The attitude and behaviour of European car drivers to road safety
The attitude and behaviour of European car drivers to road safety

SARTRE 2 reports

Part 1
Report on principal results

April 1998
Authors

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Preface

In 1989, researchers from different road safety institutes in Europe started a consortium to explore car drivers’ attitudes to road safety: SARTRE, Social Attitudes to Road Traffic Risk in Europe.

The initiative was taken by Timothy Benjamin, IDBRA, Pierre Barjonet, INRETS, and Charles Downing, TRRL, soon supported by Jean-Pierre Cauzard, INRETS, Allan Quimby, TRL, Ingo Pfafferott, BASt and Roelof Wittink, SWOV.

When the survey started, 15 countries participated, each represented by a research institute or road safety organisation. The members organised the budget by themselves, in most cases the ministry of Transport financed the cost for the country. Later, European commission contributed with 10%, and the newly created FERSI, Forum of European Road Safety Research Institutes, supported the project.

In 1995, INRETS took the initiative for a second survey. A request to EU commission to support the survey in EU member states by 50% was honoured. FERSI gave to the project again full support. All EU countries except one are participating again and some other countries joined the consortium.

Four reports represent the analyses of the results of the second SARTRE survey:

**Part 1: Report on principal results**

Part 2: Report on in-depth analyses
Part 3: Executive summary - Synthèse
Part 4: Central Europe countries
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Chapter 1  Introduction and methodology

From various documents\(^1\) we learn that 1.25% of people in the EU will die in average 40 years too early, and 33% will need hospital treatment during their lifetime as a result of road accident. About 45,000 people are killed yearly and 1.6 million are injured in the 15 European Union member states. What everybody knows, more or less, on its national level takes bigger amplitude when cumulated at international level. If we take in consideration the non-EU countries participating in this project, most of them could be part of EU in term of a decade, then absolute value figures will increase and rates deteriorate. If we consider now the impact on populations, the rate in killed per million population vary from 325 in Portugal in the year 1991 to 274 in 1996 for the highest rate, and from 83 to 64 in the United Kingdom for the lowest rate (Table 1.1).

Table 1.1: Killed in road accidents

<table>
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<tr>
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<th>Killed/Million population</th>
<th>Variation</th>
</tr>
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<tr>
<td></td>
<td>SARTRE 1 ~1991</td>
<td>SARTRE 2 ~1996</td>
</tr>
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<td>AUSTRIA</td>
<td>201</td>
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<td>BELGIUM</td>
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<tr>
<td>PORTUGAL</td>
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1.1 Social attitudes

SARTRE, an acronym for "Social Attitudes to Road Traffic Risk in Europe", is a research project which aims to study the opinions and reported behaviour of car drivers throughout the

\(^1\) See for example ‘Promoting Road Safety in the EU. Action programme for 1997-2001’
European continent. The project is based on ad hoc gathering of data, which involves a representative questionnaire survey.

All countries in our scope apply similar countermeasures to improve the safety of road traffic. As concern drivers’ behaviour, everywhere use of speed, driving under influence of alcohol or wearing of seat belt are submitted to regulations. An interesting fact is that the various countries, beyond common aspects, obtain apparently different success in their policies to reduce road traffic risk. This is a reason to develop a comparative study to learn, one from each other, best practices.

It is widely recognised that human factors intervene in most, if not all, road accidents. It is a major reason for the present project; contribute to put in light the role of human factor in the road accidents genealogy. More specifically, it is the social dimension of human factor that will be studied. What are the social groups that are supporting or against some measures, are they numerous or influent?

Main purposes of this project are to describe the state of drivers attitudes and reported behaviour throughout the continent with regard to road traffic risk, to evaluate the range from approval to opposition towards regulations and countermeasures, to search for underlying social or cultural factors leading to various behaviour in term of risk, and lastly to recommend actions to take in consideration when improving road safety policies.

The trends are also important to detect. The situation in various countries can be improving or in contrast deteriorating. We can also differentiate the evolution regarding the individual countermeasures and notice that in some cases such as drink driving, the attitude is improving, whereas the attitude to speeding is deteriorating.

1.2 Changes after five years

The first SARTRE survey was carried out from October 91 to June 92 in 15 countries, which consisted at that time of 10 EU member states and 5 non-EU countries. In each country a representative sample of about 1,000 vehicle licence holders, who actually drove, have been questioned, making a total of 17,430 car drivers. The main results and analyses conducted by project members were published later (SARTRE 1994, 95, 96) and the conclusions and recommendations presented to the EU Road Safety High Level Group in November 1994 (Barjonet et al., 1994). After this presentation, it was decided to perform a follow-up survey, 5 years after the first. We call this follow-up SARTRE 2.

The same methods are applied for the new survey. The questionnaire repeats the most useful questions from the previous one, and adds some new items. The SARTRE 2 field survey is finished in 19 countries. All European Union members are participating, except for Danish correspondent that has decided not to continue this time, and Luxembourg, from where our invitation has received no answer. SARTRE 2 enjoys the participation of Switzerland and of Central-European countries, the Czech Republic, Slovakia, Hungary, already in SARTRE 1, and, new in SARTRE 2, Slovenia and Poland. Correspondents in Romania and Israel were participating in the questionnaire-making phase, but unfortunately, it was not possible to carry out their surveys.

The principal results of the survey are presented and analysed in the following chapters, which cover most of the topics already explored in the first step, adding each time some views on evolution between the two surveys. After the present first chapter dealing with methodological aspects will come eight others. The second chapter develops the reported behaviour in relation to road risk. Chapter 3 describes the opinions of European car drivers on
road safety measures. In chapter 4 drinking alcoholic beverages and consequence on driving and its regulation are described. Chapter 5 deal with driving speed and attitudes to speeding. The sixth chapter covers use of seat belts, as far as wearing is now mandatory everywhere. Chapter 7 gives an overview of the road traffic risk context and changes in the period. The specific features of national groups are given country by country in chapter 8. We will conclude in chapter 9, summarising the particular conclusions of previous chapters and stressing recommendations.

1.3 About survey(s)

The global survey has been defined by various criteria similar to those of SARTRE 1. SARTRE 2 includes a questionnaire survey representative of each participating country: each sample, affected by specific weighting, being inserted in a global European sample. The target population was defined by two filter questions: "Do you have a valid car driving licence?" and "Did you drive a motorised vehicle within the last 12 months?", the universe being made of car drivers who actually drove. The questionnaires have been asked at home by interviewers (face to face situation). In each country a sample of at least 1,000 drivers has been questioned, to guarantee the usual precision of this kind of survey, depending on the size of the collected sample. Geographical representation was ensured in each country by a breakdown of sample according to European regions, corresponding to EEC NUTS1 level standard or equivalent for countries out the EU, and agglomeration size in respect with rural/urban balance, small (<2,000 inh.), medium (from 2,000 to less than 100,000 inh.), large (100,000 inh. and over). Individual representativeness, when quotas sampling method used, was ensured considering sex, age or occupation of respondents. The reference version of questionnaire has been established in English, see Annex, to be translated in the 17 language versions used. A priori, interview duration must not exceed 1 hour. The alternative categories of answer to a question must be presented on separate show cards to the interviewees. The survey period was winter '96-97.

The revision of SARTRE 1 questionnaire has been conducted in order to reduce its size. The guides were to cancel former questions presenting too low percentages of answers, or that proved after analyses to give not enough differentiation amongst the drivers, or to lead to ambiguous interpretation. New questions have been inserted relating to efforts to accept to preserve air quality and priority to give to modes of transport when planning for the future. The first version counted about 200 elementary items plus 6 technical questions. The second has been reduced to 126 plus 5 technical questions.

The realisation of the surveys (see Table 1.2 for characteristics of the surveys) included firstly a test of questionnaire in the various languages and countries, whose conclusions lead to final revised versions. The first survey field to start was on the 1st of October 96 in The Netherlands and the last one was on the 17th of April 97 in Hungary. Generally the fieldwork duration was of 2 months. Most surveys were finished on 31st January 97. INRETS had to collect, check, ask for improvement, homogenise, and merge together the country files. Often the first result files received by INRETS from the poll agencies were not conformed to specifications and implied an improvement process and delay. The size of samples collected vary from 1,000 as a minimum, to 1,802 in the case of Germany to represent more easily both western and eastern regions and allow specific comparisons with SARTRE 1 survey. An early analysis of results was available just in time for the European Road Safety Conference in Amsterdam in mid April, and a more complete and reliable version available in mid June 97.
## Table 1.2: Main characteristics of the SARTRE 2 surveys

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<th>Country</th>
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<th>Poll agency</th>
<th>Sampling method</th>
<th>Actual car drivers 10^6 estimate</th>
<th>Final size sample</th>
<th>Field dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUSTRIA</td>
<td>Kuratorium für Verkehrssicherheit &amp; Österreichischer Verkehrssicherheitsfonds</td>
<td>Fessel+GfK &amp; IFES</td>
<td>Quota, 2 plans combining differently age, sex and occupation</td>
<td>4,2</td>
<td>1005</td>
<td>1/11/96 30/12/96</td>
</tr>
<tr>
<td>BELGIUM</td>
<td>IBSR, Institut Belge pour la Sécurité Routière</td>
<td>Marketing Unit</td>
<td>Quota, based on region and rural/urban consistency; age &amp; gender</td>
<td>4,6</td>
<td>1003</td>
<td>25/10/96 24/12/96</td>
</tr>
<tr>
<td>FINLAND</td>
<td>Ministry of Transport and Communications</td>
<td>Taloustutkimus Oy</td>
<td>Proportional to counties’ adult population, in each starting address, then 5 random selections of household in each birthday key for drivers. Control by licence sex ratio</td>
<td>2,7</td>
<td>1000</td>
<td>15/11/96 09/12/96</td>
</tr>
<tr>
<td>FRANCE</td>
<td>Direction de la Sécurité et de la Circulation Routière</td>
<td>SOFRES/LOUIS HARRIS</td>
<td>Quota, based on region and rural/urban consistency; age, gender &amp; occupation</td>
<td>33,0</td>
<td>1011</td>
<td>3/11/96 15/12/96</td>
</tr>
<tr>
<td>GERMANY</td>
<td>BASt, Bundesanstalt für Strassenwesen</td>
<td>EMNID</td>
<td>Sample points (315 W, 105 E); target households each point (random route); target persons each h.; active drivers; birthday key if more than one</td>
<td>45,5</td>
<td>1802</td>
<td>8/11/96 3/12/96</td>
</tr>
<tr>
<td>GREECE</td>
<td>ANR, Amer Nielsen Research</td>
<td>AMER NIELSEN RESEARCH</td>
<td>Target in 18-64 drivers. 8 zones as primary sampling units, nb of respondents in each in proportion with target population, and breakdown for rural, semi-rural, urban districts</td>
<td>4,4</td>
<td>1009</td>
<td>10/02/97 17/03/97</td>
</tr>
<tr>
<td>IRELAND</td>
<td>NRA, National Road Authority, Ministry of Environment</td>
<td>ESRI</td>
<td>Quotas based on electoral registers</td>
<td>1,1</td>
<td>1058</td>
<td>03/12/96 27/01/97</td>
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<tr>
<td>ITALY</td>
<td>Ministry of Public Works</td>
<td>SIPSIVi</td>
<td>Quota by region, by rate of sex and age</td>
<td>30,4</td>
<td>1136</td>
<td>11/11/96 08/02/97</td>
</tr>
<tr>
<td>NETHERLANDS</td>
<td>SWOV, Stichting Wetenschappelijk Onderzoek Verkeersveiligheid, Adviesdienst Verkeer en Vervoer Rijkswaterstaat</td>
<td>Bureau Intomart</td>
<td>110 workers of Intomart used the random walk method; they began the fieldwork with a list of starting addresses. For each household only one respondent was interviewed. In total 1144 interviews were realised. To achieve this 1465 addresses were approached. The response rate is 78%. The fieldwork has been supervised on reliability by ESOMAR and NEN-EN-9001 norms.</td>
<td>9,2</td>
<td>1010</td>
<td>01/10/96 18/02/97</td>
</tr>
<tr>
<td>PORTUGAL</td>
<td>Prevenção Rodoviária Portuguesa</td>
<td>ISCTE</td>
<td>According to &gt;15 census, 6 regions, 75 towns, homes selected by random route, then individuals by Kish.</td>
<td>3,5</td>
<td>1103</td>
<td>01/03/97 26/03/97</td>
</tr>
<tr>
<td>SPAIN</td>
<td>DGT, Dirección General de Tráfico</td>
<td>SIGMA DOS</td>
<td>A random selection of 99 sampling points, stratifies multiple stage selection (region, agglomeration sizes) and random walks, with sex and age quotas. Repeated visits (3 times) when drivers are away from home</td>
<td>16,2</td>
<td>1451</td>
<td>12/12/96 31/12/96</td>
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<td>SWEDEN</td>
<td>VTI, Statens Väg-och Transportforskningsinstitut</td>
<td>SIFO</td>
<td>Stratums towns/cities/regions, random choice in first two, and selection of addresses drawn in names register in the third</td>
<td>3,7</td>
<td>1003</td>
<td>14/01/97 04/02/97</td>
</tr>
<tr>
<td>UNITED KINGDOM</td>
<td>Road Safety Division, Department of Transport Environment and Regions</td>
<td>MORI</td>
<td>Quota, based on rural/urban voting consistencies; age gender &amp; working status</td>
<td>29,0</td>
<td>1029</td>
<td>08/11/96 06/12/96</td>
</tr>
<tr>
<td>CZECH REP</td>
<td>Ministry of transport</td>
<td>FOCUS</td>
<td>Quota based on region; sex, age &amp; size of town</td>
<td>5,0</td>
<td>1000</td>
<td>29/10/96 10/12/96</td>
</tr>
</tbody>
</table>
1.4 Sampling method

A working rule in SARTRE 2 project stipulates that each European correspondent interested in participating is responsible for its own survey. As was said before, the survey has to be representative of active car drivers of the country. Corresponding people should have a full driving licence and driven during the last year. They are selected according to the local best practice to constitute such a representative sample. The method varies according to countries as may be seen in Table 1.3. The problem we are faced with is that there exist no exhaustive register of 'active car drivers', which is our target, in almost all participating countries. No statistics indicate how many they are, by sex, age, occupation, geographical level, etc. Two main types of sampling method are used related to random finding process or quota selection. In all cases method take care of geographical distribution and rural-urban balance, final individual being chosen by random way or to comply with quota rates according to the finding rule.

1.5 Sampling problems and solutions

Generally the samples seemed to comply with expected rates in the distribution concerning basic descriptors, that is to say size of town, sex, age, occupation of the respondents. A comparison was made, when possible, with corresponding figures from SARTRE 1 survey results. In practice, only sex and age led to useful checking. Size of town has been submitted to changes in the definition of towns themselves in some countries; occupation include also a too wide range of categories and does not match correctly with local definitions, specifically in the case of central Europe countries where the occupation definition changed markedly. About sex we expected a slight increase in the rate of female drivers, and about age we expected an increase of young or old drivers according to respective countries. This indication was of course not possible to check for new participants. After these tests and general checking, we pointed out some problems listed below.

The Polish sample has been incorrectly defined, because of a slight maladjustment of the second filter question about activity of driving. This small mistake led to an under-representation of drivers with very low kilometrages. Considering that the material collected...
was unique and, despite of this bias, not far from reflecting the data we wanted, we decided to compensate by means of weighting. Some key questions (filter questions, age, sex and annual kilometrage) have been introduced in an omnibus survey, representative of people over 18, the legal minimum age for driving. After this survey, we got a good picture of proportions of active car drivers in the population and a breakdown of their annual kilometrage. Considering this breakdown as a theoretical model, we weighted the sample to comply with the model. Examining the results after weighting and compared with similar Central Europe countries, the values appear coherent and satisfying.

Figure 1.1: Participating countries to SARTRE 2 project
The Italian sample presented also incorrect definition of the sampling plan. The rate of young people for quota has been calculated on figures of 0--24 population in place of 18-24, so that they are over-represented in the gross sample. We obtained figures from FIAT institute according to car ownership, by sex, age and regions. We know that these figures are under representing drivers not owning their car, mainly occasional drivers with very low kilometrage. In absence of a better model we had weighted the sample to comply with this last data. Comparisons with SARTRE 1 data shows changes that come more from weakness of the first sampling, so that comparisons in time about Italy have to be taken with care.

The Portuguese sample presented a very marked difference in sex ratio between SARTRE 1 and 2. After recalculation of the theoretical breakdown of sex according to regions, we decided to take the corresponding tabulation as a model and the sample was weighted to comply with this model. The consequence was to bring the sex rate closer to this of '91, but the difference remains important implying a marked change in female access to car driving. A doubt rose on the credibility of SARTRE 1 rate, so that comparisons in time about Portugal have to be taken with care. The Greek sample does not include drivers over 65. This option has been taken locally after consideration that, in the case of Greece, it is common practice, such people have a small share in car driving, and they are likely similar in their attitudes and behaviour to drivers from 55. A slight over representation of male drivers is expected. Specific study or results based on elderly drivers should take care of the Greek sample.

Figure 1.2: Respondents sex ratio found in SARTRE 2

In the case of the French sample, technical information concerning interviews has not been completely gathered, but this introduce no doubt on the representativeness of the gathered sample. The Slovak sample seemed not correctly representing the expected reality as compared with Slovak part of SARTRE 1 survey and ratios collected in comparable countries. In
particular, the number of urban drivers markedly increased, as well as high kilometrage and professional car usage. We decided to weight according to former distributions. It is clear that this action is partly not satisfying, underestimating possible small changes. Nevertheless comparing again with comparable countries, the new figures appear closer and more reliable. This also means that comparisons taking the Slovak sample as a pole shall be considered with care.

Some samples presented also small anomalies appearing mainly on observed sex ratios. Beyond the aforementioned warning, we would like to mention the observed effects of the weighting operations. Apart from the specific variables we wanted to correct, like age or sex, almost all percentages of answer to questions had changed of less than one percent. An interesting observation about sex are 3 levels of male drivers: around 55% we find Netherlands, Belgium, France and Germany; around 59% are Austria, United Kingdom, Sweden, Ireland and Finland (also EU mean); around or over 65% are Portugal, Italy, Spain and Greece. We notice the regional homogeneity of the 3 groups.

1.6 Comparisons between SARTRE 1 and SARTRE 2

According to the comparison of sex ratio, we expected generally stability, or a slight decrease of male together with a slight increase of female percentages (Table 3). The most marked exceptions are for Germany with a sizeable increase of female drivers due to reunification consequences, the essential part for changing being attributed to Eastern part drivers, and for Portugal, but as the difference of 11% in 5 years between the two periods appear considerable, we already said that we suspect a bias for the SARTRE 1 rate. After experience, we tend to consider that a slight variation means stability. We notice a decrease of the part of young people in the samples of Hungary, Italy and United Kingdom. And the rate for old people is higher for Hungary (see Table age in Annex). The observation of town size reveals sizeable variations in the case of Italy, where small towns were absent for the first survey, and also Hungary (see Table town in Annex). Some changing in towns definitions had occurred in Belgium.

**Presenting results**

Generally in this report we will present percentage of answer by categories for each country. When presenting SARTRE 2 only results, a ‘European Union’ line will appear. The member states can refer to this and also compare itself with other countries. The European line represents a weighted mean of the 13 EU countries participating, each of them taking part according to its contribution in the whole number of active car drivers in the 13 participating EU countries. We can talk of an EU mean. We cannot compare between SARTRE 1 and 2, because the countries representing EU in SARTRE 1 are not the same as in SARTRE 2.

According to the variety of sampling methods, we do not have a general rule for precision of results. In the following report we choose to follow the indication given by the formula described below. Given \( r \) a percentage result coming from the survey, \( s \) the size of sample on which it is calculated, and \( p \) the real percentage we try to measure. Then in 95% of cases (if \( s \geq 50 \)) the estimated percentage \( p \) is included between 2 limits:

\[
\begin{align*}
\bar{r} - 1.96 \frac{\sqrt{p(1-p)}}{s} &< p < \bar{r} + 1.96 \frac{\sqrt{p(1-p)}}{s}
\end{align*}
\]

The 2 values represent the theoretical extreme limits. In fact, the real uncertainty is lower.
Table 1.3: Sex ratio in SARTRE 1 and 2

<table>
<thead>
<tr>
<th>SEX</th>
<th>MALE</th>
<th>FEMALE</th>
</tr>
</thead>
<tbody>
<tr>
<td>% line</td>
<td>SARTRE 1</td>
<td>SARTRE 2</td>
</tr>
<tr>
<td>AUSTRIA</td>
<td>58</td>
<td>58</td>
</tr>
<tr>
<td>BELGIUM</td>
<td>55</td>
<td>55</td>
</tr>
<tr>
<td>FRANCE</td>
<td>52</td>
<td>55</td>
</tr>
<tr>
<td>GERMANY</td>
<td>63</td>
<td>56</td>
</tr>
<tr>
<td>GERMANY EAST</td>
<td>70</td>
<td>54</td>
</tr>
<tr>
<td>GERMANY WEST</td>
<td>56</td>
<td>57</td>
</tr>
<tr>
<td>IRELAND</td>
<td>59</td>
<td>60</td>
</tr>
<tr>
<td>ITALY</td>
<td>65</td>
<td>65</td>
</tr>
<tr>
<td>NETHERLANDS</td>
<td>55</td>
<td>55</td>
</tr>
<tr>
<td>PORTUGAL</td>
<td>75</td>
<td>64</td>
</tr>
<tr>
<td>SPAIN</td>
<td>69</td>
<td>66</td>
</tr>
<tr>
<td>SWEDEN</td>
<td>61</td>
<td>59</td>
</tr>
<tr>
<td>UNITED KINGDOM</td>
<td>60</td>
<td>59</td>
</tr>
<tr>
<td>CZECH REP</td>
<td>67</td>
<td>64</td>
</tr>
<tr>
<td>HUNGARY</td>
<td>65</td>
<td>68</td>
</tr>
<tr>
<td>SLOVAKIA</td>
<td>65</td>
<td>63</td>
</tr>
<tr>
<td>SWITZERLAND</td>
<td>62</td>
<td>63</td>
</tr>
</tbody>
</table>

**About the interviews**

Like for SARTRE 1 surveys, the interviews are very different. The composition of interviewer teams vary for example from high female rate, Ireland 99%, Slovakia 92% and Slovenia 87%, to high male rate, Greece 82%, Poland and Italy 64%. Concerning the age of interviewers the more extreme situations are: no interviewers under 25 in France, Ireland and Slovakia when they are 95% in Slovenia; 45% over 55 in Sweden when there is none of this age in Portugal.

For the interview itself, we know the duration it took. The mean was of 40 minutes in Germany for the maximum, of 30 minutes for EU members, and of 22 minutes in Spain for the minimum (see Figure 1.3). The value for Spain seems surprisingly low and should be taken into account when interpreting the results. We also notice that Central European countries have globally high values of duration.

**1.7 As conclusion**

The SARTRE 2 survey covered car drivers from nearly all 1996 European Union member states, except Denmark and Luxembourg. The collected data are sufficient to give a correct view of the European Union as a whole. Furthermore the non-EU countries Switzerland, Czech Republic, Slovakia, Slovenia, Hungary and Poland, some of which are potential members, are also covered. The quality of gathered data is estimated to be very good for 10 EU related samples and 4 non-EU, and good with care for the 5 others.

The common information between SARTRE 1 and 2 surveys, allow exploring the evolution from attitudes and reported behaviour around ‘91 to ‘96. Lacking in this case are Denmark, Luxembourg, Finland and Greece from the EU. The trends are also depicted for the non-EU countries as Switzerland, Czech Republic, Slovakia and Hungary.

If there should be a next stage to the SARTRE work, we recommend finding a way to have the survey(s) organised by a unique poll agency or network of poll agencies. Some EU partners
however are obliged to make a national call for tender, that does not allow to chose a common international agency. A solution should be find so that every participant could contribute to a unique operation.

**Figure 1.3: Interviews mean duration (minutes)**

To overcome some aforementioned sampling bias, that have been not perfectly solved, it would be necessary to define next time a first step to establish clearly the target population in including the filter questions and a few basic descriptors in omnibus survey based on general populations (at least over 17 years). Apart from a calibration of SARTRE targets, these a priori surveys would describe among the populations in age of driving, how many people hold a driving licence and, among them, how many actually drive. Sex, age and some other omnibus common variables could divide these specific indicators. A very useful usage for these data would be to complement exposure data at EU level in a road safety information system.

**References**


Chapter 2  Risk and behaviour

2.1 Introduction

Some of the factors that are known to have an important influence on driving behaviour - and therefore safety - are how the driver perceives and responds to both general and specific risks, or danger, while driving. For example, research has identified the importance of both hazard perception skills and risk taking behaviour on accident involvement (Quimby and Watts, 1981); indeed some models of driving behaviour - such as the risk homeostasis theory (Wilde, 1982) - propose that drivers perception of risk is one of the critical factors in determining accident rates; and that some safety measures (such as wearing seat belts) are compensated by drivers adopting more risky behaviour (for example, driving faster). Similarly, while the relationships between drivers attitudes, perceptions and behaviours are known to be complex (OECD, 1994), the importance of motivational factors such as attitudes and opinions on road safety is widely recognised; as is the critical role they can play in promoting safety by measures such as education, publicity and enforcement (OECD, 1993). It is for these reasons that the questionnaire obtained general information about drivers attitudes and opinions towards traffic risk and various road safety issues, together with more specific information about transient risk factors derived from the frequency they admit to engaging in a variety of potentially dangerous driving actions - such as overtaking and close following.

This chapter reports the findings obtained with respect to:
- concern about road accidents with respect to other social issues (Q.1)
- road safety and other personal risks (Q.29)
- traffic risks to family members (Q.28c)
- the relative safety of different modes of travel (Q.6)
- factors contributing to accidents (Q.4)
- national accident statistics (Q.32)
- personal accident involvement (Q.36 and Q.36)
- safety of own driving compared to others (Q.7), and
- frequency of engaging in specific dangerous driving behaviours (Q.14).

The question numbers referred to above are those in the SARTRE 2 questionnaire - see Annex 1 - which was slightly different to that used for the earlier SARTRE 1 survey. Also, all the results presented in this chapter have been rounded to the nearest whole number.

2.2 Concern about road accidents and other social issues

Drivers were asked how concerned they were about road accidents (and traffic congestion) and a number of other general social issues such as unemployment, the rate of crime, pollution and the standard of health care. Table 2.1 gives the percentage (%) of drivers in each country who responded that they were 'very concerned' about each of the issues. The table also shows the changes that had occurred between the SARTRE 1 and 2 surveys (for those countries that
took part in both surveys); a positive change (Change) indicates that the proportion of drivers giving this particular response had increased between the surveys (that is drivers had become more concerned) while a negative change ('-' in table) indicates that drivers had become less concerned about the issue. The table also shows a European Union (EU) average (which represents the mean score for all EU drivers - weighted by the number of drivers represented in each country) for the SARTRE 2 survey; no equivalent value is given for SARTRE 1 as the countries involved were different.

Table 2.1: Drivers very concerned about particular social issues; and changes between SARTRE 1 and 2

<table>
<thead>
<tr>
<th>Road accidents %</th>
<th>Traffic congestion chg</th>
<th>Unemployment %</th>
<th>Rate of crime chg</th>
<th>Pollution %</th>
<th>Standard of health care chg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>27 -12</td>
<td>17 -6</td>
<td>49 47</td>
<td>31 -8</td>
<td>39 -19</td>
</tr>
<tr>
<td>Belgium</td>
<td>50 8</td>
<td>41 11</td>
<td>46 26</td>
<td>48 9</td>
<td>39 -2</td>
</tr>
<tr>
<td>Finland</td>
<td>36 6</td>
<td>64</td>
<td>50</td>
<td>32</td>
<td>18</td>
</tr>
<tr>
<td>France</td>
<td>46 -6</td>
<td>26 -8</td>
<td>67 36</td>
<td>40 -1</td>
<td>41 -1</td>
</tr>
<tr>
<td>Germany</td>
<td>28 -18</td>
<td>23 -11</td>
<td>60 39</td>
<td>50 3</td>
<td>38 -7</td>
</tr>
<tr>
<td>Greece</td>
<td>69 53</td>
<td>64</td>
<td>64</td>
<td>58</td>
<td>60</td>
</tr>
<tr>
<td>Ireland</td>
<td>65 -3</td>
<td>44 14</td>
<td>56 9</td>
<td>74 11</td>
<td>48 -3</td>
</tr>
<tr>
<td>Italy</td>
<td>39 0</td>
<td>30 2</td>
<td>59 48</td>
<td>48 -18</td>
<td>47 -14</td>
</tr>
<tr>
<td>Netherlands</td>
<td>28 -3</td>
<td>28 6</td>
<td>28 14</td>
<td>41 -8</td>
<td>26 -23</td>
</tr>
<tr>
<td>Portugal</td>
<td>55 -6</td>
<td>29 -5</td>
<td>65 41</td>
<td>54 5</td>
<td>46 -4</td>
</tr>
<tr>
<td>Spain</td>
<td>41 -7</td>
<td>23 -11</td>
<td>61 17</td>
<td>34 -4</td>
<td>28 -1</td>
</tr>
<tr>
<td>Sweden</td>
<td>14 -1</td>
<td>6 -2</td>
<td>34 27</td>
<td>20 2</td>
<td>24 0</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>47 -15</td>
<td>47 -4</td>
<td>43 9</td>
<td>62 -1</td>
<td>42 -10</td>
</tr>
</tbody>
</table>

European Union 39 29 56 47 40 33

| Czech Republic  | 32 7                    | 17 8           | 13 -4            | 52 17       | 31 -5                       | 35 -4 |
| Hungary         | 43 9                    | 22 3           | 43 13            | 51 14       | 41 5                        | 48 12 |
| Poland          | 42 46                   | 46             | 33               | 34          | 38                          | 42    |
| Slovakia        | 35 11                   | 18 9           | 29 6             | 48 20       | 33 7                        | 50 17 |
| Slovenia        | 60 22                   | 22             | 56               | 47          | 38                          | 30    |
| Switzerland     | 25 -12                  | 18 -5          | 51 41            | 35 -17      | 39 -14                      | 14 -2 |

In general European drivers were much more concerned about issues such as unemployment (56%) and crime (47%) than about pollution (40%) and road accidents (39%). They were even less concerned about traffic congestion (29%) and health care (33%).

