handheld texting, browsing, or dialling was found to increase the crash risk by about 2.5 times compared to alert, attentive and sober driving (Dingus et al., 2019). Reaching for an object (no phone) and prolonged looking at objects outside the car significantly increased crash risk (9-fold and 7-fold respectively) in the earlier analysis by Dingus et al., 2016, see also European Commission (2023).

5. Legislation and enforcement

Since the legislation is generally the same across the European countries, i.e., banning handheld use and allowing handsfree use of a mobile phone (see also European Union, 2023), no further analysis of the relationship between legislation and distracted driving can be performed.

The most common method to enforce the ban on handheld phone use in European countries is police surveillance (based on research in 15 European countries, Stelling-Kończak, et al., 2020). Camera-based enforcement is only used in a few countries. The use of cameras above or along the road seems to be a promising enforcement method, as it can lead to more and better enforcement (Stelling-Kończak et al., 2020).

6. Limitations

Distracted driving is an important risk factor in road safety. However, data on the prevalence of distracted driving in European countries are scarce. The two data sources used in this report for the SPI Distraction are from the ESRA and Baseline projects. The ESRA data is based on self-reports collected on a larger scale than Baseline. The data obtained through on-road observations in the Baseline project are available for fewer countries. There are also some differences between Baseline and ESRA concerning the definition of distraction and the type of drivers included.

Both data sources used have their limitations. The ESRA data based on self-reported data can have disadvantages, such as social desirability bias (the tendency of respondents to provide answers which present a favourable image of themselves), non-accurate recall, misunderstanding of questions or selective non-response bias (occurring when subjects who refuse to take part in a study, or who drop out before the study can be completed, are systematically different from those who participate).

The Baseline data is based on observation in traffic of randomly selected drivers, and therefore does not have these disadvantages. However, the limitation of the Baseline data is that they are not fully comparable among countries mainly due to differences in the methodology, small samples for specific strata or weighting of data.

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