Within the EU countries drivers in Greece (69%), Ireland (65%), Portugal (55%) and Belgium (50%) appeared more concerned about road safety, while drivers in Sweden (14%), Austria (27%) Germany and the Netherlands (both 28%) were less concerned about road accidents; in the non-EU countries drivers in Slovenia (60%) were more concerned while drivers in Switzerland (25%) appeared to be relatively less concerned.

Of the drivers from the 15 countries who took part in both SARTRE 1 and 2 (11 of these were EU countries) 10 countries showed that concern for road accidents had reduced between the two surveys, with Germany (-18%), the United Kingdom (-15%), Austria and Switzerland (both -12%) providing the largest shift; while drivers in 4 countries had become more concerned, with Slovakia (11%), Hungary (9%) and Belgium (8%) showing the largest change. There had been no change in Italy between the two surveys.
It is interesting to note that during the same period concern about traffic congestion had increased in 7 countries, but reduced in 8 countries.

2.3 Road safety and other personal risks

Drivers were also asked how dangerous they felt driving a car was, together with a number of other personal dangers relating to general health (such as 'drinking a bottle of wine or 3 pints of beer a day', 'smoking two packets of cigarettes a day') and personal safety (such as 'walking alone in a town at night' - when a crime against one's person, for example being robbed, might take place).

Table 2.2: Percentage of drivers thinking that activities were very dangerous; and changes between SARTRE 1 and 2

|                  | Driving a car | Smoking 2 packets of cigarettes a day | Drinking a bottle of wine or 3 pints of beer a day | Walking alone in a town at night |
|------------------|---------------|--------------------------------------|-----------------------------------------------|--------------------------------
| Austria          | 7             | 51                                   | 47                                            | 20                             |
| Belgium          | 13            | 60                                   | 53                                            | 43                             |
| Finland          | 3             | 55                                   | 28                                            | 15                             |
| France           | 7             | 61                                   | 43                                            | 27                             |
| Germany          | 5             | 56                                   | 43                                            | 38                             |
| Greece           | 5             | 54                                   | 35                                            | 15                             |
| Ireland          | 12            | 61                                   | 31                                            | 48                             |
| Italy            | 6             | 68                                   | 59                                            | 34                             |
| Netherlands      | 3             | 65                                   | 49                                            | 37                             |
| Portugal         | 7             | 50                                   | 30                                            | 29                             |
| Spain            | 7             | 35                                   | 30                                            | 17                             |
| Sweden           | 6             | 65                                   | 54                                            | 16                             |
| United Kingdom   | 7             | 54                                   | 21                                            | 37                             |
| European Union   | 6             | 57                                   | 41                                            | 32                             |
| Czech Republic   | 8             | 39                                   | 20                                            | 31                             |
| Hungary          | 11            | 53                                   | 24                                            | 37                             |
| Poland           | 10            | 63                                   | 29                                            | 56                             |
| Slovakia         | 8             | 57                                   | 28                                            | 34                             |
| Slovenia         | 12            | 54                                   | 10                                            | 30                             |
| Switzerland      | 5             | 51                                   | 29                                            | 22                             |

Table 2.2 gives the percentage of drivers in each country who responded that such activities were 'very' dangerous; together with the change that had occurred for such responses between SARTRE 1 and 2 - in the same way as in Table 2.1.

The table shows that in general drivers did not consider that 'driving a car' was a dangerous activity - only 6% of EU drivers felt it was very dangerous; in contrast activities such as 'smoking two packets of cigarettes a day' (57%), 'drinking a bottle of wine or 3 pints of beer per day' (41%) and 'walking alone in a town at night' (32%) were judged to be relatively dangerous activities.

Drivers in Belgium (13%) and Ireland and Slovenia (both 12%) thought that driving was relatively more dangerous than other countries; while drivers in Finland and Netherlands (both 3%) judged that driving was relatively safe compared to drivers in other countries.
There had been relatively little changes between the two SARTRE surveys. Only Belgium, (with an increase of 8%) showed a change in excess of 5%. This is in contrast to the other personal risks included in the questionnaire where several countries showed marked shifts; especially with regard to the dangers involved in walking alone in a town at night about which concern had increased markedly.

2.4 Risk for family members

While these results suggest that in general drivers are not particularly concerned about road safety with respect to themselves they do appear to be relatively concerned about traffic safety with regard to the risks faced by members of their family, presumably because they feel that they are not in control as they are - at least to some extent - when they are driving themselves.

Nearly one-fifth (17%) of EU drivers responded that they were 'very' worried when other members of their family were out driving (Q.28). Such concerns were greater in Slovakia (59%), Portugal (54%), Greece (36%), Poland (35%), Italy and Spain (both 23%), compared to countries such as Sweden and Switzerland (both 6%), Finland (8%), the Netherlands and Hungary (both 9%), Austria (10%), the United Kingdom (11%) and Germany (12%). This particular question was not asked in the first SARTRE survey.

This finding is particularly relevant to the design of road safety publicity campaigns in that it suggests that it may be more productive to persuade drivers to modify their behaviour in order to improve the safety of their family (and perhaps friends) - or other people's family - rather than to improve their own safety.

2.5 Risks associated with different transport modes

In order to examine how drivers viewed the relative risk for different ways of travelling they were asked how safe they thought different modes of transport. Table 2.3 shows the percentage of drivers in each country who considered that a particular way of travelling was either 'very' or 'fairly' safe. While the results showed that in general public transport was seen as the safest form of travel (90%), driving a car (81%) and walking (79%) were also viewed as being relatively safe. In contrast riding a motorcycle (29%) or a bicycle (44%) were not considered to be safe ways of travelling.

The results for the individual countries showed that drivers in Ireland and the United Kingdom (both 93%), Sweden (91%) and the Netherlands (90%) felt that driving a car was relatively safe, while those in Slovenia (63%), the Czech Republic (66%) and Belgium (70%) felt it was less safe. Chapter 3 reports on the related question (Q.5) of how much consideration governments should give to each of these various modes of travel; neither of these questions were included in first SARTRE survey.

2.6 Factors contributing to accidents

In order to identify what factors drivers saw as being the main causes of accidents they were asked how often they felt various factors contributed to accidents. The results showed that in general drivers felt that human factors contributed to accidents more often than either vehicle or environmental factors. The mean results (for either 'often', 'very often, or 'always' responses), for all the EU countries for human factors were: drinking and driving (85%), driving too fast
(79%), following too closely (74%), driving when tired (71%), taking drugs (58%) and taking medicines (39%); for environmental factors: bad weather (61%), poorly maintained roads and congestion (both 40%); and vehicle factors: poor brakes (56%), faulty lights (46%), defective steering (43%) and bald tyres (41%).

Table 2.3: Drivers responding that a particular mode of travel was either very or fairly safe

<table>
<thead>
<tr>
<th></th>
<th>Driving a car</th>
<th>Travelling on public transport</th>
<th>Walking</th>
<th>Driving a lorry</th>
<th>Riding a bicycle</th>
<th>Riding a motorcycle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>76%</td>
<td>91%</td>
<td>79%</td>
<td>75%</td>
<td>55%</td>
<td>26%</td>
</tr>
<tr>
<td>Belgium</td>
<td>70%</td>
<td>80%</td>
<td>64%</td>
<td>63%</td>
<td>38%</td>
<td>33%</td>
</tr>
<tr>
<td>Finland</td>
<td>89%</td>
<td>93%</td>
<td>87%</td>
<td>87%</td>
<td>72%</td>
<td>47%</td>
</tr>
<tr>
<td>France</td>
<td>86%</td>
<td>91%</td>
<td>73%</td>
<td>73%</td>
<td>32%</td>
<td>26%</td>
</tr>
<tr>
<td>Germany</td>
<td>75%</td>
<td>88%</td>
<td>79%</td>
<td>64%</td>
<td>49%</td>
<td>29%</td>
</tr>
<tr>
<td>Greece</td>
<td>78%</td>
<td>85%</td>
<td>58%</td>
<td>81%</td>
<td>30%</td>
<td>18%</td>
</tr>
<tr>
<td>Ireland</td>
<td>93%</td>
<td>95%</td>
<td>66%</td>
<td>90%</td>
<td>45%</td>
<td>31%</td>
</tr>
<tr>
<td>Italy</td>
<td>76%</td>
<td>90%</td>
<td>79%</td>
<td>67%</td>
<td>49%</td>
<td>24%</td>
</tr>
<tr>
<td>Netherlands</td>
<td>90%</td>
<td>91%</td>
<td>89%</td>
<td>83%</td>
<td>63%</td>
<td>47%</td>
</tr>
<tr>
<td>Portugal</td>
<td>77%</td>
<td>82%</td>
<td>75%</td>
<td>70%</td>
<td>43%</td>
<td>23%</td>
</tr>
<tr>
<td>Spain</td>
<td>76%</td>
<td>85%</td>
<td>75%</td>
<td>74%</td>
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<td>21%</td>
</tr>
<tr>
<td>Sweden</td>
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<td>98%</td>
<td>78%</td>
<td>95%</td>
<td>51%</td>
<td>20%</td>
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<tr>
<td>United Kingdom</td>
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<td>93%</td>
<td>90%</td>
<td>86%</td>
<td>42%</td>
<td>40%</td>
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<tr>
<td>European Union</td>
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<td>79%</td>
<td>73%</td>
<td>44%</td>
<td>29%</td>
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<tr>
<td>Czech Republic</td>
<td>66%</td>
<td>82%</td>
<td>62%</td>
<td>67%</td>
<td>26%</td>
<td>22%</td>
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<tr>
<td>Hungary</td>
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<td>86%</td>
<td>45%</td>
<td>73%</td>
<td>20%</td>
<td>36%</td>
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<tr>
<td>Poland</td>
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<td>71%</td>
<td>47%</td>
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<tr>
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<td>30%</td>
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<tr>
<td>Slovenia</td>
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<td>87%</td>
<td>28%</td>
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<td>14%</td>
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<tr>
<td>Switzerland</td>
<td>85%</td>
<td>94%</td>
<td>68%</td>
<td>79%</td>
<td>45%</td>
<td>40%</td>
</tr>
</tbody>
</table>

While these responses represented drivers' subjective perceptions - rather than objective risk factors that might result from detailed in-depth accident analyses - the results do reflect how drivers, in general, view various risk factors associated with their driving environment - such as the importance of drinking and driving compared to excess speed - and these perceptions are likely to be important elements in determining their own driving style.

However, research suggests there is a strong tendency for drivers to judge other drivers - and the likely outcome of their behaviour - very differently from how they view their own behaviour and safety. It is known, for example that many drivers justify their own speeding behaviour by reporting that they remain in control (Corbett and Simon, 1992) while other drivers typically drive too fast, and as a result, in a dangerous way.

In fact, these perceptions of risk factors probably stem from a combination of factors, such as their own driving practices and experience, opinions based on other drivers' behaviour, their knowledge based on media information and accident statistics. Additionally, it is possible to consider that the six human factors represent personal (or inner) issues, since they depend directly on drivers themselves, while the others are external factors, as they can often be considered to be beyond the individual's direct control - although they can be recognised, monitored and allowed for.
More detailed results for the individual factors were:

Drinking and driving

European drivers saw drinking and driving as being the single most important factor, of those included, contributing to accidents, with almost all the countries producing values above 80%. Poland (95%), Hungary (94%) and Sweden (90%) provided the highest values, while drivers in the Czech Republic (79%), Germany (81%), Switzerland and Slovakia (both 83%) saw drinking and driving as being relatively less of a problem.

A comparison of the results for the SARTRE 1 and 2 surveys showed that there had been no marked general increase in the (already high) weight attributed to this factor as being a cause of road accidents. In fact, drivers in Belgium, France, Ireland, Netherlands, Sweden and Switzerland showed a slight reduction in the importance of this factor, although some of the Mediterranean (and wine drinking) countries like Italy, Spain and Portugal did show increases of between 8 and 13%. The issue of alcohol and drinking and driving are further discussed in chapter 4.

Driving too fast

Driving too fast was judged as being the second most important factors contributing to accidents. Drivers in Greece (94%) and Ireland (93%) were most likely to think it contributed to accidents while drivers in France (66%), Sweden (74%) and Finland (75%) thought it was relatively less of a safety problem.

Importantly, a comparison of the results for SARTRE 1 and SARTRE 2 suggest that European drivers see the speed factor as becoming increasingly important as a factor in accidents. The issue of speed and driving too fast are discussed in more detail in chapter 5.

Following too close

Another factor, often associated with fast driving, is following the vehicle in front too closely (or tailgating). This was also judged as being a significant contributor to accidents; Sweden and the United Kingdom (both 84%) producing the highest scores, while Austria, Finland, France, Germany, Ireland, Italy, the Netherlands, Hungary, Spain, Belgium and Switzerland all produced figures above 70%.

There appeared to be no major changes for the importance of this factor between SARTRE 1 and 2; although only Belgium, Germany, Netherlands and Czech Republic produced lower values in the latest survey.

Driving when tired

Driver fatigue is becoming increasingly recognised by safety researchers as a significant safety problem. In fact drivers themselves also recognise this to be a serious safety problem. Driving when tired was thought to contribute to accidents to a significant extent by drivers in Italy, Spain, Sweden and Hungary (all 79%); while drivers in Ireland (55%), Portugal and the Czech Republic (59%), Switzerland (63%) and Germany (64%) saw it as much less of a problem.

Figure 2.1 gives the results for both SARTRE 1 and 2 (with the countries ordered by their result for the SARTRE 2 survey) and shows that there have been small increases in the scores attributed to this factor in a number of EU countries, while in the non-EU countries, except for Hungary, drivers generally see it as being less of a problem than they did previously.
Taking medicines and drugs while driving

The response rates found for both the 'taking drugs and driving' and 'taking medicines and driving' factors were relatively smaller than for the other driver factors included, with EU averages of only 58 and 39% respectively. However, some individual countries such as Spain (90%), Italy (86%), France (77%) and Greece (71%) had atypically high responses with respect to drugs causing accidents.

While there is limited information available throughout Europe on the actual size of the medicines and drugs problem a study recently started in the UK (DETR, 1997) revealed a sizeable - and growing - problem associated with drugs and medicines with regard to traffic accidents.

Environmental factors

Of the environmental factors considered 'bad weather conditions' was considered to contribute significantly more to accidents compared to 'poorly maintained roads' and 'traffic congestion'.

Bad weather was thought to be a particularly strong influence on accidents in Belgium (71%), France (71%), Poland (71%), United Kingdom (69%), Switzerland (64%), Netherlands (63%) and Spain (61%); while the state of the roads was considered to be more of a factor in Greece (83%), Portugal (70%), Slovenia (67%), Poland (67%), Spain (64%) and Hungary (62%) compared to the low scores obtained for this factor in the Netherlands (11%) and Sweden (13%).

Perhaps surprisingly, because it is recognised as being a major problems in a large number of cities in many countries at the moment - and a problem seen to be getting worse - the traffic congestion factor was not judged as being quite as serious as these other environmental factors,
although high scores were found in some countries, notably Poland (64%), Belgium (54%),
Netherlands (52%) and Greece (48%).

The comparison of the results for the SARTRE 1 and SARTRE 2 surveys did not reveal any major changes in driver's perceptions between the two surveys, possibly because of the subjective nature of these questions.

Vehicle factors

With regard to the vehicles factors included, the less visible technical problems like 'defective steering' produced a low response rates in some countries, such as the Netherlands (7%), Sweden (13%), Austria (15%) and Germany (18%) and very high values in others, such as France (81%), Spain (77%), Poland (63%) and Greece (61%). More visible technical aspects like 'bad tyres' show both a higher and more homogenous pattern of responses with high scores obtained for France (89%), Spain (78%), Greece (71%) and Hungary (71%). High scores for 'poor brakes' were obtained in France (89%), Spain (82%), Hungary (78%) and Greece (74%) and for 'faulty lights' in France (79%), Hungary (74%) and Spain (71%). These results show that drivers in certain countries (such as France and Spain) view vehicle factors to be relatively more important in causing accidents than do drivers in other countries.

2.7 Knowledge/perception of national accident rates

It was felt that a driver's concern towards road safety issues and the risks involved with driving would be influenced by their appreciation and perception of the general traffic accident situation in their country. In order to see whether the drivers under or overestimated the road safety problem they were asked to estimate the number people (not just drivers) who had been killed in traffic accidents in their country during the previous year. The possible responses included underestimates (a quarter and a half of the actual figure) and overestimates (one and a half times, twice and four times the actual number), as well as the actual number - with all the responses being rounded to the nearest 500.

Table 2.4 shows the proportion of drivers who either selected the correct response (nearly one-fifth of all drivers), underestimated or overestimated the road accident problem; note that nearly a quarter of all the drivers (and 60% of drivers in Spain and half in the Czech Republic) responded that they did not know.

The table shows that over three times as many drivers overestimated the number of road accident deaths as underestimated it; suggesting that in general drivers felt that the roads were more dangerous - at least with respect to the numbers of people killed each year - than they actually were; a belief that is likely to foster road safety.

However, a significant proportion of drivers in Ireland (30%), Italy (24%) Slovakia (20%), Sweden 919%) and Portugal (18%) underestimated the road accident problem - that is they thought the roads were much safer than they actually were.

Table 2.4 also shows that while the percentage of drivers underestimating the number of road deaths had decreased by a significant amount in Ireland (-18%) the proportion had increased significantly in Italy (16%).
Table 2.4: Proportion of drivers who underestimated, overestimated or were correct about the number of annual road deaths in their country

<table>
<thead>
<tr>
<th>Country</th>
<th>Correct</th>
<th>Underestimate</th>
<th>Overestimate</th>
<th>Don't know</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>% change</td>
<td>%</td>
<td>% change</td>
</tr>
<tr>
<td>Austria</td>
<td>23</td>
<td>2</td>
<td>15</td>
<td>5</td>
</tr>
<tr>
<td>Belgium</td>
<td>14</td>
<td>0</td>
<td>14</td>
<td>3</td>
</tr>
<tr>
<td>Finland</td>
<td>37</td>
<td>1</td>
<td>14</td>
<td>47</td>
</tr>
<tr>
<td>France</td>
<td>24</td>
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<td>Germany</td>
<td>20</td>
<td>2</td>
<td>8</td>
<td>-4</td>
</tr>
<tr>
<td>Greece</td>
<td>15</td>
<td>11</td>
<td>6</td>
<td>64</td>
</tr>
<tr>
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<td>9</td>
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<tr>
<td>Italy</td>
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<td>4</td>
<td>24</td>
<td>16</td>
</tr>
<tr>
<td>Netherlands</td>
<td>31</td>
<td>17</td>
<td>10</td>
<td>-6</td>
</tr>
<tr>
<td>Portugal</td>
<td>20</td>
<td>-1</td>
<td>18</td>
<td>6</td>
</tr>
<tr>
<td>Spain</td>
<td>8</td>
<td>-1</td>
<td>15</td>
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<tr>
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<td>-10</td>
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<td>4</td>
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<tr>
<td>United Kingdom</td>
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<td>3</td>
<td>10</td>
<td>-2</td>
</tr>
<tr>
<td>European Union</td>
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<td>13</td>
<td>44</td>
<td>24</td>
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<td>-10</td>
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<td>-10</td>
</tr>
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<td>Hungary</td>
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<td>-3</td>
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<td>3</td>
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<tr>
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<td></td>
</tr>
<tr>
<td>Switzerland</td>
<td>21</td>
<td>3</td>
<td>13</td>
<td>3</td>
</tr>
</tbody>
</table>

2.8 Personal accident involvement

One factor that is likely to be a strong influence a driver's perception of the risks involved with driving - and as a result on their behaviour and attitudes towards road safety - will be the number of accidents that they have been involved in. The questionnaire obtained information about their involvement, as drivers, both in accidents where someone was injured and also damage only accidents, during the previous 3 years.

While these questions attempt to collect factual information - not subjective information on attitudes or opinions - and the results obtained are subject to errors caused by both forgetting and problems with interpreting what actually constitutes a damage only accident, research has shown that self-reporting can provide accurate information about drivers accident involvement (Maycock et al, 1991). The actual relative accident statistics for the various countries - weighted for exposure in each country (unlike the samples used in the survey) are given in chapter 7.

However, the results of the survey do confirm the high accident rates recorded in many of the countries - see Figure 2.2. Almost all the countries produced a rate between 20 to 25% for drivers being involved in damage only accidents either one or more times. Of the EU countries taking part, Italy (33%) and Portugal (31%) showed the highest accident involvement; while the rates reported in Poland (28%) and the Czech Republic (27%) were also very high.

Expectedly, reported involvement in accidents where someone was injured, was much less frequent - estimates in some countries suggest that there are as many as ten (or even more), damage only accidents for every injury accident. However, the findings are different to those for damage only accidents - see Figure 2.3. In countries such as Belgium, Italy, Germany and Slovakia the response rates are around 6 to 7%, while in the United Kingdom, Portugal, Ireland and Spain they are around 4%.
Nevertheless, it is important that a comparison of the results of the SARTRE 1 and 2 surveys shows that there has been a substantial decrease of the number of drivers involved in...
this type of accident in all countries - see Figure 2.3. This finding is particularly marked in Portugal and Switzerland where a decrease from 10 to 4% and from 7 to 3% respectively had occurred between the two surveys.

These results suggest that in spite of the number of vehicles and drivers on the road having increased between the two SARTRE surveys the number of injury accident had gone down, although the number of damage only accidents appears to have increased.

2.9 Personal driving behaviour

An individual driver's behaviour and experiences while driving will influence both their perceptions about the risks involved in driving and their attitudes to safety issues. For this reason past behaviour will have a strong influence on future behaviour. The questionnaire asked drivers how frequently they engaged in a range of potentially dangerous driving behaviours. However, it should be noted that individual drivers have different ideas about what is actually meant by such things close following and 'just making it' while overtaking and these results should be interpreted with this in mind. In fact it is likely that an individual's appreciation of such actions will influence both the frequency of such behaviour and their perceptions about how frequently they are involved in such risks.

Figure 2.4: They think their driving is ... dangerous compared to others, in %

Safety compared to other drivers

Figure 2.4 shows the percentage of drivers in each country who considered that they drove either more or less dangerously (or about the same) compared to other drivers. It clearly shows that a majority of drivers project dangerous driving behaviour on to other drivers while
considering themselves to be relatively safe drivers. As a consequence they do not consider that they own the road safety problem and that typically it is other drivers who play the guilty role.

Figure 2.4 shows that in all countries, except Finland (35%), more than half of the drivers think that other drivers are more dangerous than themselves. Only in Finland (58%), Sweden (45%), Belgium (44%) and the Netherlands (43%), do a sizeable number of drivers report that their driving is as dangerous as other drivers. These results, when compared with the ones found in SARTRE 1, show that there had been no major shift in these beliefs between SARTRE 1 and 2.

**Frequency of engaging in specific dangerous behaviours**

While other chapters of this report deal in detail with self-reported driving behaviours with regard to particular dangerous behaviours such as drinking and driving (chapter 4), driving too fast (chapter 5) and not wearing seat belts (chapter 6), the questionnaire also obtained information about the frequency that they personally engaged in four other potentially dangerous behaviours. Figures 2.5 to 2.8 show the percentage of drivers for each country taking part in the most recent survey, who reported that they engaged in the particular behaviour relatively frequently - either 'often', 'very often' or 'always'.

Figure 2.5 shows the percentage of drivers who reported that they frequently 'follow the vehicle in front too closely'. While the results presented earlier in this chapter showed that drivers saw this behaviour (in other drivers) as being a major cause of accidents, when asked about their own behaviour only a small percentage of drivers thought that they themselves engaged in the behaviour - perhaps with the exception of Greek drivers (21%)

**Figure 2.5: Following too close, either often, very often or always, in %**
Figure 2.6: Overtaking when can just make it, either often, very often or always, in %

Figure 2.7: Driving through amber lights, either often, very often or always, in %
Figure 2.6 shows the results for 'overtaking when you think you can just make it'. Again very few drivers felt that they engaged in such behaviour very often - although drivers in Slovakia and the Czech Republic (both 15%) reported relatively more of such risk taking compared to drivers in other countries.

Figure 2.7 shows the results for 'driving through traffic lights on amber'. A very sizeable number of drivers from all countries (with the exception of Slovenia with only 3%) report they engaged in this behaviour relatively frequently. Drivers in Greece (32%), Portugal and Italy (both 30%) and the Netherlands (28%) admitted to being particularly prone to such behaviour.

However, the results suggest that in general drivers seem to respect pedestrians while they are crossings the road at pedestrian crossings. Figure 2.8 shows the percentage of drivers who do give way - that is behave safely when they come upon a pedestrian on a crossing. The worst countries for not giving way to pedestrians were Spain and the Czech Republic (both 73%) while drivers in the United Kingdom and Ireland both reported giving way to the pedestrian 95% of the time.

**Figure 2.8: Not giving way to pedestrians on crossings, either often, very often or always, in %**

In general, a comparison of the results to these various questions for SARTRE 1 and 2 does suggest a general improvement of driving habits has taken place. However, these findings do not always agree with recorded accident data and objective measures of behaviour that have been conducted in some countries.

**Other non-risk behaviour**

The results identify that there is a significant solidarity amongst drivers with regard to signalling other drivers to warn them of a police speed trap. Except for Poland (30%) and
Hungary (32%), this is a phenomenon that occurs more frequently amongst Mediterranean and Latin drivers - France (33%), Greece (31%), Portugal (30%), Italy (24%).

### 2.10 Implications of results for safety

The results of the surveys show that there are very marked differences between the drivers in different countries in terms of their attitudes and beliefs, in addition to sizeable differences in their self-reported behaviour. While it is unlikely that all European drivers will ever think and behave in the same way, the results do highlight particular problems in certain countries that need to be addressed.

However, it must be recognised that the results reported here are simply the overall finding for each country. Not only will countries differ but individual drivers, or groups of drivers within each country, will also differ. This means that countermeasures (such as publicity campaigns) might be more effective if they are targeted at particular groups of drivers - such as young males. This type of information will require a more detailed in-depth analysis than employed here; the results of such an analysis will be reported elsewhere. It is important to remember that the sample in each country can have a different demographic profiles (see chapter 1) that might be responsible for some of the differences between countries.

There are a number of ways that a particular country can attempt to improve its road safety record. The various methods are often classified as those involving either: enforcement, education, encouragement or engineering (the four E’s of safety). Changes in legislation (such as making it compulsory to wear seat belts, or reducing the drink-drive limit) are included within enforcement as such changes should be accompanied by enforcement (if this is appropriate), although often education and publicity programmes are also required. Engineering measures (such as traffic calming) although often effective are typically very expensive - although they can be very cost effective in the long-term. Enforcement programmes can also be expensive - and are often not very popular with either the public (except perhaps in the case of drinking and driving) or the agency responsible for carrying out the enforcement. For these reasons education and encouragement - which includes road safety publicity - are becoming increasingly recognised as being very cost effective ways of improving safety; and these efforts will require information on drivers attitudes and beliefs about road safety issues. Such knowledge is especially useful if it can be compared with the situation in other comparable countries as this provide a yardstick to make comparisons against. The findings of the SARTRE surveys - together with information about the good practise adopted in more successful countries - are therefore very valuable.

The results presented in this chapter show that compared to issues such as unemployment and crime in general drivers do not see road safety as being a particularly sizeable social problem; nor do they think that driving a car is a particularly dangerous activity that presents much of a personal threat. However, a significant proportion of drivers are concerned about road safety and in particular they worry about members of their family when they are driving.

However, this is contradicted to some extent with respect to drivers knowledge and belief about the size of the road safety problem in terms of the annual number of fatalities. The survey revealed that the majority of drivers in all the countries thought that there were more road accident deaths than actually occurred. While it is not surprising that many drivers are not aware of the official statistics about accidents, the fact that a majority of drivers overestimate the size of the problem reflects that road safety is viewed as a serious problem in Europe; and that the actual risks should be made known to those drivers who currently underestimate the size of the problem.
Within this context of improving safety by making drivers more knowledgeable about risk factors, it is clear that driver behaviour is seen as being the major contributory factor leading to traffic accidents; with driving after drinking alcohol, driving too fast for the conditions, following too closely and driving when tired being seen as particularly important causes of accidents. While a lack of objective information means that it is not possible to know whether such perceptions are correct or not, these findings do highlight both the psychological and social context that drivers (and other road users) exist within. For example both drinking and driving are important social behaviours - it is perhaps not surprising that their incompatibility results in concerns about safety - as does either an enjoyment of speed (chapter 5) or time pressure which exist as part of one's work or social life. This may explain why environmental factors (perhaps with the exception of the weather) and vehicle factors - which were possibly seen as being outside the drivers control - were seen as less likely to be the cause of accidents.

The results also show that while drivers typically consider themselves to be safe drivers, they do not think the same of other drivers. This is in spite of the fact that they acknowledge they often engage in dangerous driving behaviours - which typically go unpunished. This conflict is possibly resolved by a belief that they remain in control and are sufficiently skilled to deal with the risks they generate themselves, as well as the threat of other (dangerous) drivers. The fact that drivers do not own the risks faced while driving but visualise danger coming from other driver's actions makes it difficult to change the way they drive.

Such illusory feelings of control (McKenna, 1993), or over-confidence (especially in younger drivers) can be targeted by training, education and publicity programmes. Equally important is to need to increase drivers’ perception of road safety as an important social issue - and that they have a part to play in tackling it. Also, the fact that the perceived danger to members of one's family appears to be more important than the risks to the individual's themselves can be used as a way of persuading them to drive more carefully.

Interestingly travelling by public transport was (correctly) seen as being even safer than travelling by car; however, there was strong feeling that more effort should be made to improving public transport (see chapter 3).

Modern society and people's lifestyle contributes to a general lack of appreciation of risk. It is possible that drivers are the group that learned the new social risk culture fastest and have such beliefs and attitudes reinforced regularly by the way they and other drivers interact on the road - a sizeable element of their social world. The results presented in this chapter confirm the necessity of taking account of drivers’ attitudes and opinions about various risk factors, and who owns the different road safety problems considered. Drivers need to be more aware of the risk factors involved in driving and the consequences of their actions - especially in some of the countries taking part in this survey.

2.11 Summary

- Drivers attitudes to risks and the perception of risk while driving are important determinants of behaviour and safety.
- There are very marked differences between countries in how drivers view road traffic risk.
- There were numerous examples of very marked changes having taken place between the two surveys.
• Although drivers were less concerned about road safety than other social issues such as unemployment and crime nearly 2 in every 5 drivers reported being very concerned about road accidents.

• Drivers appeared to be more concerned about the exposure of members of their family to risk rather than the risks they are exposed to themselves.

• Driver behaviour was thought to much more of a contributory factor in accidents than either environmental or vehicle factors. Drinking and driving and driving too fast were seen as being particularly important causes of accidents.

• While many drivers overestimated the annual number of road deaths in their countries a significant number underestimated road traffic risk.

• Most drivers judged themselves as being relatively safe compared to other drivers.

• Drivers admitted to engaging in certain dangerous driving behaviours on a regular basis.

• The results have identified a number of examples where education and publicity could be used to promote road safety.

References


Chapter 3  Opinions of European car drivers on road safety measures

3.1. Introduction

This chapter presents the major findings concerning European opinions about road safety measures. Specifically, we will describe:

- differences in opinions of European drivers about road safety measures
- shifts in opinions from SARTRE 1 to SARTRE 2
- the nations where drivers have shown most frequent or largest shifts in opinion.

The following description of results is part quantitative, part qualitative. To reduce the bulk of data percentages in tables and figures only one response category, or the sum of two or more categories, are presented.

The chapter is arranged as follows. Paragraph 3.2 describes the results concerning the questions about the amount of effort the national government should devote to stimulate road safety measures. Paragraph 3.3 addresses the norms concerning penalties, drinking-and-driving, car advertisements and public transport. The results concerning approval for the introduction of certain road safety measures on a European scale are presented in paragraph 3.4. Paragraphs 3.5 and 3.6 deal with a number of survey questions that were only asked in 1996 not in 1991. First paragraph 3.5 deals with the questions about the amount of consideration that should be given to different transport modes. Subsequently paragraph 3.6 describes preferences for in car telematics devices. Finally, the chapter is concluded with a general discussion in paragraph 3.7.

3.2. Road safety measures that ought to be stimulated by government

Questions 2a to 2e all refer to the amount of attention the government should spend to different road safety measures. Table 3.1 presents the mean percentages on these questions.

General findings

For each of five measures (improve driver training, more enforcement, testing of vehicles, improve standards of roads) a clear majority of national drivers is in favour that their national government should devote more attention to these measure. According to E.U. drivers, the national government should first of all devote more attention to improving the standards of roads (84% strongly in favour/in favour), and should in second place improve driver training (78% strongly in favour/in favour). The support of E.U. drivers for government stimulation of more road safety campaigns (72% (strongly) in favour), more enforcement of traffic laws (70% (strongly) in favour), and of more testing of vehicles (63% (strongly) in favour) is somewhat less, but of course still considerable.
Table 3.1: Preferences for active government role in stimulating traffic safety measures

<table>
<thead>
<tr>
<th>Opinion: Strongly in favour of or in favour of government devoting more effort to:</th>
<th>Sample</th>
<th>Mean % EU</th>
</tr>
</thead>
<tbody>
<tr>
<td>... improving driver training</td>
<td>SARTRE 2</td>
<td>78%</td>
</tr>
<tr>
<td>... more enforcement of traffic laws</td>
<td>SARTRE 2</td>
<td>70%</td>
</tr>
<tr>
<td>... more road safety campaigns</td>
<td>SARTRE 2</td>
<td>72%</td>
</tr>
<tr>
<td>... test more vehicles</td>
<td>SARTRE 2</td>
<td>63%</td>
</tr>
<tr>
<td>... improve the standards of roads</td>
<td>SARTRE 2</td>
<td>84%</td>
</tr>
</tbody>
</table>

**Differences between countries**

Looking at more global patterns in results, we find the following. On at least three out of five measures in 1996, the Finnish, Swedish, Swiss and Dutch drivers tend to be among those who are _least strongly in favour_ of active government stimulation. For three out of five measures in 1996, the Polish and Irish drivers tend to be among those who are _most strongly in favour_ for their government taking a more active role. The largest variation in opinions is found on the question how much attention the government should spend to improve the standards of the roads (Figure 3.1). The least variation was found in opinions of European drivers about government support for road safety campaigns.

As can be seen in Figure 3.1, it seems that drivers in countries with high quality road infrastructure (e.g. Switzerland, Netherlands) tend not to be strongly in favour of their government devoting more attention to the standards of roads, whereas drivers in countries with less developed or maintained road infrastructure (e.g. Poland, Ireland, Hungary) tend to be very strongly in favour of an active government role in this respect.

**Changes between SARTRE 1 and 2**

Table 3.2 shows the really large shifts in opinion over time, concentrating on those national groups of drivers who differ in opinion from SARTRE 1 to SARTRE 2 with more than 9 percentage points in one or another direction.

Interestingly, Table 3.2 shows that the support for government devoting more effort in testing the road worthiness of more vehicles has seen a large decrease in France, Portugal, Spain and Switzerland. Only, Hungarian drivers show a large increase in their preference for this government action. Presumably, the decline in support for further government stimulation in this field has to do with a satisfaction with the established procedures of (yearly) testing. From SARTRE 1 to SARTRE 2 Hungarian drivers have become more enthusiastic about having more road safety campaigns and having more tests of road worthiness of vehicles, whereas Swiss drivers have decidedly become less supportive of these measures. The Swiss may fairly well be satisfied with existing state of affairs, whereas the Hungarian drivers seek ways to promote road safety. From SARTRE 1 to SARTRE 2 the Portuguese drivers have become decidedly more supportive of improving driving training, but less supportive of enforcement of traffic laws and testing of more vehicles.
Opinions on road safety measures

Figure 3.1: Percentages of car drivers who are strongly in favour of the government devoting more effort to improve the standards of roads

Table 3.2: Large shifts of opinion over time for specific national group

<table>
<thead>
<tr>
<th>Opinion</th>
<th>Sample</th>
<th>Countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly in favour/in favour of government devoting more effort to improve the standards of roads</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2a. improve driver training</td>
<td>SARTRE 1</td>
<td>France 74%</td>
</tr>
<tr>
<td></td>
<td>SARTRE 2</td>
<td>Hungary 64%</td>
</tr>
<tr>
<td>2b. more enforcement of traffic laws</td>
<td>SARTRE 1</td>
<td>Italy 79%</td>
</tr>
<tr>
<td></td>
<td>SARTRE 2</td>
<td>Portugal 78%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Spain 66%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sweden 66%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Switzerland 79%</td>
</tr>
<tr>
<td>2c. have more road safety campaigns</td>
<td>SARTRE 1</td>
<td>France 49%</td>
</tr>
<tr>
<td></td>
<td>SARTRE 2</td>
<td>Italy 91%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Portugal 68%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Spain 57%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Switzerland 63%</td>
</tr>
<tr>
<td>2d. test road worthiness of more vehicles</td>
<td>SARTRE 1</td>
<td>France 72%</td>
</tr>
<tr>
<td></td>
<td>SARTRE 2</td>
<td>Portugal 56%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Spain 71%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Switzerland 50%</td>
</tr>
<tr>
<td>2e. improve the standards of roads</td>
<td>SARTRE 1</td>
<td>no large changes</td>
</tr>
<tr>
<td></td>
<td>SARTRE 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
3.3. Norms concerning penalties, drinking-and-driving, car advertisements and public transport

Questions 3a to 3d pertain to the degree of agreement with four normative statements concerning severity of penalties, freedom in drinking and driving, freedom of manufacturers to use appeal of speed in advertisements and the need for better public transport. Table 3.3 summarises the main differences between European drivers in respect to these normative issues.

**Table 3.3: Agreement or disagreement with statements**

<table>
<thead>
<tr>
<th>Opinion:</th>
<th>Sample</th>
<th>Mean EU %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree or agree with: penalties for traffic offences should be more severe</td>
<td>SARTRE 2</td>
<td>54%</td>
</tr>
<tr>
<td>Strongly disagree or disagree with: people should be free to decide for themselves how much they drink and drive</td>
<td>SARTRE 2</td>
<td>77%</td>
</tr>
<tr>
<td>Strongly agree or agree with: in car advertisements manufacturers should not be allowed to stress speed</td>
<td>SARTRE 2</td>
<td>47%</td>
</tr>
<tr>
<td>Strongly agree or agree with: better public transport is needed</td>
<td>SARTRE 2</td>
<td>84%</td>
</tr>
</tbody>
</table>

**General findings**

A large majority (84%) of all E.U. drivers (strongly) agrees with the need for better public transport; more than half (54%) of E.U. drivers (strongly) agree with the necessity of more severe traffic penalties; slightly less than half (47%) of E.U. respondents (strongly) agrees with a restriction on the freedom of car manufacturers to use the appeal of speed in car advertisements.

**Differences between countries**

There is not much difference in opinions of E.U. drivers concerning the necessity of more severe penalties, the need for better public transport and the freedom of car manufacturers to use speed as an appealing element in car advertisements. There is large variation in the tolerance of European drivers as regards freedom in drinking and driving (see Figure 3.2). To be sure, in all of the survey-countries, there is only minority support for the statement that people should be free to decide for themselves how much they want to drink before driving. The general norm is that drivers should not be free to decide for themselves how much they want to drink before driving. But whereas seven or eight out of every ten drivers in Northern countries like Finland, Sweden, Netherlands, UK strongly disagrees with any freedom in drinking-and-driving, only three or four out of every ten drivers in Southern countries (Greece, Italy, France, Spain, Portugal) strongly disagrees.

This finding is in line with earlier results. In an earlier analysis of European differences in opinions about traffic safety measures, the question about freedom in drinking-and-driving also divided countries into Northern and Southern groups.
Opinions on road safety measures

Figure 3.2: People should be free to decide for themselves how much they can drink before they drive (% strongly disagree)

![Bar chart showing percentage of people by country and opinion.](chart.png)

Changes between SARTRE 1 and 2

Table 3.4 presents the large shifts in opinion over time, concentrating on those national groups of drivers who differ in opinion from SARTRE 1 to SARTRE 2 with more than 9 percentage points in one or another direction.

Table 3.4: Large shifts of opinion over time for specific national groups

<table>
<thead>
<tr>
<th>Opinion</th>
<th>Sample</th>
<th>Hungary</th>
<th>Italy</th>
<th>Portugal</th>
<th>Sweden</th>
<th>Switzerland</th>
<th>UK</th>
</tr>
</thead>
<tbody>
<tr>
<td>3a. Strongly agree/agree: Penalties for driving offences much more severe</td>
<td>SARTRE 1</td>
<td>68%</td>
<td>69%</td>
<td>51%</td>
<td>54%</td>
<td>70%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SARTRE 2</td>
<td>54%</td>
<td>41%</td>
<td>40%</td>
<td>40%</td>
<td>60%</td>
<td></td>
</tr>
<tr>
<td>3b. Strongly disagree: people self decide how much drink and drive</td>
<td>SARTRE 1</td>
<td>44%</td>
<td>41%</td>
<td>54%</td>
<td>60%</td>
<td>47%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SARTRE 2</td>
<td>64%</td>
<td>25%</td>
<td>42%</td>
<td>47%</td>
<td>47%</td>
<td></td>
</tr>
<tr>
<td>3c. Strongly agree/agree: Not allow car manufacturers to stress speed in advertisements</td>
<td>SARTRE 1</td>
<td>36%</td>
<td>35%</td>
<td>35%</td>
<td>35%</td>
<td>35%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SARTRE 2</td>
<td>63%</td>
<td>25%</td>
<td>25%</td>
<td>25%</td>
<td>25%</td>
<td></td>
</tr>
</tbody>
</table>

Remarkably, the support for more severe penalties for driving offences has decreased considerably in Italy, Sweden, Switzerland and UK. Also in Italy, Portugal and Switzerland...
there has been a large decrease in the disapproval for drinking-and-driving, whereas Hungary shows a large increase in disapproval.

Combining the results of tables 2 and 4 a pattern emerges. Portuguese and Swiss drivers have consistently become less enthusiastic for a number of road safety measures, whereas Hungarian drivers have become more supportive of a number of measures. Italian drivers have become more supportive of more enforcement of traffic laws (Table 3.2) and of less freedom for car manufacturers to stress speed (Table 3.4). Together these results may point to an increasing concern among Italian drivers of the dangers of reckless, high speed driving.

3.4. Degree of approval for European introduction of measures

Questions 27a to 27e ask for the degree of approval for introduction of road safety measures in all European countries. The answer scale for these questions has changed between 1991 and 1996 from ‘In favour’/’Against’ to ‘In favour very’/ ‘In favour fairly’/ ‘In favour not much’/ ‘In favour not at all’. The mean percentages on these questions are given in Table 3.5.

General findings

In 1996, there is ample majority support for the European introduction of regular technical check-ups for safety purposes, a penalty points system, a zero alcohol limit for new drivers, and the installation of a third braking light.

Table 3.5: Opinions on European introduction of road safety measures

<table>
<thead>
<tr>
<th>Opinion: Very/Fairly in favour of ...</th>
<th>Sample</th>
<th>Mean EU %</th>
</tr>
</thead>
<tbody>
<tr>
<td>... a penalty points system</td>
<td>SARTRE 2</td>
<td>70%</td>
</tr>
<tr>
<td>... restrict maximum speed of vehicles</td>
<td>SARTRE 2</td>
<td>54%</td>
</tr>
<tr>
<td>... regular technical check-ups</td>
<td>SARTRE 2</td>
<td>85%</td>
</tr>
<tr>
<td>... installation of third braking light</td>
<td>SARTRE 2</td>
<td>58%</td>
</tr>
<tr>
<td>... no alcohol for new drivers</td>
<td>SARTRE 2</td>
<td>81%</td>
</tr>
</tbody>
</table>

Differences between countries

Especially the issue of a European introduction of a requirement that car manufacturers restrict the maximum speed of cars meets a mixed response among European drivers (see Figure 3.3).

As we can see in Figure 3.3, among French, Italian, Belgian, Irish and UK drivers there exist a majority favouring that car manufacturers take steps to limit the speed of their cars, whereas Czech, Swedish, Polish, Hungarian, Slovakian, German, and Swiss drivers do not favour such steps.

If we take a more general look at answer patterns on all questions 27a to 27e, the Swiss drivers stand out. For four out of five questions concerning European introduction of measures, the Swiss drivers are found among the groups who least favour the European introduction of a measure. This may reflect a more general negative attitude of the Swiss towards introduction of measures on a European scale.
Surprisingly, Italian and Greek drivers who tend to be somewhat less strict in regard to freedom in drinking-and-driving, are very supportive of the introduction of a zero alcohol limit for new beginning drivers. It may be that a so-called ‘double norm’ is operative in regard to drinking-and-driving. When we also take into account the rather large proportion among Italian, French, Greek, Spanish drivers who consider drinking-and-driving always to be a cause for accidents, there emerges an even fuller picture of the complex attitude structure/mentality in regard to drinking-and-driving. In the discussion in paragraph 8 we’ll return to these findings.

**Figure 3.3: European introduction of a requirement that manufacturers restrict the maximum speed of their cars (% very or fairly in favour)**

<table>
<thead>
<tr>
<th>Country</th>
<th>2000 'Very or fairly in favour'</th>
<th>2001 'Very or fairly in favour'</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sweden</td>
<td>30%</td>
<td>40%</td>
</tr>
<tr>
<td>Germany</td>
<td>45%</td>
<td>46%</td>
</tr>
<tr>
<td>Portugal</td>
<td>52%</td>
<td>53%</td>
</tr>
<tr>
<td>Austria</td>
<td>59%</td>
<td>59%</td>
</tr>
<tr>
<td>Netherlands</td>
<td>53%</td>
<td>53%</td>
</tr>
<tr>
<td>Finland</td>
<td>57%</td>
<td>57%</td>
</tr>
<tr>
<td>European Union</td>
<td>58%</td>
<td>58%</td>
</tr>
<tr>
<td>Greece</td>
<td>60%</td>
<td>60%</td>
</tr>
<tr>
<td>Spain</td>
<td>62%</td>
<td>62%</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>66%</td>
<td>66%</td>
</tr>
<tr>
<td>Ireland</td>
<td>61%</td>
<td>61%</td>
</tr>
<tr>
<td>Belgium</td>
<td>62%</td>
<td>62%</td>
</tr>
<tr>
<td>Italy</td>
<td>65%</td>
<td>65%</td>
</tr>
<tr>
<td>France</td>
<td>70%</td>
<td>70%</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>25%</td>
<td>24%</td>
</tr>
<tr>
<td>Poland</td>
<td>34%</td>
<td>34%</td>
</tr>
<tr>
<td>Switzerland</td>
<td>35%</td>
<td>35%</td>
</tr>
<tr>
<td>Hungary</td>
<td>36%</td>
<td>36%</td>
</tr>
<tr>
<td>Slovakia</td>
<td>40%</td>
<td>40%</td>
</tr>
<tr>
<td>Slovenia</td>
<td>49%</td>
<td>49%</td>
</tr>
</tbody>
</table>

**Change between SARTRE 1 and 2**

The change in answer categories makes strict statistical testing not possible. We can compare the SARTRE 1-‘In favour’-percentages with the SARTRE 2-‘Very/fairly favour’-percentages at face value. Table 3.6 describes the large shifts in opinion over time, concentrating on those national groups of drivers who differ with more than 9 percentage points in one or another direction.

It appears that the drivers in some nations in the mean have hardly changed their (extreme) position. In both SARTRE 1 and SARTRE 2 the French, Belgian and Swiss drivers are least in favour of the European introduction of a penalty points system. In both survey years, drivers in the UK make up the largest support for the introduction of a penalty points system. In both SARTRE 1 and SARTRE 2, French and Irish drivers constitute the largest support group for a requirement that car manufacturers restrict the maximum speed of cars. It is interesting to note that the actual experience with a penalty points system has not changed the attitude of French car drivers. In France a penalty points system was introduced since July 1992. By the end of November 1993 only 340,000 motorists had seen their misconduct punished with the deduction
of one or more points. This relatively low number was caused by the fact that it often takes quite a long time before the courts have concluded the cases brought before them. Three quarters of the cases concerned speeding. Motorists can try to regain a number of points by attending courses (European Newsletter, 1994, 2, p. 7).

As can be seen in Table 3.6, the support for the European introduction of a penalty point system and a requirement that car manufacturers do something to limit the speed of their cars has increased among Hungarian, Italian and Belgian drivers. Surprisingly, there has been a decreasing support for the European introduction of regular technical check-ups of all types of vehicles in France, Portugal, Spain and Switzerland. In the same four countries, we also found decreasing support for national government devoting more effort in testing the roadworthiness of more vehicles (Table 3.2, question 2d)

Table 3.6: Large shifts of opinion over time for specific national groups

<table>
<thead>
<tr>
<th>Opinion</th>
<th>Sample</th>
<th>Countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>In favour (SARTRE 1) or: Very/Fairly in favour (SARTRE 2) of European introduction of</td>
<td></td>
<td>Austria</td>
</tr>
<tr>
<td>27a. a penalty points system</td>
<td>SARTRE 1</td>
<td>65%</td>
</tr>
<tr>
<td></td>
<td>SARTRE 2</td>
<td>39%</td>
</tr>
<tr>
<td>27b. requirement that manufacturers restrict maximum speed cars</td>
<td>SARTRE 1</td>
<td>51%</td>
</tr>
<tr>
<td></td>
<td>SARTRE 2</td>
<td>61%</td>
</tr>
<tr>
<td>27c. regular technical check-ups of all types of vehicles</td>
<td>SARTRE 1</td>
<td>86%</td>
</tr>
<tr>
<td></td>
<td>SARTRE 2</td>
<td>65%</td>
</tr>
<tr>
<td>27d. installation third braking light</td>
<td>SARTRE 1</td>
<td>Nearly all countries increase from 30-45% to 50-65%</td>
</tr>
<tr>
<td></td>
<td>SARTRE 2</td>
<td></td>
</tr>
</tbody>
</table>

The largest change has occurred in the thinking about the European introduction of a third braking light: from minority support in almost all countries in SARTRE 1 to majority support in all countries in SARTRE 2. Presumably, the European obligation to have a third braking light, going into effect for all passenger cars October 1st 2000, has led both car manufacturers and car drivers to anticipate on installing this device in the car. This has led to an increase of cars with a third braking light installed. For example, in the Netherlands the third braking light was observed in 28% of the passenger cars as opposed to about 5% in the early nineties. Undoubtedly, the frequent occurrence of third braking light in everyday traffic has further made way for a positive attitude towards a general introduction of this safety device.

Table 3.6 confirms a pattern we noted earlier: from SARTRE 1 to SARTRE 2 Swiss and Portuguese drivers have tended to be less supportive of a number road safety measures and Hungarian drivers more supportive. Looking at the total results of tables 2, 4 and 6, we see that also the Italian drivers have tended to become more supportive of a number of measures.
3.5. Opinions about consideration to be given to modes of transport in the future

General findings

Questions 5a to 5e do not refer to specific measures, but ask more broadly about the degree of consideration a government should give to specific groups of road users or to specific transport modes when it is making plans for the future. The mean percentages in regard to these questions are reported in table 3.7.

Interestingly, half or more than half of the car drivers state that very much consideration should be given to alternatives to car such as walking, cycling or public transport when planning for the future. It seems that even among car drivers there is wide realisation of the importance of having alternatives to car transport. The questions 5a to 5e were not asked in 1991; a comparison over time cannot be done.

Table 3.7: Amount of consideration to be given to transport modes in the future

<table>
<thead>
<tr>
<th>Opinion: When planning for the future very much consideration should be given to...</th>
<th>Mean EU %</th>
</tr>
</thead>
<tbody>
<tr>
<td>... pedestrians</td>
<td>51%</td>
</tr>
<tr>
<td>... cyclists</td>
<td>50%</td>
</tr>
<tr>
<td>... motorcyclists</td>
<td>37%</td>
</tr>
<tr>
<td>... cars</td>
<td>37%</td>
</tr>
<tr>
<td>... lorries</td>
<td>42%</td>
</tr>
<tr>
<td>... public transport</td>
<td>55%</td>
</tr>
</tbody>
</table>

Differences between countries

In general the variation on questions 5a to 5e is not large. Question 5a (amount of consideration to be given to pedestrians) has a somewhat larger variation than the rest. The results for this question are given in figure 3.4. As can be seen, Czech, Slovakian, Slovenian, Austrian, Swiss and German drivers tend to consider only a modest role for pedestrians in future planning, whereas Belgian, French, Greek, Irish, Portuguese, and UK drivers have a majority agreeing with giving very much consideration to pedestrians in future planning.

If we take a look at national differences, two groups of drivers can be distinguished. First, it appears that the group of Portuguese, Irish, Polish and Greek drivers considers it particularly important that their government considers the position of various groups of road users and transport modes in the future. This group of drivers favours that high consideration should be given to various road users and transport modes. It may be that this answer pattern is the result of a more general interest in transport and traffic in these societies. That general interest may be the result of particular fast developments in the area of transport and traffic or of growing awareness of problem areas. Second, the group of Czech, Slovenian, Swiss and Austrian drivers tends to consistently favour less consideration to various road users and transport modes. For some reason or other, public interest in traffic and transport may be on a ‘low tide’ in these countries. In the case of Switzerland and Austria the general feeling may be that the traffic system as it is works quite well and needs not much tampering with in the future. For Czech and Slovenian drivers, as for countries where sizeable general changes happen, it is
likely that the problems of transport are quite neglected and seem to many people unimportant when compared with, for example, problems of health care.

**Figure 3.4: Consideration should be given to pedestrians in planning for the future (%) very much**

![Bar chart showing consideration for pedestrians in planning for the future by country.](chart)

### 3.6. Telematics

Telematics - the combination of telecommunication, electronics and information sciences - is an umbrella concept covering new technological developments that ease or guide interactions between humans, machines and environment through new information systems. The applications in this field for a better and safer traffic system seem numerous. The future role of telematics in national and international traffic partly depends on how road users think about these new technological applications. In the SARTRE 2 questionnaire, the respondents were asked how useful they would find it for themselves to have new technological appliances in their car (Questions 31a to 31e). Their opinion was asked on the usefulness of the following five devices: a route guidance system, a device that helps not to exceed the speed limit, a distance control device, an alcohol-meter and a mobile telephone. Table 3.8 describes the results for these questions.

**General findings**

In 1996, the most appreciated telematics application in Europe is a distance control system. Two third among European drivers would find it very or fairly useful to have a distance control system in their cars. There are no large differences in European opinions about a distance control system. Over half of the European drivers would find it very or fairly useful to have a
Opinions on road safety measures

device that helps them to respect the speed limit or to have a device that guides them to their place of destination.

The mobile telephone and the alcoholmeter come last as regards to judgements of usefulness. Over half of European drivers do not see any or much usefulness for themselves in having these devices in their car. Among the five devices, the mobile phone is, of course, the one device that is not directly connected with/developed for driving or road safety purposes.

### Table 3.8: Estimated personal usefulness of ‘in car’ devices

<table>
<thead>
<tr>
<th>Opinion: Very/fairly useful to have on your car ...</th>
<th>Sample</th>
<th>Mean EU %</th>
</tr>
</thead>
<tbody>
<tr>
<td>... a guidance system to find the way to destination</td>
<td>SARTRE 2</td>
<td>50%</td>
</tr>
<tr>
<td>... a device to assist you not to exceed the legal speed limit</td>
<td>SARTRE 2</td>
<td>57%</td>
</tr>
<tr>
<td>... a distance control system to maintain a safe distance automatically</td>
<td>SARTRE 2</td>
<td>67%</td>
</tr>
<tr>
<td>... an alcohol-meter to check if you are over the legal limit</td>
<td>SARTRE 2</td>
<td>46%</td>
</tr>
<tr>
<td>... a mobile telephone</td>
<td>SARTRE 2</td>
<td>38%</td>
</tr>
</tbody>
</table>

**Differences between countries**

The opinions about a distance control system, a guidance system and a device to assist not exceeding the speed limit did not show large variation. On the contrary, the opinions about the personal usefulness of the mobile telephone and the alcoholmeter are quite divided in Europe.

A closer look at the results concerning the mobile telephone reveals the following. Austrian, Dutch, French, German, Greek and Spanish drivers all have large majorities who do not see any or much personal usefulness in having a mobile phone in the car. Polish, Finnish, Italian, Swedish and Portuguese drivers make up majorities who estimate the mobile phone to be fairly or very useful for themselves. The particular publicity and cultural image surrounding the mobile telephone rather than driving or safety considerations probably determine the appraisal for this device in each European country.

The results concerning the alcoholmeter may elucidate further the European patterning in regard to drinking-and-driving. In figure 3.5 the results for the answer category ‘No use at all’ give the sharpest impressions of the differences.

At first thought somewhat surprisingly, Greek, French and Portuguese drivers who tend to be somewhat less disapproving of freedom of drinking-and-driving, have a majority who view use of the alcohol-meter as very or fairly useful to themselves. On the other hand, Dutch drivers who are among the most strict in Europe as regards freedom in drinking-and-driving, tend not see any or much personal usefulness in the alcohol-meter. And to further complicate the picture, Swedish drivers who share a strict attitude with the Dutch in regard to drinking-and-driving, tend to share their enthusiasm for the alcoholmeter with the Greece, French and Portuguese.

It may be that the drivers who do not see any or much personal usefulness in having an alcohol-meter, tend to rely on strict self-control to avoid drinking before driving and/or think they can establish quite well without any device whether they are over the legal alcohol limit. Strict self-control (or the preference for such control) and good working knowledge of the alcohol law may well be the main arguments for a reserved attitude towards the alcoholmeter.
Regarding European opinions on in car devices, Austrian drivers draw our attention in their reserved attitude towards most of these devices. With the exception of a distance control system, Austrian drivers tend not to see any or much personal usefulness in having these devices in their cars. In the previous section we have noted that Austrian drivers may at the time - for whatever reason - be not interested so much in traffic issues, or to put it in other words: not be inspired very much by possibilities for future improvement. It may be that their reserved attitude towards ‘in car’ devices is yet another manifestation of this ‘low interest/inspiration’.

Figure 3.5. In-car alcohol-meter allowing to check if over legal limit (% no personal usefulness)

3.7. General discussion

In 1996 there is large majority support among European drivers for road safety measures such as improvement of road standards, improvement of driver training, enforcement of traffic laws, testing of vehicles for safety, road safety campaigns, an European introduction of penalty points system and an European ban on alcohol for beginning drivers.

The introduction of a number of measures (e.g. penalty points system, installation of third braking light) on a European scale is also widely approved among European drivers. The approval for the European installation of a third braking light has increased greatly from minority support in 1991 to clear majority support in 1996. Presumably, the slowly increasing exposure to and (positive) experience with this device in daily traffic in the nineties has caused this considerable opinion shift.

The questions, which show the largest variation between European countries, pertain to the necessity of improving the standards of roads and to the strictness regarding drinking-and-driving. This result is in line with an earlier analysis of SARTRE 1 results, in which it was
Opinions on road safety measures

found that these questions were part of the two major discriminating dimensions between European countries.

Especially the findings concerning drinking-and-driving present a complex picture of differing attitudes. Drivers of southern European countries are, on the one hand, less extreme in their disapproval of freedom in drinking-and-driving and, on the other hand, very extreme in their thinking that drinking-and-driving will lead to accidents and that drinking-and-driving should be completely forbidden for young drivers. This answer pattern may indicate a tendency of southern European drivers to view the problem of drinking-and-driving as the particular problem of certain target groups (e.g. young people, or people with anti-social tendencies) and to equate drinking-and-driving with ‘drunk driving’ or ‘reckless, uncontrolled driving’. It may be that drivers of northern European countries are more inclined to view drinking-and-driving as a general societal phenomenon and to have a more legalistic concept of drinking-and-driving, i.e. to see drinking-and-driving as driving with BAC above the legal limit. In chapter 4 about drinking-and-driving this issue is discussed in more detail.

Changes between SARTRE 1 and SARTRE 2

In Europe in general there are only a few large changes from 1991 to 1996 in opinions about measures. Most changes for most countries were within the range of 3 to 4 percentage points. For most of the countries, the support has hardly changed from SARTRE 1 to SARTRE 2. Taking a look at results on a country basis reveals some large opinion changes for a number of countries.

From SARTRE 1 to SARTRE 2, most and largest changes in opinions about measures have occurred among Italian, Hungarian, Portuguese and Swiss drivers. The change of opinions among Swiss drivers is consistent in the sense that they are far less supportive of different road safety measures in SARTRE 2 than in SARTRE 1. This may in part be due to the fact that in the summer of 1996 the fines for various traffic offences have raised considerably. Like the Swiss, the Portuguese appear also to be less supportive of a number of different measures in SARTRE 2 - with the exception of government devoting more attention to improving driver education which they favour more in 1996 than in 1991.

In contrast to the findings for the Swiss and Portuguese drivers, the shift of opinions among Hungarian and Italian drivers goes more in the direction of growing support for a number of measures. In SARTRE 2, Hungarian drivers are more supportive of road safety campaigns, and of testing of vehicles, are more in favour of the European introduction of penalty points system, and of an obligation that car manufacturers restrict speed of cars and are more critical in regard to freedom in drinking-and-driving. In SARTRE 2, Italian drivers are more supportive of enforcement of traffic laws, restriction on the freedom of car manufacturers to use speed in advertisements, the European introduction of a penalty points system and of a requirement that car manufacturers restrict the maximum speed of cars. On the other hand, in SARTRE 2 Italian drivers are less supportive of more severity in penalties and are less extreme in their disapproval of freedom in drinking and driving.

Finally, some national groups of drivers have rather unique positions on certain subjects. Belgium is unique in its low approval for the European introduction of a penalty points system. France is unique in its strong support for restricting the freedom for car manufacturers in using speed in car advertisement and in obliging car manufacturers to restrict the maximum speed of their cars. Italian and Greek drivers may have what we call a ‘double norm’ regarding drinking-and-driving: very strict when thinking about drinking-and-driving as problem of specific target groups or as cause of accidents, but less strict when thinking about general freedom in drinking-and-driving. Swiss are rather unique in their meagre enthusiasm for measures on an
European scale and in their decreasing support for a number of road safety measures. Netherlands has a relatively unique position on drinking-and-driving: very strict regarding freedom in drinking-and-driving, but at the same time Dutch drivers do not see much usefulness in an alcoholmeter. Portugal is unique in its decreasing support for a number of measures. Among Italian drivers there is increased support for a number of measures, but there is no increase in the strictness concerning penalties for traffic offences and drinking-driving. Austrians are relatively unique in their reservations towards ‘in car’ devices.

Recommendations

1. The trend of waning support for a number of different road safety measures in some European countries may indicate some saturation with the road safety problem in these countries. Especially in these countries (but also in others) effort should be put into devising innovative road safety campaigns that are able to renew (personal) interest in road safety topics. Preferably, mass-media communications should be locally supplemented with more personal forms of communication directed at specific target groups or at local regions.

2. In some European countries where the enthusiasm and support for a number of road safety measures has been greatly increased, there is good momentum for introducing and implementing a more active, new road safety policy.

3. European publicity about the dangers of drink driving should tackle possible misperceptions that equate drinking-and-driving with drunk driving, or that reduce the drinking-and-driving problem to problem behaviour of specific target groups.

4. Future transport and traffic planning should explicitly take into account the fact that at least half of the European car drivers agree on the idea that very much consideration should be given to alternative modes of transport besides the car, i.e. walking, cycling and the use of public transport.
Chapter 4  Drinking and drink driving

4.1 Introduction

The discussion of drink driving behaviour must keep in mind that there are considerable differences within Europe not only concerning driving culture but also drinking culture. Analyses of data of SARTRE 1 confirmed that different consumption patterns as well as different enforcement and legislation are important distinctions.

This chapter will point out:

1. Drinking behaviour in the participating countries
2. Opinions about alcohol risk when driving
3. Opinions about alcohol legislation
4. Self reported drinking and driving habits
5. Opinions about enforcement
6. Links between individual drinking habits, attitudes towards alcohol and driving, and reported behaviour by country

4.2 Drinking behaviour in the participating countries

Alcohol consumption patterns can be described by frequency of consumption and amount of alcoholic drinks per drinking occasion. Consumption patterns in wine producing countries are usually described as frequent and moderate whereas consumption patterns in Nordic countries are usually described as infrequent but when, then lots of units. This description can partly be verified by the collected data.

Frequency of consumption

Daily alcohol consumption (most days) is reported from about 13 percent of the drivers. Daily consumption is hardly reported from Sweden, Finland, Poland, Ireland, Slovakia and Switzerland (Fig 4.1a). Daily consumption is often reported from the typical wine producers Portugal, Italy and France. Daily consumption is also often reported from the Netherlands, but not from the wine producer Spain, which is almost European average.

A comparison of SARTRE 2 with SARTRE 1 results shows:

• a decrease of frequent alcohol consumption for Austria, Belgium, Portugal and Switzerland,
• an increase of frequent alcohol consumption for the UK,
Figure 4.1a: In general how often do you drink alcohol in a week? Frequency in %

Figure 4.1b: In general how often do you drink alcohol in a week: never in %
A high or low proportion of people reporting frequent consumption does not necessarily mean that the rate of abstainers is respectively low or high. In the wine country Italy, and especially Spain, quite infrequent consumption is reported by a lot of people (Fig. 4.1b). For Sweden very infrequent consumption is found very seldom.

A comparison of SARTRE 2 with SARTRE 1 results shows:

- a lower rate of very infrequent consumers for Ireland, Italy and the UK,
- an increased rate of very infrequent consumers for Hungary and Switzerland;
- in Portugal, Sweden and Slovakia consumption patterns seem to shift from abstaining to infrequent consumption.

**Units per drinking occasion**

About 41 percent of the interviewed drivers from EU countries say that their typical consumption is 1 to 2 units of alcoholic drinks (Fig. 4.2). Moderate amounts per drinking event are frequently reported from the wine countries France, Italy and Portugal, but also from Austria, the Netherlands, Slovenia and Switzerland.

**Figure 4.2: In general when you are drinking, how many units alcohol do you typically drink?**

About 11 percent of the interviewed drivers say that their typical consumption is 5 units of alcoholic drinks or more. Five or more units per drinking event are frequently reported from Ireland and Poland (33%), Finland, the UK and Sweden. Such heavy consumption is very rare in France, Italy and Switzerland.
A comparison of the surveys of 1991 and 1996 regarding this issue must be interpreted carefully, partly questionnaires and instructions have been changed. The following differences, however, are obvious:

- in Ireland and Spain a decrease of moderate consumption and an increase of heavier consumption,
- in the Czech Republic and Slovakia and Switzerland a decrease of heavy consumption and an increase of moderate consumption.

**Classification**

The data show a distinction between beer and wine countries, the classification, however, is not strict. New influences probably gain more and more importance, the margins of drinking cultures may vanish due to globalisation.

**4.3 Opinions about alcohol risk when driving**

More than 40 percent of the interviewed drivers think that drinking and driving is very often a factor causing road accidents (Fig. 4.3). The variations between the countries are not too extreme and obvious distinctive criteria are not evident. The ratings are higher for France, Greece, Spain, Sweden, UK, Poland and Hungary. Low ratings can be observed in the Netherlands, Germany and Finland.

**Figure 4.3: How often do you think the following factors are the causes of road accidents? ...Drinking and driving, in %**
A comparison of the SARTRE 1 and SARTRE 2 data shows:

- an increased perception of alcohol as an accident cause in: Italy, Portugal, Spain and Hungary (countries with a high wine production),
- a decreased perception of alcohol as an accident cause in: Belgium, Germany, Ireland, Sweden, Czech Republic, Switzerland (countries where beer is of greater importance; it seems as if «beer countries» and «wine countries» become closer in this respect).

4.4 Opinions about alcohol legislation

Ban of alcohol on the roads

More than 40 percent of the drivers in the EU (and more in the non-member countries) want a ban of alcohol on the roads. The rejection of alcohol when driving is very pronounced in Slovakia, the Czech Republic, Hungary and Poland (Fig. 4.4). In the member states of the EU the idea of a ban of alcohol on the road finds much support in Sweden, the Netherlands, Finland and the UK (the only country among these with 0.08 BAC level). Very few drivers support a ban of alcohol on the roads in Portugal, Switzerland, Austria, France and Belgium.

Figure 4.4: Opinions about what the legal limit should be. Do you think drivers should be allowed to drink...no alcohol at all %

Compared to 1991 the support for a ban of alcohol on the roads has:
- increased in Czech Republic and Slovakia, Ireland (moderate), Italy (moderate), Sweden (moderate),
- decreased in Austria, Germany, the Netherlands, Portugal, and Spain. In Germany the changed legislation in the new countries (from 0.00 to 0.08 BAC) presumably has changed the opinions, too.

**Lowering or increasing the limit**

Higher limits are supported in France, Belgium, Ireland, the Czech Republic and Slovakia. Ireland has reduced from 0.1 to 0.08, Belgium and France have reduced to 0.05 — the poll results indicate that there are still groups who refuse the changes. Czech Republic and Slovakia still have 0.00.

Lower limits are especially supported in the Mediterranean countries — Greece, Italy, Portugal and Slovenia. Considerably high support for the high limit of 0.08 is found in Switzerland and Austria.

**Units permitted**

The SARTRE survey tried to achieve comparable definitions of units of alcoholic beverages. As drinking habits differ the definitions are not exactly the same in each country. Depending on country one unit was defined as: 25 to 30 cl. beer or 10 to 20 cl. wine or 2 to 3 cl. spirits. Despite of these differences, one unit finally will contain about 10 to 15 mg pure alcohol, 12 mg as average is a quite reliable amount.

Two third of the drivers think that they should not drink more than two units of alcoholic beverages if they want to stay under the limit (Fig. 4.5). In those countries of course where the limit is 0.0 very high percentages of drivers say that they cannot drink any unit of alcoholic beverage (80% in Czech Republic, 60 % in Hungary, 45% in Slovakia).

**Figure 4.5: Estimation of alcohol allowed to drink, staying under limit, in units**
However, it is also interesting that also 52% of the Swedish drivers say that they cannot drink one single unit — the low limit of 0.02 makes divers really concerned that abstaining from alcohol when driving is necessary.

More important for the improvement of traffic safety is the group of drivers who think that high alcohol consumption is allowed without exceeding the alcohol limit. A consumption of more than five units is in any case dangerous and will end in a violation of a legal limit of 0.05 which is in force in many countries.

Percentages for Spain are so high, we do not display them. We see that drivers from Austria, Portugal and even Sweden think to a great extent that they can drink 5 or more units of alcoholic beverages without exceeding the limit.

It is important to note that in Sweden this group seems to be an exception, very few think that they can drink 3 to 4 units. In Ireland, the UK, Austria, Portugal, Belgium, Germany, Switzerland and again Spain a considerable percentage of drivers thinks that they can drink 3 to 4 units and will stay under the limit. With the exception of Portugal and Belgium these are the countries that still have the high limit of 0.08% BAC.

**Support for a ban of alcohol for new drivers**

Sixty one percent of the interviewed drivers from the EU-member states are very much in favour for a general regulation that does not allow alcohol consumption for new drivers.

Very high support (more than 2/3 of the drivers) is found in Italy, Austria, the Netherlands. Very high support is also reported in Slovenia (in many non-EU countries this question has not been asked, as the general legal limit is 0.0).

However in a few countries there is a broad opposition against such a regulation. 26% of the Swiss drivers are strictly against a ban of alcohol for new drivers and 19% of the Portuguese drivers. Only 6 percent of the drivers in the European Union are against a ban of alcohol for new drivers.

**4.5 Self reported drinking and driving habits**

*How often do you drive after drinking even a small amount of alcohol*

Almost 34 percent of the drivers in the EU say that they never drink even a small amount of alcohol before driving, and about 18 percent say that they drink less than once a week before driving (Fig. 4.6). 50 or more percent abstainers when driving are found in Sweden, Finland, Czech Republic, Slovakia, Hungary, the United Kingdom, Poland and the Netherlands.
Frequent driving after alcohol consumption (most days) is reported from wine countries, especially from Italy and Portugal, from Spain and France, but also from Austria. The percentage of drivers who say that they do not drink at all before driving increased in many countries if we compare the surveys of 1991 and 1996.

The rate of abstainers when driving increased in Austria, Belgium, Ireland, Italy, Portugal, Sweden, the UK, the Czech Republic and Slovakia. There has been a decrease in Germany, Switzerland and the Netherlands. In Germany the changed limit for the new countries may be responsible for the decrease of abstainers.

**Driving when over the alcohol limit**

The responses to the question concerning the violation of the alcohol limit are certainly subject to social desirability. There are 63 percent of drivers from EU countries who say that they are not concerned from this matter and additional 29 percent say that they never exceeded the limit the last month (Fig. 4.7).

There is however a considerable number of drivers who report to exceed the alcohol limit frequently (Fig. 4.8). Almost 4 percent of drivers from the EU report that they have driven last month at least once a week exceeding the legal limit.

Frequent driving when over the legal limit is often reported from Greece — more than 13 percent of the drivers drive at least once a week over the limit. Considerable rates are also reported from Switzerland, Slovenia, Belgium, Austria and Italy.
An interesting fact is that, especially in those countries where the rate of frequent driving over the limit is high, the rate of drivers who report never to exceed the limit is also quite high — this is obvious for Austria, Slovenia and Switzerland (not for Belgium).

Regarding frequent driving over the limit (more than three days a week) a comparison between 1991 survey and 1996 does not show any unfavourable development. Numbers are small so interpretation must be cautious, but there seems to be an improvement in Ireland, Italy, Portugal and Slovakia. Compliance with the limit:

- has improved in Italy and the Netherlands,
- has become less favourable in Belgium, Portugal and the UK. Belgium reduced the limit recently; this may explain why more drivers think that they may be above the limit.

Figure 4.7: Over the last month how often did you drive when you may have been over the legal limit for drinking and driving? Never drink, never do, %

<table>
<thead>
<tr>
<th>Country</th>
<th>NEVER DRINK</th>
<th>NEVER DO</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWEDEN</td>
<td>90</td>
<td>9</td>
</tr>
<tr>
<td>FINLAND</td>
<td>88</td>
<td>12</td>
</tr>
<tr>
<td>BELGIUM</td>
<td>66</td>
<td>18</td>
</tr>
<tr>
<td>IRELAND</td>
<td>74</td>
<td>18</td>
</tr>
<tr>
<td>GERMANY</td>
<td>66</td>
<td>22</td>
</tr>
<tr>
<td>UNITED KINGDOM</td>
<td>72</td>
<td>24</td>
</tr>
<tr>
<td>SPAIN</td>
<td>65</td>
<td>25</td>
</tr>
<tr>
<td>NETHERLANDS</td>
<td>72</td>
<td>25</td>
</tr>
<tr>
<td>EUROPEAN UNION</td>
<td>63</td>
<td>29</td>
</tr>
<tr>
<td>GREECE</td>
<td>51</td>
<td>31</td>
</tr>
<tr>
<td>AUSTRIA</td>
<td>53</td>
<td>33</td>
</tr>
<tr>
<td>ITALY</td>
<td>54</td>
<td>35</td>
</tr>
<tr>
<td>PORTUGAL</td>
<td>55</td>
<td>37</td>
</tr>
<tr>
<td>FRANCE</td>
<td>52</td>
<td>41</td>
</tr>
<tr>
<td>HUNGARY</td>
<td>94</td>
<td>4</td>
</tr>
<tr>
<td>POLAND</td>
<td>84</td>
<td>8</td>
</tr>
<tr>
<td>CZECH REP</td>
<td>84</td>
<td>9</td>
</tr>
<tr>
<td>SLOVAKIA</td>
<td>78</td>
<td>13</td>
</tr>
<tr>
<td>SWITZERLAND</td>
<td>47</td>
<td>33</td>
</tr>
<tr>
<td>SLOVENIA</td>
<td>48</td>
<td>34</td>
</tr>
</tbody>
</table>

**Number of units before driving**

About 4 percent of the drivers from EU countries report that they drink a maximum of three or more units before driving (Fig. 4.9). A high proportion of heavier consumers is found in Slovenia, Belgium, Switzerland and Greece, above average also the drivers from Austria, Ireland, Portugal and Spain.
Figure 4.8: Over the last month how often did you drive when you may have been over the legal limit for drinking and driving? One day or more, in %

Figure 4.9: In general when you are drinking and driving afterwards, what is the maximum number units alcohol that you drink? 3 or more drinks before driving
4.6 Opinions about enforcement

The estimated chance to be stopped and breathalised

More than one third of the drivers (37% from EU countries) say that on a typical journey they will „never“ be breathalised and more than an additional third (36%) say that they „rarely“ expect to be breathalised (Fig. 4.10).

Italian, Hungarian, Polish, Irish and Greek drivers and drivers from the UK, Swiss and Spanish drivers are quite sure that they will not be breathalised. A greater chance to be breathalised is reported from the Czech Republic, Slovakia, Slovenia and Finland.

Figure 4.10: On a typical journey, how likely is it that you will be stopped and breathalised? Rare breath tests

Looking at the complete sample there have been no important changes since 1991. Looking at single countries the following changes can be observed: the Italian drivers became even more sure that they will never be breathalised, the Swiss think their chance is „rare“, the Czech, the Slovak and the French drivers became less convinced that their chance to be tested is low.

Support of alcohol meters in cars

About 22 percent support alcohol meters in cars „very much“, additional 24 percent support such devices „fairly much“. Lot of support for such devices is found in Slovenia, Greece, France, Sweden, Ireland and Poland. A strong rejection of such devices is found in the Netherlands, Germany, Austria and the Czech Republic (50% or more answering „not at all“).
There is no simple explanation why the support of alcoholmeters differs so markedly between countries. The idea that this could have to do with the chance to be breathalised is not convincing as the following figure indicates (Fig. 4.11).

Figure 4.11: Chance to be breathalised compared with support of alcohol meters in cars

4.7 Links between individual drinking habits, attitudes towards alcohol and driving and reported behaviour by country

Austria - moderate consumers and heavy drinking over represented

Alcohol is not frequently regarded a main cause of accidents and many drivers reject alcoholmeters in cars and a general ban of alcohol on the roads. However, a ban of alcohol for new drivers finds great support (this is also law in Austria).

There are many drivers who drink little alcohol if they drink. Driving after drinking small amounts is often reported. There is also a considerable group of drivers, who think that a lot can be consumed and they also do so - drink a lot and drive when over the limit.

Belgium - permissive with respect to drink driving, frequent driving after heavy consumption

Belgian drivers reject a general ban of alcohol on the roads and are in high proportion for raising the alcohol limit (again, it has been lowered recently). Driving when over the limit is over represented, high consumption before driving is reported. However, the rate of drivers who do not drink at all is considerable, too.
Finland - Nordic drinking culture, supporting a ban of alcohol on the roads
Drivers from Finland do not drink often but if they do, they drink a lot. They do not drive after drinking, have a high chance to be breathalised and support a ban of alcohol on the roads in general. In Finland alcohol is not considered a very frequent cause of accidents.

France - moderate but frequent consumption, often driving after drinking, usually keeping the limit
French drivers drink often, but they drink small amounts and they drive afterwards (obeying the limit). They are in favour of alcoholmeters in cars but reject a ban of alcohol on the roads and want the limit raised (- again - it has just been lowered). In France alcohol is considered a frequent accident cause.

Germany - European average
Germans reject alcoholmeters in cars more often than European average. In Germany alcohol is not considered to be a frequent accident cause. With respect to other opinions and habits the German drivers are average.

Greece - problematic drink driving habits
Greek drivers report in high proportion that they drink and drive and they say that they drink considerable amounts before driving. They will hardly ever be breathalised and support a lower limit and alcoholmeters in cars. In Greece alcohol is considered to be a frequent accident cause.

Ireland - an attempt to link a Nordic drinking culture with driving
Drivers from Ireland hardly drink daily but they drink many units and drive after drinking big amounts. Irish drivers want the limit be raised (again - has been lowered recently) and think driving after several units of alcohol should be permitted. They are not afraid from breathalysing and support alcoholmeters in cars.

Italy - moderate and frequent consumption, keeping to the limit, supporting a lower limit
There are many drivers in Italy who drink often but few units (there is also a high proportion who drinks very seldom), although there chance to be breathalised is rated low, they keep to the limit. Italian drivers are in favour for lowering the limit (which is still 0.08) and they are in favour to prohibit young drivers from driving after alcohol consumption.

Netherlands - moderate and frequent consumption, high support for a ban of alcohol on the roads
There is a high proportion of drivers who drink daily and who drink few units. There are very few drivers who report to drive after drinking and many drivers who support a ban of alcohol on the roads (in general and for young drivers too). Alcoholmeters in cars are not supported and alcohol is not considered to be a frequent accident cause in the Netherlands.

Portugal - often driving after moderate consumption, rejecting a ban of alcohol
Drivers from Portugal drink often and they drink small amounts and they drive after drinking. Although the number of alcoholic drinks they believe to be permitted is rated high, they are in favour for lowering the limit, a ban of alcohol however is not supported.

Spain - permissive regarding number of drinks, keeping to limit
Drivers from Spain think that many drinks are permitted, they often report to drive after drinking, and they say that they keep the limit. The rate of abstainers is above average. The chance to be breathalised is rated low.
Sweden - Nordic drinking culture, supporting a ban of alcohol on the roads

Attitudes and habits quite similar to Finland - infrequent consumption, many units, do not drive after drinking and supporting a ban of alcohol on the roads. Alcohol is regarded to be a frequent cause of road accidents. A higher proportion than in other countries supports alcoholorimeters in cars - this may be due to the low limit of 0.02 (which is well accepted!).

United Kingdom - awareness of alcohol risk, discipline

If drivers from the UK drink, they drink many units and they also think that many units are permitted. Alcohol is regarded to be a frequent cause of road accidents. The chance to be breathalised is rated low. Many driver do not drive after consumption of even small amounts, there is great support for a ban of alcohol on the roads. The fact that a high limit coincides with high discipline is unique and it is worth to consider how discipline is supported in the system of the UK.

Czech Republic - strict regulation - supported, but also support for raising the limit

The ban of alcohol (limit 0.00) is linked with a chance to be breathalised. The number of drivers who abstain from alcohol when driving is high. There are many that support the ban of alcohol on the roads; there is also a group who supports a higher limit. The rate of abstainers is low and alcoholorimeters in cars are not supported to a great extent.

Hungary - strict regulation - supported and obeyed

Hungarian drivers are very much concerned that alcohol causes accidents and they support a ban of alcohol on the roads. There are several people who want the limit raised, however, the proportion of drivers who obey the regulation is considerable although breath tests seem to be rare.

Poland - infrequent and excessive drinking behaviours, awareness of alcohol risk, support of a ban of alcohol

Daily alcohol consumption is underreported, but if the Polish drivers drink, they drink a lot. They support a ban of alcohol on the roads (in general and for novice drivers) and consider alcohol a frequent cause of accidents. Many drivers report to abstain from alcohol when driving - although their chance to be breathalised is rated low.

Slovakia - strict regulation - supported, but also support for raising the limit

The ban of alcohol (limit 0.00) is linked with a chance to be breathalised. There are many that support the ban of alcohol on the roads and keep to that limit; however, there is also a group who supports a higher limit.

Slovenia - attitudes and habits differing within one country

Although the chance to be breathalised is rated high, many drivers report to drive when over the limit - with high consumptions. On the other hand there is also a big group which supports a lower limit and an alcohol ban for new drivers and alcoholorimeters in cars.

Switzerland - habits differing within one country and a rejection of a ban of alcohol

The chance to be breathalised is rated very low, a high proportion keeps to the limit, however, there are also many that exceed the alcohol limit when driving. A ban of alcohol is not supported. Alcohol consumption patterns in general indicate moderate consumption, but differences between the German, French and Italian speaking parts have to be considered.
4.8 Conclusion and recommendations

The comparison of countries shows that the problems with alcohol and driving are complex. The different patterns how attitudes and habits are linked indicate different drinking cultures, different driving cultures and different attempts to tackle the drink-driving problem. The view cross the border should help decision makers and all those who have to deal with the problem to find the most promising points for activities and improvements in their very country.

1. The attempt to achieve the general goal to reduce the alcohol risk in traffic in Europe needs the **consideration of national and cultural differences**.

2. Shifts regarding awareness of the alcohol risk in traffic within a period of five years indicate that these opinions and attitudes are subject to some influence of course also by information campaigns and legal measures. A decrease of the awareness in countries where measures have been taken or in countries which seem to perform well compared to other countries show the **necessity to continue the support of the awareness of alcohol risk in traffic**.

3. Low alcohol limits correspond with awareness of alcohol risk in traffic and with desirable habits regarding drinking and driving. However, this link between low limit and desirable attitudes and habits may take time as results from countries where the limit has been changed recently indicate. For those countries where there is little support for a low alcohol limit an **increase of the awareness of the alcohol risk with low blood alcohol concentrations is necessary**. UK perhaps is a good example for a «high limit – high discipline» situation.

4. Low alcohol limits however are no guarantee for responsible behaviour regarding drinking and driving of all drivers. Even in countries where regulations are strict and desirable attitudes are widespread a remarkable number of drivers report to drink several units of alcoholic drinks before driving. The **general strategy of increasing the perception of alcohol risk and making drivers more responsible needs supplement measures to prevent the hard core of violators from doing so**.

5. There is a great chance to increase the awareness of alcohol risk and to improve the behaviour of the drivers. The results of the survey provide guidelines for national policies and the setting of priorities. Anyway, two problems must be considered - the underestimation of alcohol risk of the average driver and the behaviour of frequent violators. National policies should be sophisticated and targeted to **avoid an alliance between violators and average drivers**. It must be pointed out that legal and public activities will not concern moderate consumption (e.g. with meals) but will target thoughtless and addictive abuse of alcohol.

6. A maximum BAC limit of 0.05 in the EU would be an advantage in several countries and there is range to overcome adverse side effects, which might arise when implementing this limit.

7. The low perception of the chance to be breathalised on a typical journey show considerable need to **support legal measures with enforcement** in several countries.
Table 4.1: Countries compared item by item with average

<table>
<thead>
<tr>
<th>Limit</th>
<th>Frequency &quot;daily&quot;</th>
<th>Frequency &quot;never&quot;</th>
<th>1-2 units</th>
<th>5 or more units</th>
<th>„alcohol causes accidents&quot;</th>
<th>Ban of alcohol on the road</th>
<th>3 or more units permitted</th>
<th>Opinion about limit &quot;+&quot; higher &quot;-&quot; lower</th>
<th>Ban of alcohol for new drivers</th>
<th>Driving after small amount &quot;5 days/week or more=+&quot; &quot;never= -&quot;</th>
<th>Driving over limit &quot;3 days a week or more =+&quot; &quot;Never= -&quot;</th>
<th>Driving after 3 units or more</th>
<th>Chance to be breathalised</th>
<th>Alcohol meters in cars</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUSTRIA</td>
<td>0.08</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>&quot;+/-&quot;</td>
<td>+</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BELGIUM</td>
<td>0.05 *</td>
<td>-</td>
<td>-</td>
<td>+</td>
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</table>

* limit has been reduced recently; ** increase of limit for East Germany because of unification
Chapter 5  Driving speed and attitudes to speeding

5.1 Introduction

Driving too fast - or at an excessive speed for the conditions - is widely recognised by those involved in road safety as being a major contributory factor in both the number and severity of traffic accidents. Some estimates suggest that speed is a factor in as many as one-third of all accidents and research has shown that an average increase of only 1 mile/h in traffic speeds on certain roads is associated with a 5% increase in accidents (Finch et al., 1994). Information on drivers' attitudes and reported behaviour with respect to speed related issues (such as speed choice, the relationship between speed and risk, enjoyment of speed, speed limits and enforcement, etc.) is therefore important in providing guidance about ways of reducing accidents involving excess speed by means of countermeasures such as education, publicity, enforcement and engineering. This knowledge is likely to be especially valuable when it provides comparative information from different countries, so that examples of 'good practice' can be identified and adopted.

The SARTRE 2 questionnaire included questions on a wide range of speed related issues. These included:

- Speed as a contributory factor in accidents (Q.4)
- Other drivers’ speeding behaviour (Q.8)
- Personal driving speed compared to other drivers; and on different types of road (Q.9 and Q.10)
- Enjoyment of speed (Q.28)
- Enforcement and desired speed limits (Q.11 and Q.12)
- Attitudes towards some possible countermeasures (Q.3c, Q.27b and Q.31b).

Also, a number of speed related questions were common to both SARTRE 1 and SARTRE 2 surveys, so that it is possible (for 15 countries) to identify any changes that had occurred during the 5 years between the two surveys.

This chapter will:

- report the main finding of the SARTRE 2 survey conducted in 1996/97. This is sometimes done with reference to an 'average of all European Union (EU) countries'. It is considered that this represents a more homogeneous 'bench-mark' for comparing individual countries against rather than an 'average of all participating countries'; also occasionally the results obtained from non-EU countries appear to be atypical, possibly because of recent social and political developments.

- describe the main changes that have occurred in the 5 years between the two SARTRE surveys. Because the individual countries participating in the two surveys were different and because the questionnaires used were not identical, any differences mentioned will only be for those 15 countries taking part in both surveys (and for questions included in both); and there will be no reference to 'average' results. Only the main changes, likely to be statistically
significant at the 5% level, will be referred to; although again there are examples of changes that appear to be rather extreme and may have resulted from factors (e.g. sampling) other than 'simple' changes in attitudes and reported behaviour.

- discuss the implications of the results with respect to improving road safety throughout Europe.

### 5.2 Results

All the results presented, usually expresses as percentages (%), have been rounded to the nearest whole number.

**Speed as a contributory factor in road accidents**

**General findings**

Nearly 4 out of 5 drivers (79%) from countries within the EU felt that 'driving too fast' was a major cause of accidents; being judged as the cause of accidents either 'often', 'very often' or 'always'. Of the various other factors considered, only 'drinking and driving' (85%) was judged as being a more frequent cause.

*Figure 5.1: 'Driving too fast' seen as a cause of accidents*

<table>
<thead>
<tr>
<th>Country</th>
<th>Percentage (often, very often, always)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FRANCE</td>
<td>66</td>
</tr>
<tr>
<td>SWEDEN</td>
<td>74</td>
</tr>
<tr>
<td>FINLAND</td>
<td>78</td>
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<td>NETHERLANDS</td>
<td>78</td>
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<tr>
<td>PORTUGAL</td>
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<td>EUROPEAN UNION</td>
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</tr>
<tr>
<td>ITALY</td>
<td>80</td>
</tr>
<tr>
<td>GERMANY</td>
<td>80</td>
</tr>
<tr>
<td>SPAIN</td>
<td>84</td>
</tr>
<tr>
<td>UNITED KINGDOM</td>
<td>86</td>
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<td>AUSTRIA</td>
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<tr>
<td>BELGIUM</td>
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</tr>
<tr>
<td>IRELAND</td>
<td>93</td>
</tr>
<tr>
<td>GREECE</td>
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</tr>
<tr>
<td>SWITZERLAND</td>
<td>80</td>
</tr>
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<td>SLOVAKIA</td>
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<td>CZECH REP</td>
<td>83</td>
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<tr>
<td>POLAND</td>
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<td>HUNGARY</td>
<td>90</td>
</tr>
<tr>
<td>SLOVENIA</td>
<td>91</td>
</tr>
</tbody>
</table>

(Percentage responding 'often', 'very often' or 'always')

'Following too closely' (often considered to be a direct consequence of driving too fast) was also seen as being a significant cause of accidents (74%). Other driver factors such as 'driving when tired' (71%), taking either 'drugs' or 'medicines' while driving (58% and 39% respectively) were seen as less of a safety problem. Factors concerning either the roads, such as
'bad weather' (61%), 'poor maintenance' (40%) and 'congestion' (40%), or vehicles, such as 'poor brakes' (56%), faulty lights (46%), 'defective steering' (43%) and 'bald tyres' (41%), were generally seen as being less important than factors relating to driving behaviour - the results for individual countries are discussed in more detail in Chapter 2.

Figure 5.1 compares the relative extent to which drivers in the 19 countries taking part in SARTRE 2 consider driving too fast to be a cause of accidents. While drivers in Greece and Ireland (both 94%) consider the role of driving too fast to be relatively high, drivers in France seem to consider speed as less of a safety problem; although they still regard it as a factor that causes many accidents.

Changes between SARTRE 1 and 2

Figure 5.2 shows how drivers' feelings about speed being a cause of accidents had changed between the first and second SARTRE surveys, for those 15 countries taking part in both surveys. An increase shows that drivers felt speed had become more of a problem between the two surveys, while a decrease (indicated by a negative percentage) means that drivers judged speed to be less of a problem at the time of the second survey; there had been no change for UK drivers between the two surveys.

Figure 5.2: Changes between SARTRE 1 and 2 for 'driving too fast' being a cause of accidents

While drivers in the Netherlands felt that driving too fast had become less of a cause of accidents (by 10%) over the 5 year period, drivers in the Czech Republic, Hungary and Spain all felt that it had become much more of a safety concern (by 27%, 19% and 17% respectively). These changes are likely to have resulted from differences in education, publicity and enforcement policies in the various countries, as well as social and political changes. However, a lack of objective information about the numbers of driving accidents caused by excess speed means that it not possible to see whether or not these subjective beliefs are matched by actual accident statistics.
**Other drivers’ speeding behaviour**

**General findings**

The results also showed a very widespread and strong belief that other drivers often exceeded speed limits. More than four-fifths (82%) of drivers in EU countries thought that they did so either 'often', 'very often' or 'always' (with over half of these responses being either 'very often or 'always').

This belief, whether correct or not - although there is widespread evidence, from a number of countries, that many drivers often drive faster than speed limits - is likely to be a strong influence on an individual drivers attitudes and behaviour with regard to speed limits and speeding. For example, it may reinforce a general feeling that speed limits are often set too low; it also offers support to the typical driver's belief that they are a safe driver and remain 'in control' even when driving fast (Corbett and Simon, 1992). Importantly, such a finding also suggests that there is a general feeling that enforcement of speed limits is not taken very seriously by the authorities and that many drivers get away with ignoring them much of the time - at least up to an officially sanctioned amount.

**Differences between countries**

Figure 5.3 shows how drivers in different countries varied in their belief about how often other drivers exceeded speed limits.

Drivers in Greece, the United Kingdom and Slovakia were amongst those countries with a high perception of other drivers speeding (with 93% of all drivers thinking that other drivers exceeded the limit either 'often', 'very often' or 'always'). Drivers in Sweden and Hungary (both 91%), Slovenia (90%), the Netherlands (89%), Ireland and Portugal (both 88%) revealed similar, but slightly less strong, beliefs. In contrast, drivers in Germany and Finland (both 70%), Spain (71%) and Switzerland (72%) considered that other drivers exceeded speed limits rather less, even though they clearly felt that they did so a very high proportion of the time.

**Changes between SARTRE 1 and 2**

Figure 5.4 shows how drivers in individual countries have changed in their beliefs about other drivers speeding behaviour between the SARTRE 1 and 2 surveys. While drivers in Belgium (11%), Switzerland (9%) and Austria (8%) considered that it had reduced by a sizeable amount, drivers in Italy (36%), Portugal (20%), Slovakia (17%) and Spain (11%) judged that speeding behaviour had increased to a marked extent; although we have little objective information on actual speeding behaviour in the various countries to compare the subjective estimates against.
Figure 5.3: Other drivers exceeding the speed limit

(Percentage responding 'often', 'very often' or 'always')

Figure 5.4: Changes between SARTRE 1 and 2 for other drivers exceeding the speed limit

Difference in percentage responding 'often', 'very often' or 'always'
Own driving speed

General findings

Over half of all EU drivers (53%) considered that they drove about the same speed as other drivers (who were generally felt to be braking speed limits, see Figure 5.3), with 19% judging that they drove a 'little faster' while 21% responded that they drove a 'little slower'; 2% judged that they drove 'much faster' and 4% considered they drove 'much slower'. While these findings are not backed up with actual speed measures, they do suggest that, in general, drivers probably have a reasonable idea about their own driving behaviour with respect to speed - and this is supported by recent research conducted in the United Kingdom (Quimby et al, 1997).

Importantly, with regard to road safety, drivers' perceptions of their own speed choice - with respect to speed limits - depends markedly on the types of road being driven on. When drivers were asked how often they drove 'faster than the speed limit' the responses varied considerably depending on the type of road specified. While nearly one-quarter (24%) of EU drivers reported that they exceeded the speed limit (either 'often', 'very often' or 'always') on motorways, only 19% reported they did so on main roads between towns, with only a relatively small number admitting they broke the speed limit on country roads (13%) or built-up areas (8%). While these results suggest that in general drivers are sensitive to the relative dangers associated with different road types, it is necessary to remember that this is self reported behaviour and the results may reflect, at least to some extent, what is seem as being socially acceptable behaviour; although actual speed surveys generally do show a higher number of drivers exceeding the speed limit on higher speed roads.

Figure 5.5: Own speed compared to other drivers

(Percentage responding 'a little faster' or 'much faster')
Although the SARTRE survey did not fully explore the reasons why drivers were, or were not, exceeding speed limits, it did determine that a sizeable number of drivers reported that they 'enjoyed driving fast', with 9% of all EU drivers responding that they did so 'very much'. While this may not represent a surprising result (especially given the 'social marketing' (OECD, 1993) of the desirability of speed and power by car manufacturers), it does have serious implications with respect to changing such behaviour in order to improve safety.

**Individual countries**

There appear to be marked national differences with regard to how drivers view the speed at which they drive compared to others - see Figure 5.5. While 30% of drivers in the Netherlands, 28% of French drivers and 25% of Swedish drivers considered that they drove faster than average, only 12% of Polish drivers, 14% of drivers from Spain, 15% of Slovakian drivers, 16% of drivers in Belgium, Germany and the Czech Republic and 17% of Austrian drivers did so; these findings probably reflect different cultural attitudes to cars, driving and safety.

**Table 5.1: Drivers reporting they exceed the speed limit on different types of road; and changes between SARTRE 1 and SARTRE 2**

<table>
<thead>
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<th>Percent</th>
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<th>diff</th>
<th>Built-up areas</th>
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<td>-3</td>
<td>15</td>
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<td>2</td>
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</tbody>
</table>

Again, reported speeding behaviour on different types of road varied between countries. Table 5.1 gives the results for each country for different road types. While it is clear that drivers typically report that they exceed speed limits (either 'often', 'very often' or 'always') more on higher speed roads, the extent to which they do this varies considerably between countries. Also, French drivers appear to go against the general pattern for driving within speed limits in built-up areas; and drivers in Hungary, Poland and Slovakia reported exceeding speed limits relatively less on motorways.
There also appear to be clear differences between the results for individual countries for self-reported speed behaviour depending on whether this was relative to other drivers (see Figure 5.5) or with respect to speed limits (see Table 5.1) - again possibly caused by social and cultural factors, including differences in the desire to give socially acceptable responses.

Importantly, for road safety in individual countries, there were pronounced differences between countries for the number of drivers who reported that they enjoyed driving fast - see Figure 5.6. While only 3% of drivers in Spain, 4% of drivers in the United Kingdom and Hungary responded that they enjoyed driving fast, 37% of drivers in Slovakia, 23% of drivers in Finland, 20% of drivers in Poland and 19% of drivers in Portugal did so.

It is also important for road safety that there did not appear to be any simple correlation or linkage - between individual countries at least - for responses about personal driving speed (compared to other drivers, Figure 5.5) and perceptions of how safely they drive (again, compared to other drivers, Figure 5.7). This finding suggests that, in general, drivers are not aware of, or are not prepared to acknowledge, the strong relationship between their own driving speed and driving safety - even though they do appear to recognise that excessive speed is an important factor in other drivers causing accidents (Figure 5.1). It appears that individual drivers do not see their own driving behaviour and safety in the same way as they view it for others - and possibly consider that they personally can safely exceed speed limits because they (but not other drivers) are expert enough to be 'in control' (McKenna et al., 1991) and safe at higher speeds.
Similarly there was very little correspondence, again for individual countries, between reported speed behaviour (Figure 5.5) and actual enjoyment of driving fast (Figure 5.6) - although different levels of enforcement (either actual or perceived) in different countries may have been a factor here - in that there is little enjoyment to be derived from behaviour that offers the threat - or reality - of being 'caught' by the police or speed cameras and punished.

*Changes between SARTRE 1 and 2*

Figure 5.8 shows how the proportion of drivers who felt that they drove faster than average (either 'a little more' or 'much more') had changed for individual countries between the two SARTRE surveys. While this behaviour was thought to have reduced by drivers in Belgium and Hungary (by 8% and 7% respectively) the proportion of drivers in Italy, Portugal, Germany and France who thought they drove faster than average had increased (by 10%, 7%, 5% and 4% respectively). The reasons for such differences are likely to be complex and will have been influenced by a number of factors such as national publicity and enforcement campaigns, see Chapter 7.

These changes between the two surveys about speed compared to other drivers (Figure 5.8) can be considered alongside the changes found to the question about driving faster than the speed limit for the four different types of road considered - included in Table 5.1. While there is some agreement between the responses to these questions (e.g. Portugal), in some cases (e.g. Italy) there appeared to be pronounced differences between the two sets of responses - however, it must be realised that one question is about driving speed with respect to other drivers (and thus may partly reflect a desire to be recognised as skilled - and faster - drivers) while the other is with reference to speed limits and is possibly influenced by the drivers' general attitudes to speed limits (and the role of the law in enforcing them) and also a wish to give socially acceptable answers.
Figure 5.8: Changes between SARTRE 1 and 2 for own speed compared to other drivers

Figure 5.9: Changes between SARTRE 1 and 2 for enjoying driving fast

In any respect, Table 5.1 shows, with the obvious exception of a few countries (e.g. Portugal reporting more speeding, and Belgium and Hungary reporting less speeding), relatively little shift had occurred in the proportion of drivers reporting they drove faster or slower than the speed limit in the period between the surveys.
However, there had been a marked change in the proportion of drivers who reported that they enjoyed driving fast - see Figure 5.9. While there had been a reduction in such responses for drivers in Austria, the Czech Republic and the United Kingdom (by 8% in each case) and Switzerland (by 6%); the results revealed a sizeable increase in Portugal (24%) and a marked increase in the Netherlands and Slovakia (9% and 8% respectively). However, reasons for these various shifts are hard to explain, although one reason may be changes in publicity and enforcement activity, while another may have been a shift in general attitudes to 'lifestyle' factors.

**Enforcement and desired speed limit**

*General findings*

Overall, less than 1 in 5 drivers (17%) thought that their speed might be 'monitored (either 'often', 'very often' or 'always') by speed cameras or the police on a typical journey'. This is surprisingly high considering the number of drivers who acknowledge that they regularly break the speed limit. It might be that drivers expect to be allowed to exceed the speed limit, at least by a small amount, before they will be penalised in some way by the police or speed cameras - and this expectation may be correct given the need to allow for possible operational errors in speed monitoring equipment and the generally stated objective that such enforcement is aimed at deterring 'dangerous' speeding, rather than 'simply' catching all of those driving over the speed limit by a small margin, that appears to be the practice adopted in some countries.

A similar proportion of drivers (18%) reported that they had been 'fined or punished in some other way' for exceeding the speed limit in the last three years. However, there was considerable variability in these two results, for being monitored or being punished, between countries - see Figure 5.10.

Also, with respect to speed enforcement, there was considerable general support for speed limits staying at their current levels, with support for this ranging from 73%, 70% and 51% respectively for built-up area, main roads between towns and motorways. As a consequence support for increasing speed limits (or having no limits at all) went up from only 10% in built-up areas, to 24% in main roads and to 42% on motorways. Again there was considerable variability between countries; possibly resulting from the different limits that were in operation, or in recent changes that have been made to speed limits in some countries, see Chapter 7.

*Individual countries*

Figure 5.10 shows the results obtained for two questions relating to enforcement of speeding. Drivers' perceived risk of having their speed 'monitored' (by a speed camera or the police) on a typical journey, arranged in order on the left of the figure, ranged from a high of 37% (in Slovenia) - with Hungary (34%), the United Kingdom (30%) and Portugal (23%) also producing high estimates (as did Austria, Netherlands, Germany and Switzerland) - to a low of 3% (in Sweden) - with Ireland (5%) and Italy (7%) also producing low scores.
Figure 5.10 also gives the results to the question about whether drivers had been fined or punished in any other way for breaking speed limits in the previous 3 years period. Perhaps surprisingly, there was no obvious relationship (across countries) between drivers’ perception of being stopped and those reporting that they had actually been stopped and punished. Austria (38%), Switzerland (33%), Slovenia (32%), Germany (31%) and the Netherlands (31%) produced the highest scores for reported speed ‘enforcement’ while Ireland (3%), Greece (6%), United Kingdom (7%), France (8%) and Sweden (9%) produced the lowest scores for actually being punished for speeding as a result of police or speed camera activity. These results show that in some countries drivers underestimate the amount of perceived enforcement activity. If enforcement is primarily intended to deter (rather than simply to ‘catch and punish’; and thus generate revenue) this mismatch needs to be addressed if general safety is to be improved.

Table 5.2 shows that while in general there was marked support for higher speed limits on motorways very few drivers approved such an increase for roads in built-up areas; while about a quarter of drivers thought that speed limits should be increased on main roads. There were also marked differences between countries in the proportion of drivers supporting increased speed limits, which appeared to be particularly popular in non-EU countries. Support for higher limits in built-up areas was 52% and 41% respectively for Hungary and Slovakia; on main roads between towns 52% and 43% respectively for Hungary and Slovakia; and on motorways 73% and 71% respectively in the Czech Republic and Slovakia.
Changes between SARTRE 1 and 2

Unfortunately, it is not possible to compare the results of the SARTRE 1 and 2 surveys directly with respect to the proportion of drivers who had been fined or punished for speeding offences because a slightly different question was asked in each survey; while SARTRE 1 asked whether drivers have ever been fined or punished for speeding SARTRE 2 asked only about the previous 3 year period. However, the results of the surveys show that there are significant, and important, differences between drivers experience of speeding enforcement; the results will be summarised here by identifying the 5 countries who scored either highest and lowest for each survey.

SARTRE 2 found that while 38% of drivers in Austria had been punished for speeding in the previous 3 years (with equivalent scores for drivers in Switzerland, Germany, the Netherlands and the Czech Republic of 33, 31, 28 and 21% respectively) only 3% of drivers in Ireland had been similarly punished (with equivalent scores for the United Kingdom, France, Portugal and Sweden of 7, 8, 8 and 9% respectively). In contrast at the time of SARTRE 1 survey, drivers in Germany, Italy, the United Kingdom, Austria and France (with 78, 52, 51, 50 and 50% of drivers respectively having been punished, at some time, for speeding) had more experience of speeding enforcement, compared to drivers in Belgium, the Netherlands, Switzerland, Sweden and Hungary (with corresponding figures of 21, 23, 23, 26 and 28% respectively).

These results suggest that, in the long term, relatively more speed enforcement has taken place in Austria and Germany (in the 'high' group - of 5 countries - for both SARTRE 1 and 2)
compared to Sweden (which produced a 'low' score in both surveys'). In relative terms the amount of enforcement appears to have gone up in Switzerland and the Netherlands (both of which moved from the 'low' to 'high' groups - although the percentage changes were relatively small, especially for the Netherlands where scores only went from 23 to 28%); in contrast between SARTRE 1 and 2 France and the United Kingdom shifted from the 'high' to the 'low' enforcement groups.

Table 5.2 shows the changes in drivers' attitudes towards higher speed limits, for three different types of roads that took place between the surveys. However, there does not appear to be any clear pattern of changing driver attitudes towards higher speed limits, although it might be expected that any changes would be very different for motorways and roads in built-up areas. While drivers in 10 countries had become more in favour of higher limits on main roads (while those in 5 countries had become less in favour), only half this number showed such an increase for roads in built-up areas; while the drivers in only 3 countries had done so for motorway speed limits.

Also, while drivers in a number of countries exhibited different shifts for the various road types, drivers in Portugal and Slovakia had typically become more in favour of higher limits for all road types while drivers in Germany, Spain and Switzerland had become less in favour of increased limits on all road types. Some of these findings are possibly explained by actual changes to speed limits that have taken place between the two SARTRE surveys; plus the current limits in certain countries and things such as police enforcement activity and any publicity campaigns aimed at reducing speeding that may have taken place. However, the picture is far from clear. For example, the recent increase in speed limits on main roads that took place in both Italy and Spain appears to have influenced attitudes in opposite directions, while the reduction in speed limits in built-up areas (from 60 to 50 km/h) that took place in countries such as Portugal and Spain resulted in little change in drivers' attitudes - while in contrast the same change in Hungary and Slovakia appear to have caused drivers to become very strongly supportive of higher limits.

**Attitudes to countermeasures**

**General findings**

Drivers' degree of support for 3 different 'countermeasures' aimed at reducing speeding were obtained by asking whether or not they agreed that 'car manufacturers should not be allowed to stress the speed of their cars in their advertisements' (from now referred to as 'advertising restriction'), how much they supported having a requirement' (throughout Europe) that manufactures modify their vehicles to restrict their maximum speed' ('speed limiters') and how useful they would find 'a device in your car to assist you in not exceeding the limit' ('speed limit control').

There was considerable support for each of these measures, with support within the EU countries being 47% (for advertising restrictions), 54% (for speed limiters) and 57% (for speed limit control). These high levels of support will again reflect the wish of some respondents to give socially acceptable responses; although it also possibly reflects a general increasing desire to see driving speeds - and other forms of antisocial and aggressive driving - reduced.
Table 5.3: Support for different countermeasures and changes between SARTRE 1 and SARTRE 2

<table>
<thead>
<tr>
<th>Country</th>
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<th>Diff 1</th>
<th>Ratio 2</th>
<th>Diff 2</th>
<th>Ratio 3</th>
<th>Advertising restrictions</th>
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</table>

Individual countries

Table 5.3 shows the level of support given to each of the 3 countermeasures from drivers in each country, with the countries ordered by the result for speed limiters. In general there was a similar degree of support for each of the 3 measures, although support was generally higher within EU countries rather than non-EU countries, especially for 'speed limiters', which was to be introduced as part of a process of European 'harmonisation'. Perhaps, understandably this received more support in EU countries.

Changes between SARTRE 1 and 2

Table 5.3 also shows how support for 2 of the countermeasures had changed between SARTRE 1 and 2. While support for speed limiters had gone down in Sweden (by 5%), Portugal and the Czech Republic (both by 4%), support for this measure had increased in Hungary and Italy (by 18% and 15% respectively). Support for advertising restrictions had reduced in Portugal and Slovakia (by 10%) and also in Czech Republic and Switzerland (both by 8%), but had increased markedly in Italy (by 28%) and also increased in Spain (by 11%).

5.3 Implication of results for safety

• The surveys showed that the reported behaviour and attitudes to speed related issues vary considerably from country to country. There are also very marked differences in changes that
have occurred between SARTRE 1 and 2. There does not appear to be any simple pattern to the results (e.g. differences between EU and non-EU countries, between northern or southern - or eastern or western - countries, or even a similarity within Scandinavian countries, etc.).

• Differences identified between countries mean that it is possible to identify examples of 'good practice' (and similarly 'bad practice') that could inform less effective countries how they might improve their performance.

• The numbers of road safety accidents caused by excessive speed can be reduced by the use of a variety of measures, such as education (including publicity), engineering (such as improved road layout and traffic calming in residential areas) and enforcement. A multi-factor approach is likely to be more effective and the results of this survey may provide guidance for individual countries as to whether or not they have the correct 'mix'. This will need to be determined for each country based on their own recent experience.

• There is widespread recognition that speed is a major factor in causing traffic accidents - and this belief has increased since the first SARTRE survey. There is also a widespread belief that many other drivers frequently drive faster than the speed limit - and again this perception has increased since the first SARTRE survey. Also, there is a general acceptance that drivers themselves often drive faster than speed limit - although drivers do appear to be sensitive to different road type as they admit to more speeding on higher speed roads. This latter finding shows that individuals recognise the link between speed and safety in some general way, unfortunately this is not reflected when comparing the results, for individual countries, between driving speed and driving safety. If drivers were made more aware of the high link between speed and safety this may engender a more thoughtful, slower and thus safer style of driving.

• A considerable number of drivers reported that they enjoyed driving fast. In most circumstances a 'love of speed' is not compatible with being a safe driver and this needs to be targeted by means of publicity and when training new drivers.

• The results suggest that enforcement of speeding could be improved in a number of countries. Drivers typically reported that they frequently drove faster than speed limits, especially on faster roads. Surprisingly, in the light of this reported behaviour, they also reported that there was a good chance of having their speed monitored while driving. This apparent conflict may result from drivers believing that the authorities (whether the police conducting speed checks, or local authorities setting the threshold for triggering speed cameras) allow a certain tolerance over the speed limit before enforcement action is taken. This belief, whether true or not, is receives constant reinforcement by the large majority of speeding drivers and must lead to a feeling that the authorities do not take speeding (up to a certain point) seriously, and thus condone it as being an acceptable behaviour.

• Countermeasures aimed at reducing speeding (e.g. speed limiters) and making speed less glamorous (e.g. in commercials aimed at selling cars because of their speed, acceleration and power) were widely supported. This suggests that 'driving too fast' is now being recognised as an unacceptable and antisocial behaviour (in the same way that attitudes to drinking and driving have been changed over the last 20 years from it being acceptable to it being socially unacceptable) and that public support for actions to curb it (such as increased penalties and more enforcement (see Chapter 3) would be readily accepted by the majority of drivers.

• The results reported here are only concerned with the overall results obtained for each country, while research typically identifies a variety of individual differences within the driving population (such as age, sex, lifestyle and driving exposure) that are important in determining an individual's accident liability. An in-depth analyses of the speeding behaviour and attitudes
of all European drivers that looks at such individual differences should therefore provide additional implications of how the results can be used to improve safety. The results of such an analysis will be reported in the in-depth analyses report.

5.4 Summary

- There are very marked differences between countries in drivers attitudes towards speed related issues. Similarly there are differences in self reported speed behaviour
- In general, drivers recognise that driving too fast is a major cause of accidents - but less of a factor than drinking and driving
- Many drivers consider that most other drivers exceed speed limits much of the time
- Drivers often admit to driving faster than the speed limit, but report doing so more often on higher speed roads than in built-up area, this is in spite of the fact that they think there is a high probability that their speed will be monitored on a typical journey
- A significant number of drivers reported that they enjoyed driving fast
- When comparing the results of individual countries there was no simple relationship between drivers' ratings of their own driving speed and driving safety
- Generally drivers were in favour of the introduction of countermeasures aimed at reducing speed related accidents
- The findings can be used by individual countries to inform their future safety measures aimed at reducing the numbers of speed related accidents.
- An in-depth analysis looking at individual characteristics (such as age and sex) within the whole sample of drivers, rather than simply comparing the results from each country - and the implications of these findings - is reported elsewhere.

References


Chapter 6  Use of seat belts

6.1 Introduction

The scientific assessment of the fatality and injury reducing effects of seat belts is well documented. The percentage reduction in injuries that occurs when the seat belts are used is estimated to be around 50% for fatal and serious injuries (for review see ETSC, 1996). Seat belts are most effective in frontal, rear and roll over collisions, and especially in low speed accidents (Evans, 1990). Consequently, it is not surprising that all EU countries, Poland and Switzerland have implemented laws requiring seat belt fitting and seat belt use for all seats. Data for other countries involved in SARTRE 2 were not available.

In the following, the principal results of SARTRE 2 regarding seat belts will be presented. More specifically, the survey results cover the following areas:

• frequency of seat belt installations
• seat belt use in different environments
• attitudes towards seat belt wearing
• enforcement of seat belt laws.

The results will be compared with the corresponding results of SARTRE 1 if a question of SARTRE 1 was the same or about the same. In every case, the data for West and East Germany of SARTRE 1 were combined (weighted by the number of drivers). Also, data for the Czech Republic and Slovakia of SARTRE 2 were compared with the data for former Czechoslovakia of SARTRE 1. Only significant changes between SARTRE 1 and 2 are indicated.

6.2 Frequency of seat belt installations

The proportion of cars having seat belts installed in the front seats was more than 95% in every country, except in Slovakia (89%). However, Fig. 6.1 shows that there were relatively high percentages of cars with no seat belts in the rear seats. On the other hand, the most important difference between SARTRE 1 and SARTRE 2 was that the percentage of cars with seat belts in all seats increased significantly in each country involved in both surveys, except in Sweden which had a very high percentage already in SARTRE 1. The countries that had the most substantial increase (i.e. Italy, Portugal, Ireland, the Netherlands and Spain), implemented a law requiring seat belt fitting for all seats about at the time of the first survey or between the two surveys (ETSC, 1996).

The proportion of cars having seat belts installed in all seats highly correlates with the year of mandatory fitting of belts in all seats: the earlier the requirement of fitting in a given country is, the more frequent fitting is found among the car population. This can be demonstrated by comparison of the SARTRE 2 results of Figure 6.1 and legislation data of ETSC (1996) showing the implementation year for fitting of rear seat belts in new cars for EU countries. The results of this analysis showed that the correlation coefficient for those 13 countries was high (−0.82).
6.3 Seat belt use in different environments

In SARTRE 2, seat belt use was studied in three environments - (a) in town, (b) on main road between towns and (c) on motorway - while SARTRE 1 included the following situations: (a) a short journey in town, (b) a short journey on main road between towns, (c) a long journey on main road between towns and (d) a long journey on motorway. In spite of these differences, the results of both surveys are given in Fig. 6.2 through 6.4. An attempt was made to convert former results to correspond to SARTRE 2 results as well as possible. Specifically, the situations "a" and "d" of the former survey were contrasted with the environments "a" and "c" of the latter survey (i.e. with no transformation). The mean of the numbers in situations "b" and "c" of the former survey was calculated and contrasted with "b" of the latter survey. The results showed that countries differed considerably in seat belt use in towns (Fig. 6.2). The highest (more than 80%) percentage of "always" answers was for United Kingdom, followed by Sweden, Germany and Finland. In contrast, Greece and Italy had the lowest rates (less than 20%).

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2 “Don’t know” answers were excluded from the analyses. The proportion of those answers was less than 1% for each country, except for Spain in SARTRE 2 (2%).
Comparison of the results of the surveys showed that the percentage of "always" answers did not decrease in any country involved in both surveys. The increase was substantial in Portugal and Spain, which introduced a compulsory use of front and rear seat belts inside urban areas in 1993 and 1992, respectively. A less substantial increase was found for Sweden, France, Austria, Switzerland, Hungary, Slovakia and the Czech Republic.

For some countries, it was possible to compare the survey results with results of observational studies (see reviews ETSC, 1996; Wilding, 1997). However, the measures were slightly different, i.e. the results shown in Fig. 6.2 indicate the percentages of the "always" answers of drivers, while the study of ETSC (1996) showed the seat belt wearing rates of front seat occupants and the year of data collection varied between 1994 and 1995. Nevertheless, the analyses (not shown) suggested that - in comparison to the observational studies - the survey results showed over 10 percentage units higher seat belt wearing for Spain and Hungary, while the results for Austria, Finland, France, Germany, the Netherlands, Sweden, United Kingdom and the Czech republic were rather similar.

Overall, the percentages of "always" answers for main roads between towns were higher than for towns (Fig. 6.3). However, the main pattern by country was rather similar. The highest percentage (more than 90%) of "always" responses was for United Kingdom, followed by Finland, Sweden and France. Italy and Greece had the lowest rates (less than 40%).

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3 "Don’t know” and "no seat belts fitted” answers were excluded from the analyses. The proportion of those answers was less than 5% for each country, except for Slovakia in SARTRE 2 (9%) and Czechoslovakia in SARTRE 1 (10%).
Comparison of the survey results showed that the percentage of “always” answers slightly decreased in the Czech Republic and Slovakia. On the other hand, the increase was substantial in Spain, Portugal, Switzerland and Hungary.

Figure 6.3: How often do you wear seat belt in making a journey on main road between towns?[^4]

Comparison of the results from the survey and observational studies suggested that the survey results were relatively similar for most of the countries in which the results of observational studies were available (i.e. Austria, Finland, France, Germany, Spain, Sweden, United Kingdom and the Czech Republic). The wearing rates obtained from surveys were over 10 percentage units higher for the Netherlands and Hungary than those obtained from observational studies.

Results for seat belt wearing on motorways were rather similar to the results for seat belt wearing on main roads between towns (Fig. 6.4). In Greece and Italy, however, the percentages of “always” answers were more than 20 percentage units higher for seat belt wearing on motorways than on main roads. Comparison of the two surveys showed that the percentage of “always” answers decreased in Sweden, the Czech Republic, Slovakia and Italy, while the percentage increased in Portugal (24%) and Switzerland.

Survey results were relatively similar for several countries for which also observational studies were available (i.e. Finland, France, Germany, Greece, the Netherlands, Sweden and the Czech Republic). However, the belt wearing rates obtained from survey results of Austria

[^4]: “Don’t know” and “no seat belts fitted” answers were excluded from the analyses. The proportion of those answers was less than 5% for each country, except for Czechoslovakia in SARTRE 1 (10%).
and Hungary were higher (10 percentage units or more) than those obtained from observational studies.

Figure 6.4: How often do you wear seat belt in making a journey on motorway?5

6.4 Attitudes towards seat belt wearing

The rating scales used in questions concerning attitudes towards seat belt wearing differed slightly from those used in SARTRE 1. Specifically, SARTRE 1 used two-point scale (agree, disagree), while SARTRE 2 used the following four-point scale of agreement: very, fairly, not much and not at all. Therefore, the percentages of drivers who agreed in SARTRE 1 and the percentages of drivers who selected "very" or "fairly" in SARTRE 2 were compared. Because of the scale differences, however, the comparisons between the two survey results should be interpreted with caution.

5 "Don’t know” and ”no seat belts fitted” answers were excluded from the analyses. The proportion of those answers was less than 5% for each country, except for Poland (11%) and Slovakia (9%) in SARTRE 2 and Czechoslovakia (10%) in SARTRE 1.
Fig. 6.5 shows that there were substantial differences between countries when assessing whether the seat belts were not really necessary in careful driving. Drivers in Sweden, followed by the United Kingdom, Finland most infrequently (less than 15%) agreed with the statement. In contrast, more than 30% of the drivers in Slovakia, Portugal, Poland, the Czech Republic and Italy agreed with the statement.

The percentage of drivers agreeing was higher in SARTRE 2 than in SARTRE 1 in Portugal, Ireland, Germany and Switzerland. The percentage of drivers agreeing decreased in the Czech Republic and Spain.

6 “Don’t know” and ”no seat belts fitted/not asked” answers were excluded from the analyses. The proportion of those answers was less than 10% for each country, except for Czechoslovakia (17%) and Italy (14%) in SARTRE 1.
Figure 6.6: In most accidents seat belts reduce the risk of serious injury for drivers and passengers?  

About 90% of drivers or more in each country agreed that seat belts reduce the risk of serious injury for drivers and passengers in most accidents (Fig. 6.6). There were only a few reductions between SARTRE 1 and SARTRE 2: the percentage of drivers agreeing decreased in Italy, Switzerland, Slovakia and Hungary. In contrast, the percentage of drivers agreeing increased in Portugal, Belgium and Spain.

7 "Don’t know" and "no seat belts fitted/not asked” answers were excluded from the analyses. The proportion of those answers was less than 10% for each country, except for Czechoslovakia (17%) and Italy (12%) in SARTRE 1.
Figure 6.7 shows that more than 70% of drivers in Sweden, Finland, Germany, United Kingdom and Austria agreed very much or fairly much with the statement that they feel less comfortable if not wearing seat belts. The percentage was considerably lower in many other countries: less than 50% of drivers in Greece, Slovakia, Italy, the Czech Republic and Spain agreed with the statement. Each change between SARTRE 1 and SARTRE 2 was positive in terms of traffic safety, i.e. the percentages increased in Sweden, Belgium, Switzerland, France, Portugal, Hungary and Spain.

The last statement concerning the attitudes was as follows: "There is a risk of being trapped by the belt in case of emergency". The results given in Fig. 6.8 showed different patterns compared to the previous statements: more than 60% of drivers in Portugal, France, Sweden, the Netherlands and Slovenia agreed with the statement, while less than 40% of drivers in Germany, Austria, Switzerland and Greece agreed.

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8 "Don’t know" and "no seat belts fitted/not asked" answers were excluded from the analyses. The proportion of those answers was less than 10% for each country, except for Belgium (14%), Czechoslovakia (25%), Portugal (11%), Hungary (15%) and Italy (25%) in SARTRE 1.
6.5 Relationships between seat belt wearing and attitudes

The relationships between drivers’ seat belt wearing rates and attitudes towards belt wearing were studied using correlation coefficients. The percentages of drivers agreeing very much or fairly much were correlated with the mean wearing rates (town, main roads and motorways). The correlation coefficients calculated by country (not by driver) were as follows:

- If you drive carefully seat belts aren’t really necessary. -0.60
- In most accidents seat belts reduce the risk of serious injury for drivers and passengers. 0.36
- When I’m not wearing my belt I feel less comfortable; as though something is missing. 0.81
- There is a risk of being trapped by the belt in case of emergency. 0.20

The results showed that the highest correlation coefficient was for the third statement concerning the feeling of comfort with no belt. The lowest coefficient was for the last statement concerning the risk of being trapped. Perhaps this statement was confusing to some degree: a high agreement might indicate that a driver (a) overestimated disadvantages of the seat belts, and

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9 "Don’t know” and ”not asked” answers were excluded from the analyses. The proportion of those answers was less than 10% for each country, except for Poland (14%) and Sweden (28%).
thereby had a negative attitude towards the advantages of the seat belts or (b) was aware of the risk being trapped by belt, although this risk is much smaller than the advantages of the belts.

### 6.6 Enforcement of seat belt laws

The percentages of drivers that were fined or punished in some way for not wearing seat belts in the last 3 years were less than 10% in each country, except in Slovenia (Fig. 6.9). Ireland had the lowest percentage of punished drivers. In addition, the results showed that the drivers were usually fined only. The majority of French drivers who were punished for not wearing seat belts indicated some additional punishments. It is assumed that these additional punishments are related to other associated offences.

**Figure 6.9: In the last 3 years, have you been fined, or punished in any other way, for not wearing your seat belt?**

The percentages showed in Figure 6.9 did not show any strong correlation between the wearing rates. This might be due to the small percentages of punished drivers and differences in the level of police control by country.

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10 "Don’t know” and "not fitted” answers were excluded from the analyses. The proportion of those answers was less than 5% for each country, except for Slovakia (9%).
6.7 Discussion

This chapter showed the main results of SARTRE 2 dealing with seat belts. First, the results indicated that the proportion of cars having seat belts installed in the front seats was high in all countries involved in the study. However, relatively high percentages of cars were with no seat belts in the rear seats, although seat belts in the rear seats were much more frequent than five years ago (SARTRE 1).

Second, the results showed that the wearing rates were relatively low for Greece, Italy, the Czech Republic, Slovakia and Belgium in all environments concerned. In comparison to the results of SARTRE 1, the most substantial difference was that the wearing rate was higher in towns for many countries. However, the results still supported an earlier finding that the rates are generally lower in urban areas than in rural areas. This is the case in all countries although there is strong evidence that the belts are most effective in low speed accidents that more probably take place in urban areas. One reason for this might be that in many countries, the compulsory wearing was introduced first in rural areas, supporting an assumption that the belts are less effective in urban areas. Nevertheless, given that most countries have currently introduced a compulsory law for seat belt use in all environments, it seems that measures such as education, information campaigns and enforcement are generally the most effective means to improve seat belt wearing in urban areas. In order to be effective, these means should focus on seat belt wearing in urban areas, in particular. In addition, the countries having a substantial percentage of cars with no belts in the rear seats should consider rear-belt installations for older cars.

Third, the comparisons of the results from the survey and observational studies suggested that the survey results were relatively similar for most of the countries in which the results of observational studies were available. This conclusion was also made in the first survey (SARTRE, 1995).

Fourth, the results showed that in each country, a great majority of drivers agreed with the statement “In most accidents seat belts reduce the risk of serious injury for drivers and passengers”. This did not mean that drivers would understand how important the seat belt wearing is. For example, 86-96% of drivers in Slovakia, Portugal, Poland, the Czech Republic and Italy agreed very or fairly much with the above mentioned statement. At the same time, more than 30% of the drivers of the same countries agreed that the seat belts are not necessary if one drives carefully. Furthermore, the drivers in countries assessing less frequently that seat belts are not really necessary if one drives carefully wore seat belts more infrequently. These results suggest that there are many drivers who agree that the seat belts are useful in accidents but they assume that they will not be involved in accidents because they drive carefully.

Many earlier findings have demonstrated that education and information as itself do not provide sufficient means to increase the wearing rates. The first requirement for high percentage of drivers wearing the seat belts is a compulsory use of belts. This was also demonstrated by comparing the wearing rates in Portugal and Spain before and after the introduction of the law (Fig. 6.2). Enforcement, education and information can reinforce the improved wearing then.

The comparisons of seat belt wearing rates and attitudes towards belt wearing showed that the highest correlation was for the statement “When I’m not wearing my belt I feel less comfortable; as though something is missing”. In addition, the most substantial change of this attitude was for Portuguese and Spanish drivers. One might conclude that these findings support an argument indicating that attitudinal changes frequently follow behavioural changes. Drivers that are used to wear seat belts (that is required by law), feel less comfortable with no
belts. This attitude is adopted after using the seat belts for some time, but it is difficult to adopt by education or information.

Overall, the results support a recently presented recommendation of ETSC (1996) to introduce national quantitative targets for seat belt wearing and to promote the favourable development of wearing rates by several means including law enforcement programmes, education/information programmes, monitoring and reminders. In addition, high wearing rates may require technical solutions (see Turbell and Larsson, 1997).

Several present results suggest that there is a need and room for safety improvement in Europe by increasing the seat belt wearing rates. A specific application of the programmes depends on the current phase of a given country.

References


Evans, L. Restraint effectiveness, occupant ejection from cars and fatality reductions, Accident Analysis and Prevention, 1990, 22, 167-175.


Chapter 7  About context

7.1 Introduction

The collection of the questionnaire survey data from car drivers in Europe forms the core of the SARTRE 2 project. Apart from these data, additional information was gathered in the participating countries about several topics of interest to road safety research:

• Population
• Road network
• Road fatalities
• Exposure
• Road traffic legislation
• Enforcement
• Road safety campaigns
• Accidents and
• Road user behaviour.

This information is referred to as contextual data and was gathered for the years 1990-1991 as well as 1995-1996. There were two reasons for collecting it. Firstly, it provides some context for judging more clearly the questionnaire results, especially the changes in the period 1991-1996. Secondly, the contextual data are interesting in their own right and deserve a general description that is independent of their role in the interpretation of the survey results.

In this chapter a partly qualitative, partly quantitative description of the contextual data is given. First, paragraph 7.2 describes the sources and contents of the contextual data. Then in paragraph 7.3 to 7.6 the following subjects are described: general traffic situation, driving under the influence (of alcohol), speed limits and speeding, seat belts. Paragraph 7.7 attempts to summarise the road safety campaigns that have been conducted. The chapter concludes with some closing remarks in paragraph 7.8.

7.2 Subjects and sources of contextual data

There were four major sources of contextual data:

• The International Road Traffic and Accident Database (IRTAD)
• National statistics
• Policy and research literature
• Personal information from road safety experts (mostly on the basis of the national reports)
**The IRTAD Database**

The Federal Highway Research Institute (BASt) established the International Road Traffic and Accident Database (IRTAD) in the mid 1980s. Since 1990 the database has been operated within the framework of the OECD Road Transport Research Programme and includes data from most OECD countries, with the BASt acting as database host and administrator. The database comprises road traffic and accident data by country on a yearly basis: population figures with a breakdown by age group, vehicle population broken down into vehicle types, kilometres driven classified by network areas and vehicle types, number of injury accidents classified by road network areas, fatalities and injury figures broken down into types of road usage, age groups and network areas, etc.

From the IRTAD Database information was collected about the following subjects (the subdivisions/categories are shown in brackets):

- Population
- Number of vehicles (goods vehicles/motorcycles & mopeds/passenger cars)
- Length of roads (motorways/rural roads/inside urban areas)
- Kilometres driven on specific roads (motorways/rural roads)
- Kilometres driven of vehicles (goods vehicles/passenger cars)
- Number of injury accidents (total/inside urban areas)
- Number of traffic fatalities (riders of bicycles/mopeds/motorcycles/pedestrians/0-14 years/15-24 years, etc.)
- Number of injured road users (occupants of passenger cars/bicycles/pedestrians)

These figures were gathered for the years 1991 and 1996. For 16 of the 19 countries that participated in SARTRE 2, these figures could be fully or partially gathered from IRTAD. In the case of three of the countries making up the SARTRE 2 sample, IRTAD provides no information: Slovakia, Slovenia and Poland. For these countries an attempt was made to replace the IRTAD-figures with the available national statistics.

Both the IRTAD data and national statistics about accidents and accident outcomes have limitations. The officially reported accidents that are stored in national databases are in part not representative of the actual occurrences of accidents. The accidents reported to or by the police generally are selective with respect to the severity of the accident outcome, the type of vehicle or road users involved and the type of accident (IRTAD, 1994). The percentage of under-reporting also varies from country to country. In his discussion of this well-known problem, Koornstra mentions the following findings for European countries (Koornstra, 1996; 21):

- Accidents involving serious injury are under-reported by percentages that range from 15% to 50%, depending on country and type of accident.
- Accidents involving slight injury are under-reported by percentages of 30% to 75%, also depending on country and type of accident
- Accidents involving non-motorised road users in collision with motor vehicles are under-reported by 30% to 60%.
- Accidents that only involve non-motorised road users may even be under-reported by 55% to 90%.
In this chapter we focus on safety developments within individual countries during a relatively short time period (1991-1996). We restrict ourselves to comparing European countries, indicating which countries have had a clearly favourable safety trend and which countries have had a less favourable or adverse trend. For this purpose, IRTAD data and national statistics may suffice. But it is as well to keep in mind that our data do not give the full picture.

**National Statistics**

National statistics were gathered to fill in the gaps for the aforementioned countries that were not part of the IRTAD database. Moreover, national statistics provided extra information on topics on which IRTAD has no data as it covers only internationally comparable variables that can be presented by the majority of countries involved in this database. These topics were behaviour in traffic and legislation. Behavioural data were gathered concerning speeds driven and speeding, alcohol consumption per capita, frequency of drinking-and-driving and seat belt use. Information concerning legislation was obtained about the legal alcohol limit, speed limits on different road types, seat belt legislation, penalty points system and suspension of licence.

**Policy and research literature**

Policy and research literature containing information relevant to the present purpose has been published by organisations like the European Transport Safety Council (ETSC, 1995a, 1995b, 1996), the Forum of European Road Safety Institutes (FERSI, 1997) and the European Road Safety Federation (ERSF) in its biannual publication *European Road Safety News*.

**Expert information**

Information about national road safety campaigns, legislation and police enforcement was mostly derived from consultation with experts. It proved virtually impossible to obtain reliable information about police enforcement and the procedures relating to the system of legal deterrence. One of the problems is that there are large variations in the intensity and the methods of police enforcement as well as in the definitions and procedures of the legal system. A second difficulty is that in several countries the police or judicial organisation is divided up in many small units with relatively high degrees of autonomy. In some countries there is no central organisation that has an overview of all activities or data. Furthermore, even if data are available they may not tell us very much. The output indicators of enforcement or legal deterrence may not be very meaningful for our purposes. For example, the number of citations for specific traffic offences is not a good indicator of either the quantity or the quality of police enforcement. Because of these problems, the information about enforcement and the system of legal deterrence are scarce and seem to be hardly comparable.

**7.3 Population, traffic and safety in Europe**

**Population**

France, Germany, Italy, Spain, the United Kingdom and Poland are large European countries, each estimated with more than 10 million active car drivers. The other European countries in the sample have populations of active car drivers generally ranging from 1 to 5 million. The Netherlands is small in area, but has a rather large driver population of more than 9 million licence holders.
Minimum driving age

In almost all European countries the minimum age for driving is 18 years. Exceptions are the United Kingdom and Poland where the minimum age for obtaining a driver’s licence is 17. France is an exception in the sense that accompanied driving, under the supervision of a parent or friend, is allowed for young people of 16 years or older. The minimum age for actually obtaining the driving licence in France is also 18 years.

Vehicle fleet

Italy and Poland are countries with a rather high proportion of small cars (< 1,000 cc). Greece, the Czech Republic and Poland are countries with a rather high proportion of lorries (> 3.5 tonnes). Austria, the Czech Republic, Germany, Greece and Italy are countries with a rapidly increasing fleet of passenger cars in the period 1991-1996.

The safety problem

Every year, more than 50,000 people are killed in road accidents in Europe. More than 150,000 accident victims remain disabled for life. The European Union thus has a total number of 200,000 victims of road accidents for whom the consequences are serious.

Comparison of fatality rates

Of all the possible consequences of road accidents only fatalities (corrected for the 30-day definition, i.e. when death is causally attributable to the accident if it occurs within 30 days of the accident) can sensibly be used to compare risk indicators, such as fatality rates (fatalities per vehicle kilometre or per motor vehicle). This is because national figures for injured persons and accidents vary according to the registration definitions and in reporting coverage. Comparison of road safety among countries is probably most justified by comparing the rate of fatalities divided by number of population. Figure 7.1 shows the motorization and fatality rates for a number of European countries.

As can be seen, the UK, Sweden, the Netherlands, Finland and Switzerland are the five safest countries in Europe. At the other end of the scale Portugal, Greece, Slovenia and Poland are the least safe countries in terms of inhabitants.

In general it can be said that the less a country is motorised the higher its fatality rate.

Safety trends for specific countries

If we take into account both the number of injured road users and the number of accidents involving injury, the countries with a clearly improved safety record from 1991 to 1996 were (in alphabetical order) Austria, Belgium, France, Germany, Hungary, Spain, Finland and Sweden.

The countries that had to cope with a worsening safety situation were the Czech Republic, Greece, Italy, Ireland, Poland, Slovenia and Slovakia.

Countries with a fairly stable or slightly changing safety situation were the Netherlands, Portugal, Switzerland and the United Kingdom.

Italy has a somewhat confusing safety record. The number of people injured in road accidents rose between 1991 and 1996, but the incidence of accidents involving injury decreased over the same period. This may be due to some error in the figures reported.
**Trends for specific types of accidents and road users**

Austria, Belgium, France, Spain and Hungary have seen large decreases in the number of accidents involving injury at night and a large reduction of accidents in built-up areas. Italy also shows a rather large reduction of accidents in built-up areas, but the reliability of this result is in question.

Austria, Finland, France, Germany, Hungary, Sweden and United Kingdom have all achieved large reductions in the number of pedestrians killed in the period 1991-1996.

If we look at pedestrian deaths as a proportion of total road fatalities, then pedestrian safety seems to be an especially serious problem in Poland, the UK, and Hungary. In Britain 33% of those killed on the roads were pedestrians, a total of 1,241 in 1993. One in ten road casualties involved an elderly person. One quarter of these were pedestrians, and 50% of all pedestrian deaths in the United Kingdom involve people aged 60 years or over (European Newsletter on Road Safety, 3, 1995). 31% of all road users killed in Hungary in 1995 were pedestrians (IRTAD, 1996).

Compared to the pedestrians’ safety gains, the reductions in the number of bicyclists or motorcyclists killed are less impressive. Poland, Spain and Hungary show large reductions. In the period 1991-1996 in nearly all European countries a reduction in the numbers of young men killed in traffic has taken place. Especially Spain, Austria, France, Germany, Hungary, Italy, Slovenia, Switzerland, Sweden and the United Kingdom have been successful in this respect.

A note of caution must be sounded: the aforementioned tendencies are not corrected for mobility trends. Some of the changes may be due to different methods of travelling. This may be particularly true for the Eastern European countries.
Reported explanations for safety gains in specific countries

Spain saw the number of fatalities reduced from 8,836 in 1991 to 6,350 in 1993, a drop of 28% in only two years (European Newsletter on Road Safety, 1994, 2, p. 1). This positive development of road safety in Spain followed a rather dramatic increase in road accidents and casualties in the eighties. The problem was so serious that the Spanish senate decided to appoint a special commission to investigate and look into the problems related to the use of vehicles and road safety (European Newsletter on Road Safety, 1994, 2, p. 4). This commission published a report in 1991 in which two major recommendations were made:

• to make a strategic plan aimed at reducing accidents to a rate similar to that of European countries
• to draw up and reach a social agreement on road safety among all authorities, companies, unions and road safety organisations.

In April 1994 the Social Agreement on Road Safety was signed whereby representatives of central and regional authorities and the social sectors, associations of businessmen, professions and unions committed themselves: to include road safety activities in their main priorities, to prevent any activities that might have a negative effect on road safety and to co-operate with other organisations in their road safety activities.

The enormous decrease of fatal and injury accidents has been attributed to the aforementioned activities, strong enforcement policies, aggressive road safety campaigns and improvements in the road network.

In Belgium a particularly strong positive trend with regard to road safety was established in the nineties. Between 1989 and 1994 the number of car drivers severely injured or killed dropped by about 15%. In the 18-24 age group the number fell by as much as 29%. In particular, weekend accidents involving young car drivers decreased by 24% between 1991 and 1994 (European Road Safety News, 1996, 6, p. 9). The positive effects have been ascribed to increased police enforcement of drinking and driving at weekends, private citizen initiatives to change the mentality of the young driver and state-subsidised road traffic campaigns with themes such as the consumption of non-alcoholic drinks and drawing attention to public transport.

France experienced a notable drop in accidents since the beginning of 1994. This positive development has been attributed to the new road safety measures that were introduced since 1992 (European Newsletter on Road Safety, 1994, 2, p. 7):

• A penalty points system was introduced in July 1992. By the end of November 1993 340,000 motorists had seen their poor conduct result in the deduction of one or more points.
• Since July 14th 1994 a lower maximum blood alcohol level of 0.7 BAC has been in power. A level between 0.7 and 0.8 BAC is considered an offence and penalised by the deduction of four points.
• Random breath tests (5.5 million in 1993)
• Deducting one point if the driver was not wearing a seat belt.
• Exceeding the speed limit by more than 50 km/h now classed as a criminal offence rather than a contravention.
• Forcing the owner of a car to disclose the name of the driver when an offence has been committed and the driver could not be identified.
Especially the lower alcohol limits and the fact that non-compliance with seat belt regulations is penalised have been considered crucial in the improved safety record (European Newsletter on Road Safety, 1994, 2; p.1).

In Ireland extensive coverage was given to the fact that statistics for road fatalities for the summer of 1995 were among the worst ever recorded. In the period from July to October 184 people were killed in road accidents, as compared to 130 for the same months in 1994. The main factor behind the increased accident rate was probably the increased number of cars on the roads. Tourist volumes increased enormously in 1995, partly due to the peace process in Northern Ireland. The prolonged good weather also encouraged a lot of Irish people to tour at home instead of going abroad (European Newsletter on Road Safety, 1995, 3, p. 9).

7.4 Driving under the influence of alcohol

**Limits: general and differential**

Currently four different BAC-limits apply across Europe: 0.0, 0.2, 0.5 and 0.8.

The countries, which have a limit of 0.8, are Austria, Germany, Greece, Ireland, Italy, Spain, the United Kingdom and Switzerland. Countries having a BAC-limit of 0.5 are Belgium, Finland, France, the Netherlands, Portugal and Slovenia. Countries with a limit below 0.5 are Sweden (0.2), Poland (0.2), the Czech Republic (0.0) and Slovakia (0.0).

There is differential limit for beginning drivers in Austria (0.1). Germany and Greece have differential limits for general drivers (0.8) and for drivers who have already been involved in accidents (Germany 0.3, Greece 0.5). In Slovenia there are different limits for general (0.5) and professional drivers (0.0).
Table 7.1: European countries subdivided by legal alcohol limit and alcohol consumption per capita

<table>
<thead>
<tr>
<th>BAC-limit for the general driver</th>
<th>Alcohol consumption per capita</th>
<th>&lt; 9</th>
<th>&gt;= 9</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.8</td>
<td>Italy</td>
<td>8.6</td>
<td>Austria</td>
</tr>
<tr>
<td></td>
<td>UK</td>
<td>7.3</td>
<td>Germany</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Greece</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Ireland</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Spain</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Switzerland</td>
</tr>
<tr>
<td>0.5</td>
<td>Finland</td>
<td>6.6</td>
<td>Belgium</td>
</tr>
<tr>
<td></td>
<td>Netherlands</td>
<td>8.0</td>
<td>France</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Portugal</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Slovenia</td>
</tr>
<tr>
<td>0.0 - 0.2</td>
<td>Czech Republic</td>
<td>8.9</td>
<td>Hungary</td>
</tr>
<tr>
<td></td>
<td>Poland</td>
<td>8.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Slovakia</td>
<td>7.9</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sweden</td>
<td>4.2</td>
<td></td>
</tr>
</tbody>
</table>

Table 7.1 presents European countries subdivided by legal alcohol limit and alcohol consumption per capita. As can be seen in table 7.1, the countries with both a low legal limit and a relatively low alcohol consumption per capita are the Czech Republic, Finland, Sweden, the Netherlands, Poland and Slovenia. Given these background characteristics, it may be expected that in these countries public tolerance towards drinking-and-driving is lower than in the rest.

**Differences in legislation**

Currently, evidentiary methods and enforcement activities vary widely throughout the Union. In many EU countries, blood tests are still the only form of legal evidence for drink-driving offences (ECMT, 1993). Results of breathalyser tests are not yet accepted for evidentiary purposes in the majority of EU Member States. Exceptions are Finland, the Netherlands, Germany, Sweden and the UK. Evidentiary breath tests have the advantage of reducing the amount of time police officers have to spend at the police station, allowing for more time and more breath tests to be conducted.

**Differences between SARTRE 1 and SARTRE 2**

The New Road Traffic Bill that was passed in 1994 in the Republic of Ireland also pertained to drink-driving legislation (European Newsletter on Road Safety, 1994, 2, p. 6). The permitted level of alcohol has been reduced from 1.0 to 0.8 BAC. Moreover, electronic breathalysers can now be used as evidence in Irish courts and a drink-drive conviction carries an automatic two-year driving ban, with the stipulation that the offender can be asked to take the driving test again before being allowed back on the road.
In East Germany a legal limit of 0.0 was present up to 1992. On the 1st of January 1993 the 0.8 limit in West Germany was extended to the whole of Germany. It is planned to introduce 0.5 BAC in 1998.

Belgium and France introduced new legal limits between 1991 and 1996. In 1994 the 0.8 limit in Belgium was reduced to 0.5. In France, as of 15th September 1995 the new limit of 0.5 BAC replaced the limit of 0.7, which came into force in July 1994 (European Newsletter, 3, 1995). The lower limit was intended to reduce drink-driving, based on the knowledge that accident risk is doubled at a level of 0.5, but five times higher at 0.7 and ten times higher at 0.8 BAC.

Figure 7.2 shows the number of road users convicted for alcohol abuse in traffic. As can be seen, in the period 1991-1996 the convictions for alcohol traffic violations increased sharply in Austria, Poland, Spain and Slovenia, but decreased markedly in Portugal. The increase in alcohol convictions may reflect changes in both the intensity and the mode of police enforcement of drink-driving legislation and the changes in accuracy of registration.

### 7.5 Speed limit and speeding

**Differences between speed limits**

Speed limits vary considerably among European countries. Table 7.2 gives an overview. With regard to the limits in built-up areas, Germany, the Netherlands, France, Poland and the UK have special lower 20 or 30 km/h limits for certain residential areas within cities and villages. Poland and Slovenia have the highest limits (60 km/h) within built-up areas.

With respect to secondary and regional rural roads, Greece has the highest speed limit (110). Hungary, the Netherlands, Slovenia, Switzerland and Sweden have the lowest limits (70/80) for these types of roads. On highways and main roads, France, Italy, Poland, Spain and Sweden have the highest limits (110 km/h). With regard to motorways Germany is unique in not having a general speed limit, only a «recommended speed» (130) and many local limits. Among those countries which have limits, Austria, France, Italy and in 1997 also Slovakia rank highest (130 km/h).
Changes over time

Between 1990 and 1995 three European countries, Belgium, Portugal and Spain, changed their speed limit for built-up areas from 60 to 50 km/h. In Eastern part of Germany, the speed limit on rural roads was changed from 80 to 100 km/h in 1993. On motorways to «Western» standards the limits were changed from 100 km/h to the same as in Western part of Germany.

Withdrawal of licence and points system

The deterrent effect of police enforcement on speeding may in part depend on whether a speeding violation or an accumulation of speeding violations might result in withdrawal of the driving licence. Almost all European countries have some legal provision that allows for licence suspension when the speed limit has been grossly exceeded. A notable exception is Poland. In France, Hungary, Slovakia, Sweden, Switzerland and the Czech Republic it is possible to have the licence suspended for speed violations of more than 20 to 31 km/h.

Table 7.3 summarises the information gathered on licence suspension and points systems in European countries. The following countries have points systems in regard to traffic violations: France, Germany, Greece, Italy, the United Kingdom and Poland. In this group, France and Poland were the last to introduce such a system. France started a points system in July ’92 and Poland in June ’93. Some information is available about the rules of the points systems in different countries.
Table 7.2: Speed limits in European countries in 1997

<table>
<thead>
<tr>
<th></th>
<th>Built-up areas</th>
<th>Secondary/ regional roads</th>
<th>Highways/ main roads</th>
<th>Motorways</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>50</td>
<td>100</td>
<td>100</td>
<td>130</td>
</tr>
<tr>
<td>Belgium</td>
<td>50</td>
<td>90</td>
<td>90</td>
<td>120</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>60</td>
<td>90</td>
<td>90</td>
<td>110</td>
</tr>
<tr>
<td>Germany</td>
<td>50 (30)</td>
<td>100</td>
<td>100</td>
<td>no limit</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(recommended: 130)</td>
</tr>
<tr>
<td>Finland</td>
<td>50</td>
<td>100</td>
<td>100</td>
<td>120</td>
</tr>
<tr>
<td>France</td>
<td>30/50/70</td>
<td>90</td>
<td>110/90</td>
<td>110/130</td>
</tr>
<tr>
<td>Greece</td>
<td>50</td>
<td>110</td>
<td>110</td>
<td>120</td>
</tr>
<tr>
<td>Hungary</td>
<td>50</td>
<td>80</td>
<td>80/100</td>
<td>120</td>
</tr>
<tr>
<td>Ireland</td>
<td>48</td>
<td>96</td>
<td>96</td>
<td>112</td>
</tr>
<tr>
<td>Italy</td>
<td>50</td>
<td>90</td>
<td>110</td>
<td>130</td>
</tr>
<tr>
<td>Netherlands</td>
<td>30/50/70</td>
<td>80</td>
<td>100</td>
<td>100/120</td>
</tr>
<tr>
<td>Poland</td>
<td>20/60</td>
<td>90</td>
<td>90/110</td>
<td>110</td>
</tr>
<tr>
<td>Portugal</td>
<td>50</td>
<td>90</td>
<td>100</td>
<td>120</td>
</tr>
<tr>
<td>Slovakia</td>
<td>50</td>
<td>90</td>
<td>90</td>
<td>110</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(in 1997: 130)</td>
</tr>
<tr>
<td>Slovenia</td>
<td>60</td>
<td>80</td>
<td>80/100</td>
<td>120</td>
</tr>
<tr>
<td>Spain</td>
<td>50</td>
<td>90</td>
<td>100/120</td>
<td>120</td>
</tr>
<tr>
<td>Sweden</td>
<td>50</td>
<td>70/90</td>
<td>90/110</td>
<td>110</td>
</tr>
<tr>
<td>Switzerland</td>
<td>50</td>
<td>80</td>
<td>80</td>
<td>120</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>30/48</td>
<td>96</td>
<td>96</td>
<td>112</td>
</tr>
</tbody>
</table>

(Source: SARTRE 2 contextual data)

In Finland a driver who gets more than 3 speeding tickets in 12 months or more than 4 in 24 months, has his or her licence suspended. In France the accumulation of 12 points can lead to licence suspension. Points can be returned if a driver receives no additional points within a period of three years or if the driver undergoes specific training. In Germany there is a highly structured system of licence suspension in combination with different driver improvement courses, especially for beginners, alcohol-impaired drivers, drivers with 14 points (voluntary) accumulation of 18 points (mandatory), etc. The main goal of all these measures is the reintegration if at all possible. The number of points depends on specific violations (minimum 1, maximum 7). In Greece a licence withdrawal is foreseen if 18 points are collected during a period of two years. In Italy two transgressions within two years may lead to licence withdrawal. In Portugal there is no formal points system, but something resembling it. A driving licence may be withdrawn by the court if a driver is convicted three times for very serious or five times for serious offences in three years. To recover the driving licence a new driving test must passed. In the United Kingdom a licence will be suspended if the driver receives more than 12 points over a three-year period. The points are flexible depending on violation, but the minimum for a speeding violation is three points. In Poland there are different numbers of points for the 45 most important offences, ranging from 1 to 10. If 21 points are accumulated in one year, the driving test must be passed again. If the driver fails the driving test the licence is suspended. If there are fewer than 21 points after one year, all points are cancelled and the driver may start the new year with a clean record.
Table 7.3: Presence of a points system and licence suspension in European countries in 1997

<table>
<thead>
<tr>
<th>Country</th>
<th>Possibility of licence suspension (+50 = violation of limit by more than 50 km/h)</th>
<th>Points system in operation?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>+50 at least 2 weeks’ suspension</td>
<td>No</td>
</tr>
<tr>
<td>Belgium</td>
<td>+50 2 weeks’ suspension</td>
<td>No</td>
</tr>
<tr>
<td>Finland</td>
<td>+40 flexible</td>
<td>No</td>
</tr>
<tr>
<td>France</td>
<td>+30/+20 suspension</td>
<td>Since July ’92</td>
</tr>
<tr>
<td>Germany</td>
<td>+41 suspension</td>
<td>Before ’91</td>
</tr>
<tr>
<td>Greece</td>
<td>+40 suspension</td>
<td>Before ’91</td>
</tr>
<tr>
<td>Ireland</td>
<td>variable</td>
<td>No</td>
</tr>
<tr>
<td>Italy</td>
<td>+40 suspension</td>
<td>No</td>
</tr>
<tr>
<td>Netherlands</td>
<td>+50 suspension possible</td>
<td>Before ’91</td>
</tr>
<tr>
<td>Portugal</td>
<td>+30/50 suspension possible</td>
<td>No</td>
</tr>
<tr>
<td>Spain</td>
<td>+50/77 suspension</td>
<td>No</td>
</tr>
<tr>
<td>Sweden</td>
<td>+31 usually suspension</td>
<td>No</td>
</tr>
<tr>
<td>UK</td>
<td>variable</td>
<td>Before ’91</td>
</tr>
<tr>
<td>Czech Rep</td>
<td>+30 no information</td>
<td>No</td>
</tr>
<tr>
<td>Hungary</td>
<td>+40/+33/26 suspension</td>
<td>No</td>
</tr>
<tr>
<td>Poland</td>
<td>no withdrawal</td>
<td>Since June 93</td>
</tr>
<tr>
<td>Slovakia</td>
<td>+30 no information</td>
<td>No</td>
</tr>
<tr>
<td>Slovenia</td>
<td>+60/+50 no information</td>
<td>No</td>
</tr>
<tr>
<td>Switzerland</td>
<td>+30 no information</td>
<td>No</td>
</tr>
</tbody>
</table>

Source: SARTRE 2 contextual data
7.6 Seat belts

**Legislation**

Most European countries introduced seat belt legislation in the mid or late seventies with the notable exception of the United Kingdom (introduction in 1983), Italy (introduction in 1989) and Portugal (1992 inside built-up areas).

With regard to the presence/use of rear seat belts, Austria, Finland, Germany and Sweden all established legislation in the mid-eighties, whereas the rest of Europe followed in the early nineties. Table 7.4 shows the year of introduction of seat belt and child restraint legislation and enforcement for each European country.

**Wearing rates**

Wearing rates differ widely in the various European countries. Front seat wearing rates are higher than rear seat wearing rates and wearing rates during journeys in built-up areas are lower than for journeys on country roads and motorways (Figures 7.3 and 7.4).

European countries with high wearing rates (~ 90%) outside built-up areas are Germany, France, Finland, Sweden and the United Kingdom. Comparatively low wearing rates (< 80%) outside built up areas are found in Belgium, Ireland, the Netherlands and Switzerland.
Table 7.4: Year of introduction of compulsory use of front and rear seat belts and of child restraints in private cars in European countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Front seat belts</th>
<th>Rear seat belts</th>
<th>Child restraints</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>front seats: 1974</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>&lt; 12 yrs. and 150 cm: 1994</td>
</tr>
<tr>
<td>Austria</td>
<td>1976 without fine</td>
<td>1984</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1984 with fine</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Belgium</td>
<td>1975</td>
<td>1991</td>
<td></td>
</tr>
<tr>
<td>Denmark</td>
<td>1976</td>
<td>1990</td>
<td>3 years and older: 1990</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>less than 3 years: 1992</td>
</tr>
<tr>
<td>Finland</td>
<td>1975 without fine</td>
<td>1987</td>
<td>front seats: 1982</td>
</tr>
<tr>
<td></td>
<td>1982 with fine</td>
<td></td>
<td>rear seats: 1987</td>
</tr>
<tr>
<td>France</td>
<td>1973 rural areas</td>
<td>1990</td>
<td>less than 10 years: 1992</td>
</tr>
<tr>
<td></td>
<td>1975 urban areas at night</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1979 all areas day &amp; night</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Germany</td>
<td>1976 without fine</td>
<td>1984 without fine</td>
<td>&lt; 12 years and 150 cm: 1993</td>
</tr>
<tr>
<td></td>
<td>1984 with fine</td>
<td>1986 with fine</td>
<td></td>
</tr>
<tr>
<td>Greece</td>
<td>1979</td>
<td>pending</td>
<td>pending</td>
</tr>
<tr>
<td>Ireland</td>
<td>1979</td>
<td>pending</td>
<td>pending</td>
</tr>
<tr>
<td>Italy</td>
<td>1989</td>
<td>1990</td>
<td>1992</td>
</tr>
<tr>
<td>Portugal</td>
<td>1977 outside urban areas</td>
<td>1994</td>
<td>1995</td>
</tr>
<tr>
<td></td>
<td>1993 inside urban areas</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spain</td>
<td>1975 outside built-up areas</td>
<td>1992</td>
<td>1992</td>
</tr>
<tr>
<td></td>
<td>1993 inside built-up areas</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sweden</td>
<td>1975</td>
<td>1986</td>
<td>1988</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>1983</td>
<td>1991</td>
<td>1983 under 1 in front</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1989 under 14 in rear</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1993 under 3 in front</td>
</tr>
</tbody>
</table>

Source: ERSF, 1996

Within built-up areas Finland, Germany, Sweden and the UK again show a good wearing-rate record (>80%). Ireland, Switzerland and the Netherlands again show low wearing rates (<70%). Some countries achieved a large increase in wearing rates between 1990 and 1996: Belgium from 54% to 65%, France from 61% to 72%, Finland from 73% to 82%.

In Germany there was a strong increase in the use of rear seat belts up to 1993, but a slight decrease since then. The reasons for the German decline in seat belt use since 1994 – see also the decline in fig. 7.4 and 7.5 – are unclear.
Figure 7.3: Observed front seat belt wearing rates outside built-up areas among car drivers in European countries in 1990-91 and 1995-96 (%)

Figure 7.4: Front seat belt wearing rates in built-up areas in European countries in 1990-1991 and in 1995-1996
7.7 Campaigns

In this paragraph information about road safety campaigns in European countries is presented.

Table 7.5: Nation-wide campaigns in the period of 1991 to 1996

<table>
<thead>
<tr>
<th>Country</th>
<th>Alcohol</th>
<th>Speed</th>
<th>Seat Belt</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>Day time running lights</td>
</tr>
<tr>
<td>Belgium</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>Finland</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>France</td>
<td>*</td>
<td>*</td>
<td></td>
<td>Relationship between car drivers and two-wheelers</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Driver behaviour as accident cause</td>
</tr>
<tr>
<td>Germany</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>More consideration among road users</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>for children</td>
</tr>
<tr>
<td>Greece</td>
<td>*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ireland</td>
<td>*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Italy</td>
<td>*</td>
<td></td>
<td></td>
<td>Reckless driving</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Respect for traffic regulations</td>
</tr>
<tr>
<td></td>
<td>young drivers after discotheque visits</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Netherlands</td>
<td>*</td>
<td></td>
<td></td>
<td>Introduction of new Traffic Code</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Wearing belts in rear seats</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Daytime running lights</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Regular breaks when driving</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Car-pooling</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Maintaining distance</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Vision check</td>
</tr>
<tr>
<td>Portugal</td>
<td>*</td>
<td></td>
<td>*</td>
<td>Pedestrians, headway, overtaking (all-in-one campaign)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Respect for traffic regulations</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Driving two-wheeled vehicles</td>
</tr>
<tr>
<td>Slovenia</td>
<td>*</td>
<td>*</td>
<td></td>
<td>Bicycle helmets</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Reflective materials on bicycles</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Beginning of school term</td>
</tr>
<tr>
<td></td>
<td>also directed to children, not only adults</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Switzerland</td>
<td>*</td>
<td>*</td>
<td></td>
<td>Alcohol and drugs in traffic</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Right of way for pedestrians</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>*</td>
<td>*</td>
<td></td>
<td>Child safety in traffic</td>
</tr>
</tbody>
</table>

Source: SARTRE 2 contextual data
Table 7.5 shows the nation-wide campaigns in the period 1991-1996. Most of the information was gathered by consultation with experts in the various countries. The representatives of the participating countries were asked to report campaigns in the period from 1991 to 1996. The comprehensiveness and detail of the descriptions varied somewhat. For this reason only the main topics are mentioned.

Table 7.5 reveals that, in most countries, the main topics of driving under the influence of alcohol, speeding and seat belt wearing have been covered. Most countries also carried out campaigns on other topics, the most notable of which concerned seat belts in rear seats, children’s safety and daytime running lights.

Campaigns differed considerably in respect of

• duration (few weeks to several years)
• topics (most important drink-driving, speeding and seat belts)
• media used (posters, television, radio, newspapers)
• specification of target groups (most campaigns aimed at all drivers, some only at specific groups, for example young drivers, parents, cyclists, etc.)
• frequency (annual repetition or one-off presentation).

Considering all the differences, evaluation of the campaign results seems to be very necessary to be able to profit from other countries’ experience without repeating already committed errors.

### 7.8 General discussion

When the period 1990-1996 is considered there are three distinct groups of European countries in terms of road safety.

First, there is a group of countries where road safety clearly improved in the period 1990-1996, Austria, Belgium, France, Germany, Finland, Hungary, Spain, Sweden, UK. Most of these countries introduced sometimes radically new policies or new measures in the period 1990-1996 that may partially explain the improvement in road safety. For instance, France introduced a points system, Belgium lowered the legal alcohol limit to 0.5 BAC and Spain devised a social contract that encourages government, industry and other parties to work towards better road safety. Spain also lowered the speed limit within built-up areas to 50 km/h.

Second, there is a group of countries with a seemingly stable safety situation over the period 1990-1996. The Netherlands, Portugal and Switzerland are in this group.

Third, there is a group of countries where road safety in the nineties appears to have worsened. Italy, Ireland, Slovenia, Slovakia, Greece and Poland belong in this group. In some of these countries, for example Poland, the deterioration is bound up with a strong growth of private and commercial motorised traffic, spurred by economic development. The road safety figures for Italy show rather strange fluctuations from one year to the other that are probably best accounted for by unreliable registration.
References


Chapter 8  Country by country characteristics

8.1 Introduction

In this chapter, we will attempt to describe the specific characteristics of drivers in the different participating countries (samples), and show how they differ one from another. The method used was simply to take the overall results as a reference and then compare each country to this reference. The characteristics of a country, which differ appreciably from the group as a whole, are said to be specific of the country. For each sample we kept the 99 categories of answer the most characteristic. They are sorted regarding a test (value test) that shows if a category is significantly more frequent in the considered sample than in the whole. In every case kept, the probability to observe such a breakdown of answer is lower than one in a thousand. A summary for each country shows the categories specific to the considered country, and the percentage of this country’s driver who have chosen those categories, together with the percentage of the considered categories in the whole. The significant and distinctive categories have been grouped by themes. These themes are:

1 Survey: technical aspects
2 Drivers: socio demographical characteristics
3 Mobility features (km/year, car size, power)
4 Attitudes and behaviour related to three road safety measures:
   • alcohol when driving and illegal drink-driving
   • fitting, mandatory wearing of seat belt
   • speed limitation and speeding

For the Austrian sample, for example (see next page), « Interviews were most often conducted by men (52/40) » means that 52% of the interviews were conducted by men, whereas this proportion is only 40% for all the surveys (and the probability to observe such a situation is less than 0.001).

8.2 Austrian drivers

Survey technical aspects

Interviews were most often conducted by men who were older than average (52/40). Only 6% were under 25 (against 21% for the whole sample).

Drivers characteristics

The proportion of people whose occupation is ‘middle management and trainee’ is much more important than in other countries (17/10). There are on the contrary few lawyers (0.4/3) and unemployed (1.3/4).

Mobility features

Most cars have engine whose size is medium-up between 1,300 and 1,900 cc (58/46). More than in whole, two drivers out of three have a minimum insurance (63/45).
Alcohol when driving
Austrian drivers do not drink much more than other drivers, but they drink more often before driving (7 against 4 drink more than 3 units alcohol before driving). Most of them are satisfied with the current legal limit (53/27). Compared to the rest, many drivers always expect to be checked (4/1.5).

Wearing of seat belt
Most of Austrian drivers always fasten their seat belt in town (75/61), on main roads (84/75) and on motorways (90/80). Most drivers think that seat belt remains useful even when driving carefully (70/50).

Speed limitation
Austrian drivers consider they drive little slower (31/23) or much slower than others (11/5). About speed limits, drivers’ behaviour is average. People are satisfied with speed limit and most of them think it should stay the same either in built up areas (82/70), on main roads (78/67) or on motorways (60/47). Almost two drivers out of five have been fined (38/20).

As compared to others, Austrian could improve their situation to safety in the domain of alcohol (will the parliament decide the 0.5 legal BAC?), and of speed compliance. Insurance level is markedly low.

8.3 Belgian drivers

Survey technical aspects
Interviews were often conducted by people younger than 25 years old (28/20) and held in the morning (30/22).

Drivers characteristics
Most of the Belgian drivers live in small towns, from 2,000 to 100,000 inhabitants (89/55) perhaps due to administrative definition of towns. Male and female are almost in the same proportion (52/62), and they are a little older, (13/7 for 65 and over). The proportion of retired people is higher (20/13) than in the whole.

Mobility features
Neither professional drivers (2/6), nor people who drive at work (10/20) are numerous among Belgian drivers. Most cars have engine whose size is between 1,300 and 1,900 cc (59/46). More drivers have only a minimum insurance (56/45).

Alcohol when driving
Belgian drivers drink less often and many of them never drink (37/28). Yet they drink a little bit more than others do before driving (10 against 4 drink more than 3 units alcohol before driving). Many of them are satisfied with the current legal limit (40/27) but one person out of ten thinks drivers should be allowed to drink more (10/5). Many drivers think people should be allowed to decide for themselves how much they can drink before driving (22/12). More Belgian drivers have been fined or punished for driving after drinking (5/2).

Wearing of seat belt
The proportion of Belgian drivers who always wear seat belts is slightly less than general average, either in towns (56/61), on roads (64/75) and on motorways (70/82).
Speed limitation

Most frequently, they declare they never drive faster than the speed limit on motorways (30/23) and especially on main (31/22) and country (36/28) roads. In built up areas, their behaviour is average.

As compared to others, Belgian amelioration could come from increasing belt wearing, relatively low, persuading them of validity of the 0.5 legal BAC in force. About speed and perhaps for other limits there is lack of approval of the threshold.

8.4 Finnish drivers

Survey technical aspects

Most of the interviews took place in the afternoon (58/50) or in the evening (37/25).

Drivers characteristics

Most of the Finnish drivers live in towns from 2,000 to 100,000 inhabitants (68/55). They are more often unemployed than in the rest (10/4).

Mobility features

Most cars have engine size between 1,300 and 1,900 cc (58/46) and a lot over 2,000 cc (17/13). A majority of people has a fully comprehensive insurance (70/52).

Alcohol when driving

Most drivers drink less than once a week (50/25). Only a very small minority drink most days (0.7/10). Yet, when they drink, many Finish drivers (27/13) drink a lot (more than 5 units alcohol). Nevertheless, most of them (68/40) never drive after drinking even a small amount. Most of them (56/48) think driver should not be allowed to drink as much as now and strongly disagree (93/56) when asked whether people should decide themselves how much they can drink before driving.

Wearing of seat belt

About eight drivers out of ten always wear seat belts in town (80/60). The proportions are very high too, either on main roads (90/75) or on motorways (92/82). Most drivers think that seat belt remains useful even when driving carefully (82/50) and do not feel comfortable when not wearing belt (63/35). Nine drivers out of ten think that seat belts reduce risk of serious injury (87/58).

Speed limitation

Most Finish drivers consider they drive at average speed (62/51). Yet only one driver out of three (28/42) never breaks the speed limit in built up areas. Most of them consider however that this speed limit should not be changed (83/70).

As compared to others, Finnish sample seems in better position to safety. We note occasional but heavy drinking which require specific attention, concerning likely very few drivers but with high risk.
8.5 French drivers

Survey technical aspects
Interviews were rather conducted by women (69/60), and by people between 40 and 54 years old (57/33). They seldom took place in the evening (4/25). (Technical information has not been correctly reported by poll institute)

Drivers characteristics
Most of the French drivers live in small towns, from 2,000 to 100,000 inhabitants (89/55) and in very small towns, less than 2,000 inhabitants (28/17). They are older (13/7), over 65 years old. They are more often retired (23/12).

Mobility features
As far as engine is concerned, many people can not answer when asked about the engine size of their car (38/9), nor the power to weight ratio (20/13), technical problem due to poll institute. Few cars are owned by employer (2/5). More drivers have a fully comprehensive insurance (67/52).

Alcohol when driving
Many drivers drink most days (17/10), but most of the sample drink very little (51/38, less than one unit alcohol). They often drive after drinking (75/60) but seldom when they are over the legal limit (40/22). Most often they are satisfied with the current legal limit (43/27) but more than one person out of ten thinks drivers should be allowed to drink more (11/5). Moreover, one person out of three thinks that people should be allowed to decide for themselves how much they can drink before driving (33/12).

Wearing of seat belt
About eight French drivers out of ten always wear seat belts in town (80/60). The proportion is higher too, either on main roads (90/75) or on motorways (92/82). One driver out of five thinks that, in case of emergency, there is an important risk of being trapped by seat belt (20/12).

Speed limitation
One French driver out of four believes he drives a little faster than average (24/17). According to them, French drivers are respectful of the speed limits. As a matter of fact, few of them have been fined recently (9/20).

As compared to others, French sample seems to adopt the principle of recent 0.5 BAC but in practice the potential of contestation is sizeable. More confidence to seat belt should be obtained, some contradictions in declarations about speed.

8.6 German drivers

Survey technical aspects
Interviews were most often conducted by men (60/40) or much older interviewers, 55 and over (28/15).

Drivers characteristics
German drivers rarely live in small towns (8/17). Older people, 65 and over, are more numerous than in the whole (11/7).
Country by country

Mobility features
More cars have engine whose size is between 1,300 and 1,900 cc (57/46). The percentage of cars over 2,000 cc is quite higher (16/13). A majority of people has a fully comprehensive insurance (79/52).

Alcohol when driving
German drivers are satisfied with the legal limit (0.8). Very few of them (2/5) think people should be allowed to drink more. Compared to all countries, many drivers always expect to be checked (6/1.5) but the percentage of fined people is not higher (2/2).

Wearing of seat belt
More than eight German drivers out of ten always wear seat belts in town (81/60). The proportion is higher too, either on main roads (87/75) or on motorways (90/82). More drivers think that seat belt remains useful even when driving carefully (70/50) and do not feel comfortable when not wearing seat belt (55/35). Almost three drivers out of four think that seat belts reduce risk of serious injury (73/58) and more than one driver out of two think there is not much risk of being trapped by seat belt (52/33).

Speed limitation
Almost one German driver out of three (31/23) thinks he drives a little slower than average. Where speed limit on motorways is concerned, most of them (55/46) think it must not be changed (no limit in this case). Almost two persons out of 10 (19/8) are against speed limit on motorways. Many German drivers (30/20) have been fined.

As compared to others, German sample is very favouring seat belt. For drink driving there is deterioration because eastern part was at 0.0 till ‘93, situation could be improved if Chambers vote reduction to 0.5 limit. In the country of partly ‘no limit’ speed, excessive speeding is more often sanctioned.

8.7 Greek drivers

Survey technical aspects
Men (82/40), or young people, 25 to 39 (64/30), most often conducted interviews.

Drivers characteristics
Greeks drivers live either in small towns, less than 2,000 inhabitants (26/17) or in big town, more than 100,000 inhabitants. They are often males (75/60). The proportion of farmers and fishermen is more important (13/3) and few middle-manager/trainee (1/10). Where driving experience is concerned, there is quite a high proportion of people with less than 2 year (13/7) and a low percentage of people answering more than 25 years (18/30).

Mobility features
Almost one Greek driver out of two drives to and from his work (44/30). There are few cars with engine over 2,000 cc (4/13) and high power to weight ratio (2/17). Where insurance is concerned, two drivers out of three chose the minimum insurance (63/45).

Alcohol when driving
Greek drivers often drive after drinking alcohol. Only one person out of five (19/40) never drives after drinking. Many of them drink 1 or 2 units of alcohol before driving (10/4) or as many drive most days over legal limit (2.6/0.5). They are many to think that drivers should not be allowed to drink as much as now (43/16). Yet, many Greek drivers (44/12) think that people
should be allowed to decide for themselves how much they could drink before driving. Most people (47/33) never expect to be breathalised.

**Wearing of seat belt**

Many drivers never fasten their seat belts, either in town (53/12), on main roads (22/5) or on motorways (14/4). Moreover, more of them think seat belts are not necessary when driving carefully (14/9). Less than one person out of five only does not feel less comfortable at all without his seat belt fastened (18/35).

**Speed limitation**

There are, on the one hand, relatively quite a lot of drivers (3.4/2.2) who believe they drive much faster than average, and on the other hand, more drivers (7.7/4.7) who believe they drive much slower than average. As far as speed limits are concerned, one driver out of five drive very often or always faster than the limit on motorways (19/10).

*As compared to others, Greek sample present bad scores as concern drinking and driving, general legal BAC could be reduce to 0.5 as it is for accidents. The room for belt wearing improvement is sizeable. General enforcement appears very low.*

### 8.8 Irish drivers

**Survey technical aspects**

Interviews were almost always conducted by women (99/60) who were middle-aged, 40 to 54 (64/33).

**Drivers characteristics**

Irish drivers often live in very small towns, less than 2,000 inhabitants (44/17). They are older, 40 to 54 (39/30), 55 to 64 (16/14) and 65 and over (10/7). The proportion of farmers and fishermen (10/3) or housewives (15/7) are much more important than in the whole.

**Mobility features**

More Irish cars have a power to weight ratio between 40 and 60 (52/48), but there are also many cars with a ratio between 60 and 80 (44/26). Where insurance is concerned, a majority of Irish drivers chose a fully comprehensive insurance.

**Alcohol when driving**

Less drivers drink alcohol every day (2.3/10) but one person out of three drinks typically more than 5 units alcohol (33/14). They are more often satisfied with the current legal limit (38/27), but one person out of ten (10/5) thinks driver should be allowed to drink more. More people never expect to be breathalised (50/33).

**Wearing of seat belt**

Most Irish drivers think that seat belts remains useful even when driving carefully (60/50). Almost three drivers out of four think that seat belts reduce risk of serious injury (74/58) and almost one driver out of two does not feel comfortable when not wearing seat belt (48/33).

**Speed limitation**

More Irish drivers (62/51) consider they drive at average speed. As a matter of fact, more than one driver out of three never drives faster than the speed limit either on motorways (34/23) or on main roads (37/22). In built-up areas, almost two persons out of three never break the limit (64/42). Very few of them have been fined for speeding (3/20).
As compared to others, Irish sample is a case of occasional but heavy drinking, BAC level is high and control rare. Belt is well supported, and speed limit seems respected.

8.9 Italian drivers

Survey technical aspects
Male interviewers (64/40) or young ones, 25 and less (50/21), most often conducted interviews.

Drivers characteristics
Two Italian drivers out of three live in a small town (66/55), from 2,000 to 100,000. Italian drivers are older, 55 to 64 (26/14). There are more lawyers (10/3) and more students (13/6) than as usual, but less manual workers (8/20).

Mobility features
One car out of five has a small engine size of less than 1000 cc. (18/8). Only one Italian driver out of 100 does not know the size of his car engine (1/9). More car drivers (55/45) have only a minimum insurance.

Alcohol when driving
Many drivers drink most days (22/10). Yet there are also many drivers who never drink (40/30). Many of them often drive (most days) after drinking (12/4). Where the drink-driving legal limit is concerned, many of them never drive being over (35/23). Many of them (35/17) think drivers should be allowed to drink less than the current limit. Yet, more than one person out of four thinks that people should be allowed to decide for themselves how much they can drink before driving (25/12). A great majority of people (72/33) never expect to be breathalised.

Wearing of seat belt
Many Italian drivers never fasten their seat belts, either in town (53/12), on main roads (22/5) or on motorways (12/4). Only one Italian driver out of three thinks that seat belts remain necessary even when driving carefully (36/50). Less than one person out of five (18/35) does not feel less comfortable at all without wearing the seat belt.

Speed limitation
Most Italian drivers (57/51) consider they drive at average speed, yet a few of them (3.5/2.1) believe they drive much faster. Whereas many Italian drivers never drive over the speed limit on country roads (37/27), a quarter of them sometimes do it in built up areas (23/16). More persons (29/14) think that their speed is never checked.

As compared to others, Italian sample is a case of not so high but regular drink driving with less support to the law. There is room for improvement to belt wearing. Is speed usage very wise? It seems. But enforcement appears very low in all three domains.

8.10 Dutch drivers

Survey technical aspects
Interviewers were mostly women (70/60) and older than average, 40 to 54 (38/33) or much older, 55 and over (33/15).
Drivers characteristics
   Most drivers live in small towns, from 2,000 to 100,000 (77/54). More Dutch drivers are middle-managers (17/10) or directors (8/4).

Mobility features
   There are very few cars (2/6) with small engine of less than 1000 cc. More of them (51/26) have a power to weight ratio between 60 and 80 KW/T. As far as insurance is concerned, fully comprehensive option is more frequent (68/52). Yet, there is a relatively high proportion of not insured cars (3.7/0.7).

Alcohol when driving
   Many drivers drink most days (22/10) and they are also many to drink little, 1 or 2 units alcohol (50/38) or never drive after drinking (50/40). More of them think drivers should not be allowed to drink alcohol at all before driving (60/50). They also think drivers should not be allowed to drink as much as now (56/48) and strongly disagree when asked whether people should decide how much they can drink before driving (75/56).

Wearing of seat belt
   Most Dutch drivers think that seat belts remain useful even when driving carefully (60/50) and that seat belts reduce risk of serious injury (66/58). Nevertheless one person out of five (20/12) thinks there is a serious risk of being trapped by seat belts.

Speed limitation
   Most Dutch drivers consider they drive at average speed (60/52) or a little faster (29/17). Moreover, people are satisfied with speed limits and most think they should stay the same either in built up areas (74/70), on main roads (77/67) or on motorways (56/47). More drivers have been fined (28/20).

   As compared to others, Dutch sample support greatly the idea of reducing the limit (now 0.5). More confidence in the seat belt should be desirable. State of speed limits is approved even if sanctions are more frequent.

8.11 Portuguese drivers

Survey technical aspects
   Interviewers were mostly females (83/40) or were young, under 25 (50/21) or between 25 and 39 (50/31).

Drivers characteristics
   Portuguese drivers often come from very small town, less than 2,000 inhabitants (36/17). They are more numerous being less than 25 years old (21/13). As far as their occupation is concerned, there is a lot of middle-manager/trainee (20/10) and a lot of students (12/6). There are less housewives (2/7). Where driving experience is concerned, there is a higher proportion of inexperienced people, less than 2 years (11/7) or 3 to 5 years (17/9).

Mobility features
   More often Portuguese driver drives to and from his work (44/30) there are few cars with a power to weight ratio over 80 KW/T (3/7). More car drivers have minimum insurance (57/45).

Alcohol when driving
   More than one person out of four drink most days (26/10). More drivers very often drive after drinking (13/4) but they drive less often over the legal limit (37/23). Many drivers are
satisfied with the current legal limit (40/27), but one person out of three thinks driver should not be allowed to drink as much as now (30/17). One person out of ten expects to be often breathalised (11/5).

**Wearing of seat belt**

About three Portuguese drivers out of four always wear seat belts in town (75/60). The proportion is higher too, either on main roads (84/75) or on motorways (89/82). More of them think seat belts are not necessary when driving carefully (15/9) and one person out of three thinks that the risk of being trapped by seat belt is important (28/12).

**Speed limitation**

One Portuguese driver out of five often drives faster than the speed limit on motorway (20/13). About 15% drivers do it very often (15/6) and 13% do it always (13/4). Their behaviour is quite similar on roads and in built up areas. As a matter of fact more of them think speed limit should be higher on motorway (51/38).

As compared to others, Portuguese sample present frequent drink driving. Even though less often illegal, it does not mean safe. Marked progress for belt wearing after extending law, but confidence to improve. Speed is also a domain where Portuguese driver under estimates the related high risk.

## 8.12 Spanish drivers

**Survey technical aspects**

Young people (28/15) most often conducted interviews. Less than 1% (1/14) were 55 and older.

**Drivers characteristics**

Nearly one Spanish driver out of two comes from a big town, 100,000 inhabitants and more (45/27). They are more often young, between 25 and 39 years old (43/35). The proportion of unemployed people is higher (7/4).

**Mobility features**

Only a very low proportion (1/5) of cars belongs to the driver’s employer. Most of Spanish drivers (75/45) chose a minimum insurance.

**Alcohol when driving**

Many drivers never drink (44/28). As far as the drink-driving legal limit is concerned, people are quite satisfied with the current situation (35/27). More of them (40/33) expect to be never breathalised.

**Wearing of seat belt**

More than eight Spanish drivers out of ten always wear seat belts on motorways (85/75). The proportion is higher too on main roads (85/75). It is not the case where towns are concerned: only one person out of two always fastens his/her seat belt (51/61) and, moreover, more drivers never wear it (18/12).

**Speed limitation**

A bit more half Spanish drivers (55/51) consider they drive at average speed. As a matter of fact, almost one driver out of three never drives faster than the speed limit either on main roads (30/22) or on country roads (40/28). In built up areas, more people (51/42) never break the limit.
As compared to others, Spanish sample indicates that drink driving does not appear as a priority; are they socially less sensitive to this problem or are they wiser than others? Seat belt wearing shows positive evolution, but important gains could come from improving it in town. Regarding speed the situation, if not perfect, seems better.

8.13 Swedish drivers

Survey technical aspects

Interviews were far more often conducted by people over 55 years old (45/15).

Drivers characteristics

Most of the Swedish drivers live in small towns, from 2,000 to 100,000 inhabitants (83/55). They are a little older, 65 years old and over (12/7). Housewives are very few (1/7).

Mobility features

More than one car out of three has an engine size over 2,000 cc (36/12). More than 8 drivers out of ten (80/13) can not answer when asked about their car power to weight ratio. Nevertheless, there is nearly no car (0.6/7) with a ratio less than 40 KW/t. Most cars (77/52) are fully insured.

Alcohol when driving

Most drivers drink less than once a week (58/27) and a large majority of them (80/40) never drive after drinking. Only a few people sometimes drive over the legal limit (0.3/9). Most of them think drivers should not be allowed to drink alcohol before driving (64/50). Most people (68/40) expect to be rarely breathalised. Very few people have been fined for driving after drinking (0.1/2).

Wearing of seat belt

More than eight drivers out of ten (82/60) always wear seat belts in town. The proportion is very high too, either on main roads (90/75) or on motorways (92/82). Many drivers (40/3) do not answer when asked whether seat belts are necessary even when driving carefully and when asked if there is a risk of being trapped by seat belts (45/6). Yet most of them (67/58) think that wearing seat belts reduce risk of injury and do not feel comfortable when not wearing (52/35).

Speed limitation

One driver out of five often drives faster than the speed limit on motorway (20/13). Their behaviour is quite similar on main roads where one person out of five often breaks the limit (18/12) and two out of five break it sometimes (40/30). Moreover, many of them (49/38) think the speed limit should be higher on motorways. Most drivers (72/38) think that their speed is rarely checked. As a matter of fact, few of them (10/20) have been fined for speeding.

As compared to others, Swedish sample shows very positive situation with regard drink driving and belt wearing. Improvements concern a small part of drivers difficult to change. The temptation to which yield Swedish drivers seems to be excessive speed. Social tolerance is higher than for previous topics.

8.14 United-Kingdom drivers

Survey technical aspects

Women (79/60) or people of 40 to 54 (53/33) most often conducted interviews.
Drivers characteristics
Many British drivers come from a big town with more than 100,000 inhabitants (43/28) and they are more often aged over 65 (13/7).

Mobility features
British cars are rather powerful. Very few of them have a power to weight ratio less than 40 KW/T (1/7). Almost eight drivers out of ten have a fully comprehensive insurance (78/53).

Alcohol when driving
More British people (53/40) never drive after drinking. Many of them (55/50) think drivers should not be allowed to drink alcohol before driving and only very few of them (1/5) think people should be allowed to drink more before driving. More people expect to be never breathalised (50/33).

Wearing of seat belt
About nine British drivers out of ten (89/60) always wear seat belts in town. The proportion is higher too, either on main roads (92/75) or on motorways (94/82). Very few drivers believe that seat belts are not necessary at all when driving carefully (0.8/10).

Speed limitation
More British drivers consider they drive at average speed (60/52). More than one British driver out of four thinks that the speed limit should be lower in built up areas (26/17) and only very few of them (1/9) think there should be no limit on motorways. Whereas many British drivers think their speed is often (20/12) or very often (8/4) checked, few of them have been fined (7/18).

As compared to others, UK sample presents better situation to belt wearing. Drink driving regulation well accepted, but controls are perhaps less visible than for others. The higher perceived level of checking perhaps explains the reasonable attitude to speeding.

8.15 Czech drivers

Drivers characteristics
Compared to all other countries, manual workers are much more numerous (30/20). As far as unemployed people are concerned, they are very few among Czech drivers (1.7/4).

Mobility features
People who drive to their work are fewer than in the other countries (16/30). There is a great deal of cars (20/7) with a power to weight ratio less than 40 KW/T. Where insurance is concerned, the main fact is that more drivers (5/0.69) have no insurance at all. Many Czech people drive less than 5,000 km/year (40/21).

Alcohol when driving
Most of them never drive after drinking (64/40). Eight persons out of ten (81/50) think people should not be allowed to drink before driving, which is current situation. More than two persons out of three (69/56) strongly disagree with people deciding themselves how much they can drink before driving. More people expect to be rarely breathalised (60/40).

Wearing of seat belt
Most Czech drivers do not always wear their seat belts. Only four persons out of ten always wear it in town (40/60). The proportion is still less than average either on main roads (64/75) or on motorways (75/81). Many drivers (34/23) think that seat belts are not, or at least less,
necessary when driving carefully. Almost one person out of ten does not believe that seat belts reduce much risk of injury (9/5).

**Speed limitation**

Czech drivers are quite respectful of speed limits. One person out of three never breaks the speed limit on motorways (31/24), and almost one person out of three (29/24) only does it rarely. Moreover many people think that the speed limit should be lowered in built up areas (30/17). Nevertheless most people think the limit should be higher on motorways (56/38) and they are quite numerous (16/8) to ask for no limit.

As compared to others, for Czech sample the no alcohol rule received wide support, but test are not so frequent. Concerning seat belt improvement should be obtain on all aspects. About speed usage, besides situation appearing positive, there is a demand on increasing motorway limit.

**8.16 Hungarian drivers**

**Survey technical aspects**

Interviewers were more often from 25 to 39 years old (40/30) and from 40 to 54 (44/33). Many interviews took place in the afternoon (64/50).

**Drivers characteristics**

Hungarian drivers often come from towns over 100,000 inhabitants (40/28) and seldom (11/18) from small towns, less than 2,000 inhabitants. Among Hungarian drivers, there are higher percentages of craftsmen (15/10), manual workers (27/20) and retired people (22/12).

**Mobility features**

People who drive at work are much more numerous (40/20) but they are less to drive to their work (18/31). Many cars have small engines of less than 1000 cc (16/8). There are a lot of cars with a power to weight ratio less than 40 KW/T (17/7). Almost eight drivers out of ten (82/46) have only a minimum insurance.

**Alcohol when driving**

More among them never drive after drinking (55/40). They seldom drive over the legal limit (2.5/9). Almost eight persons out of ten (78/50) think people should not be allowed to drink before driving. Almost two persons out of three strongly disagree with idea of deciding themselves how much they can drink before driving (64/56). More people expect to be never breathalised (60/33).

**Wearing of seat belt**

Many drivers believe that seat belts do not reduce much the risk of serious injury (14/5). Only very few Hungarian drivers (7/12) fear the risk of being trapped by seat belts but most of them think this risk exists since they are as few (6/10) answering there is no risk at all.

**Speed limitation**

More than one Hungarian driver out of three thinks he drives a little slower than average (36/23). They are quite respectful of speed limits. Almost one person out of two (45/24) never breaks the speed limit on motorways, more than one person out of three (37/28) only does it rarely on country roads and most of them (53/42) never in built up areas. Nevertheless many people think that the speed limit should be higher both in built up areas (51/11) and on main roads (51/28). Quite a lot of people (25/12) think that their speed is likely to be often checked.
As compared to others, Hungarian sample present rather good situation to drink driving, however the level of control is perceived very low. Information on benefit from belt seems desirable. If people seem to respect the speed limit, there is a demand for increasing the thresholds.

8.17 Polish drivers

Survey technical aspects

Men (64/40) who were younger more often conducted interviews. Only 4% were older than 55 (against 15% for the whole sample).

Drivers characteristics

Polish drivers more often come from small towns, less than 2,000 inhabitants (38/17). Almost one Polish driver out of three is a manual worker (30/20). There are a lot of students (12/6). There are a lot of professional drivers (14/6). One Polish driver out of five has a driving experience shorter than two years (20/10).

Mobility features

Almost eight drivers out of ten (78/53) have a fully comprehensive insurance. More than one car out of three has a small engine, of less than 1,000 cc. (36/8). As far as power to weight ratio is concerned, there are, on the one hand, lots of cars with a ratio less than 40 KW/T (20/7), and, on the other hand, many cars (15/6) with a ratio over 80.

Alcohol when driving

Polish drivers drink as often as others but more of them (34/13) drink a lot, more than 5 units alcohol. More often, they never drive after drinking (53/40). Almost seven persons out of ten think people should not be allowed to drink before driving (67/50). More people expect to be never breathalised (60/33).

Wearing of seat belt

More Polish drivers always fasten their seat belts in town (73/61) and on main roads (81/75). They are less disposed to wear it on motorways (77/81). Almost one driver out of five believes that seat belts are not necessary when driving carefully (17/9).

Speed limitation

Only one Polish driver out of ten (12/20) thinks he drives a little or much faster than average. Moreover the percentage of people considering themselves much slower is quite higher (11/5). According to answers, Polish drivers only sometimes break the limits especially on country roads (32/25). There are more answers in favour of a lower speed either on main roads (11/5) or on motorways (11/5).

As compared to others, Polish sample present occasional but heavy drinking and controls are less frequent. In contrast with others, belt wearing is worse on motorways. The point for speed is related to small roads where breakers are more frequents. (Note that motorways are rare: 216 km).
8.18 Slovak drivers

Survey technical aspects
  Interviews were more often conducted by women (90/60) who were very often middle-aged, 40 to 54 (83/33). Many interviews were held in the morning (53/23).

Drivers characteristics
  Slovak drivers more often come from big towns (46/28). Most of them are males (76/62) and they are seldom aged over 65 (1/7). There are more manual workers (30/20). The proportion of white collar is higher too (33/20). Retired people (1.5/12) and housewives (1.1/7) are very few among them. There are a lot of professional drivers.

Mobility features
  There are lots of cars (71/48) with power to weight between 40 and 60, or over 80 (17/6). Most drivers (55/45) have a minimum insurance. The proportion of Slovak people who drive more than 30,000 km/year is a bit higher (32/14).

Alcohol when driving
  Most of them never drive after drinking (60/40). More often they think people should not be allowed to drink before driving (91/50). They strongly disagree with people deciding themselves how much they can drink before driving (74/56). More people expect to be rarely breathalised (50/40).

Wearing of seat belt
  Most Slovak drivers do not always wear their seat belts. Only four persons out of ten always wear it in town (42/60). The proportion is still less on main roads (60/75) or on motorways (65/81). The percentage of people considering seat belts of no use (2.3/1.5) is the highest. Moreover, only few drivers feel less comfortable when not wearing seat belts. More than one driver out of five has been fined or punished for not wearing seat belt (22/7).

Speed limitation
  Slovak drivers are quite respectful of speed limits. They rarely break the speed limit on motorways (34/24). They do it rarely on main roads (37/29) and never in built up areas (53/42). Nevertheless many people think that the speed limit should be higher in built up areas (51/11) and on main roads (51/28). Quite a lot of people think that their speed is likely to be checked (25/12).

As compared to others, Slovak sample seems to approve of drink driving regulation, but controls are very rare. Belt wearing is rather bad; a lot should be done. In a context of apparent respect, there is a demand for increasing speed limits.

8.19 Slovene drivers

Survey technical aspects
  Interviews were most often conducted by women (88/60) who were almost always young, under 25 (95/21). Interviews were more often held in the afternoon (61/50).

Drivers characteristics
  Slovenian drivers more often (41/18) come from small towns, less than 2,000 inhabitants, and seldom (40/28) from towns over 100,000 inhabitants. A third are manual worker (32/20).
**Mobility features**

Quite a lot of people drive to and from their work (40/30). Slovenian cars have seldom big engines, more than 2000 cc (5/12) and have often a power to weight ratio between 40 and 60 KW/T (65/47). Most of them have only a minimum insurance (70/45).

**Alcohol when driving**

Slovenian drivers drink as often as others do but most of them drink very little, less than one unit alcohol (51/38). Only one person out of five never drives after drinking (19/40). Yet quite a lot of them drive once or twice a week over the legal limit. (16/7) Many people (18/5) expect to be often breathalised. One driver out of ten has been fined for driving after drinking (10/2).

**Wearing of seat belt**

According to Slovenian drivers, they wear seat belts as often as drivers do from other countries and, yet, almost one driver out of five has been fined or punished for not wearing seat belt (19/7).

**Speed limitation**

They drive a little slower than others (40/23), but break sometimes (32/27) or often (19/13) the limits on motorways. On main roads those who never break the limit are very few (13/21). They are more respectful of the limit on country road, almost two persons out five (38/33) and in built-up areas, two persons out five, rarely drive over the limit (40/33. More drivers think that their speed is likely to be often (27/12) or very often (8/3.5) checked. Lots of them have been fined (32/20)

As compared to others, Slovene sample seems to require more enforcement of drink driving legislation. Belt wearing is in better way. Actions to diminish excessive speeding seem justified and should be perhaps increased.

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**8.20 Swiss drivers**

**Survey technical aspects**

Many interviews were held in the evening (47/25).

**Drivers characteristics**

Swiss drivers usually live in small towns, between 2,000 and 100,000 inhabitants (64/55). Manual workers are not very numerous among them (11/20). On the opposite, the proportion of white collar (30/20) on one hand, and of director (7/4), on the other hand, are quite high. Lots of them have higher income (16/6).

**Mobility features**

Swiss cars are much more powerful than others are. Almost one car out of four has a power to weight ratio over 80 KW/T (23/7). Where insurance is concerned, a large majority (82/53) of drivers have a fully comprehensive insurance. Only few Swiss people drive more than 30,000 km/year.

**Alcohol when driving**

Swiss drivers drink as often as others do but most of them drink very little, less than one unit alcohol (49/38). Yet quite a lot of them drive once or twice a week over the legal limit (8/7). More often they are satisfied with the current legal limit (56/27). A bit more people have been fined or punished for driving after drinking (4/2).
Wearing of seat belt

About seven drivers out of ten always wear seat belts in town (72/60). The proportion is higher too on main roads (79/75) or motorways (85/82). Some think that risk of being trapped by seat belt is important (31/12) and some don't think so (24/10). More Swiss drivers think that seat belts remain useful even when driving carefully (63/50).

Speed limitation

Swiss drivers never (19/23) or rarely (31/24) break the limit on motorways, or in built up areas (49/43). Many persons often (11/9) or very often (3.5/2.5) drive faster than the limit on country roads. People are satisfied with and most think speed limit should stay the same in built up areas (77/70) or motorways (50/47), even if many of them wish there were no limit on motorways (13/8). One driver out of three has been fined, which is quite a lot (33/20).

As compared to others, Swiss sample shows higher illegal drink driving and require perhaps, increased enforcement. Argumentation on benefit from belt wearing could increase wearing rates. Speeding seems more a problem on small roads.
Chapter 9  Conclusion and recommendations

9.1 SARTRE compared to other data bases

The SARTRE 2 survey covered car drivers from nearly all 1996 European Union member states, except Denmark and Luxembourg. The collected data are sufficient to give a correct view of the European Union as a whole. Furthermore the non-EU countries Switzerland, Czech Republic, Slovakia, Slovenia, Hungary and Poland, some of which are potential members, are also covered. The quality of gathered data is estimated to be very good for 10 EU related samples and 4 non EU, and good with care for the 5 others.

The conclusions drawn from the previous chapters are presented below in a summarised way. Then we will examine some trends given by the comparisons of SARTRE 1 and SARTRE 2. After that we will propose some considerations or recommendations to road safety policies.

But first we want to describe the added value of the SARTRE study with respect to current road safety research and data bases. In the SARTRE project, important information is collected directly from road users - in this case car drivers. The information about their behaviours, attitudes and opinions, is a supplementary to the usually available data bases.

Also contextual data from national statistics and other sources regarding for example drivers' behaviours have been collected from the countries that are involved in the study. These data are important for post-hoc explanations of road safety developments. These overviews of behavioural data are as yet only hardly available.

When we compare the SARTRE data with accident statistics and data from observations of behaviour the specific contribution of the SARTRE data is to analyse determinants of risky behaviour in road traffic.

The advantage of the present questionnaire survey is that the reported behaviours can be related to the simultaneously gathered opinions and social characteristics. We would like to underline that, indirectly, SARTRE is an unique source for describing drivers and driving characteristics, in detail, as it is a disaggregated database.

Besides, data about behaviour that is reported by drivers themselves may fill a gap, because observational data on road risky or illegal behaviour (alcohol, speed...), are neither systematically collected (not in all countries, and not regularly observed) and nor are they homogenous when they exist. SARTRE provides comparable systematic information on self-reported behaviour in 19 European countries. Whenever possible checks were performed that proved that reported behaviours were in many cases not much different from available observational data.

It is e.g. interesting to see that there were no data available on observed seat belt use in Spain and Portugal during SARTRE 1. This leads to the consequence that the impact of new legislation regarding the obligation to use seat belts on front seats also inside built up areas, can not be assessed on the basis of observed behaviour. SARTRE, however, provides us with data to measure effects on the basis of reported behaviour.
9.2 The results from SARTRE 2

**Attitudes to risk and general behaviour**

Drivers’ attitudes to risks and the perception of risk while driving are important determinants of behaviour and safety. The survey demonstrates that there are very marked differences between countries in how drivers view road traffic risk.

Although drivers were less concerned about road safety than other social issues such as unemployment and crime, nearly 2 in every 5 drivers reported being very concerned about road accidents. This may not appear as very high percentage to those involved in improving road safety. But we should consider that road safety is not a new and recent risk as it is probably the case for unemployment. Road safety in general is perceived to be a 'normal' risk.

According to car drivers, driver behaviour was thought to be much more of a contributory factor in accidents than either environmental or vehicle factors. Drinking-and-driving and speeding were seen as being particularly important causes of accidents.

The results have identified a number of examples where education and publicity could be used to promote road safety. While many drivers overestimated the annual number of road deaths in their countries a significant number underestimated road traffic risk. Drivers appeared to be more concerned about the exposure of members of their family to risk rather than the risks they are exposed to themselves. A considerable proportion of drivers admitted to engage in certain dangerous driving behaviours on a regular basis, even though most drivers judged themselves to be relatively safe compared to other drivers.

**Opinions about road risk and safety countermeasures**

With regard to the opinions to accident risk on the roads, there is large majority support among European drivers for wide variety of road safety measures such as improvement of road standards, improvement of driver training, enforcement of traffic laws, testing of vehicles for safety and road safety campaigns.

The introduction of a number of measures on a European scale, e.g. installation of third braking light, a European introduction of penalty points system and a European ban on alcohol for beginning drivers, is also widely approved.

The questions, which show the largest variation between European countries, pertain to the necessity of improving the standards of roads and to the strictness regarding drinking-and-driving. This result is in line with an earlier analysis of SARTRE 1 results, in which it was found that these questions were part of the two major discriminating dimensions between European countries.

Especially the findings concerning drinking-and-driving present a complex picture of differing attitudes. Drivers of southern European countries are, on the one hand, less extreme in their disapproval of individual freedom of choice in drinking-and-driving and, on the other hand, very extreme in their thinking that drinking-and-driving will lead to accidents and that drinking-and-driving should be completely forbidden for young drivers. This answer pattern may indicate a tendency of southern European drivers to view the problem of drinking-and-driving as the particular problem of certain target groups (e.g. young people, or people with anti-social tendencies) and to equate drinking-and-driving with 'driving when extremely drunk' or 'reckless, uncontrolled driving'. It may be that drivers of northern European countries are more inclined to view drinking-and-driving as a general societal
phenomenon and to have a more legalistic concept of drinking-and-driving, i.e. to see drinking-and-driving as driving with BAC above the legal limit.

**From alcoholic consumption to drink-driving**

The comparison of countries shows that the problems with alcohol and driving are complex. The different patterns how attitudes and habits are linked indicate different drinking cultures and different driving cultures and that differential attempts to tackle the drink-driving problem have to be sought.

The attempt to reduce the alcohol risk in traffic in Europe needs the consideration of national and cultural differences. Low alcohol limits correspond to awareness of alcohol risk in traffic and to desirable habits regarding drinking and driving. For those countries where there is little support for a low alcohol limit, an increase of the awareness of the accident risk at low blood alcohol concentrations is necessary.

Low alcohol limits however are no guarantee for responsible behaviour regarding drinking and driving of all drivers. Even in countries where regulations are strict and desirable attitudes are widespread, a remarkable number of drivers report drinking several units of alcohol before driving. The general strategy of increasing the perception of alcohol risk and making drivers more responsible needs supplementary measures to prevent the hard-core of violators from doing so.

The results of the survey provide guidelines for national policies and the setting of priorities. Anyway, two problems must be considered - the underestimation of alcohol risk by the average driver and the behaviour of frequent violators. National policies should be sophisticated and targeted to avoid an alliance between violators and average drivers.

A maximum BAC limit of 0.05 in the European Union would be an advantage in several countries and there is range to overcome adverse side effects, which might arise when implementing this limit.

The perceived risk of being breathalised on a typical journey is low. Considerable support of legal measures with enforcement is needed in several countries. Even though tests are often done on a selective basis (when drink-drivers are more likely to drive, like at Saturday night) increasing the perception of risk to be controlled should improve deterrent effect of regulation.

**Speed limits and speeding**

The survey showed that the reported behaviours and attitudes to speed related issues vary considerably from country to country. In contrast to alcohol-related issues there does not appear to be any simple pattern to explain the results (e.g. differences between EU and non-EU countries, between northern and southern - or eastern and western - countries, or even a similarity within Scandinavian countries, etc.). Differences identified between countries may mean that it is possible to find examples of 'good practice' (and similarly 'bad practice'). This might give indications for the less effective countries how they might improve their speeding problems.

The numbers of road safety accidents with excessive speed being a contributory factor can be reduced by a variety of measures, such as education (including publicity), engineering (such as improved road layout and traffic calming in residential areas) and enforcement. A multi-factor approach is likely to be more effective than mono-focal interventions. The results of this survey may provide guidance for individual countries as to whether or not they have the correct 'mix'. This will need to be determined for each country based on their own recent experience.
Among the drivers there is widespread recognition that speed is a major factor in causing traffic accidents. There is also a widespread belief that many other drivers frequently drive faster than the speed limit. In addition there is a general agreement that drivers asked often drive faster than speed limit although speeding behaviour appears to be sensitive to different road types as they admit speeding more on higher speed roads. This latter finding shows that individuals recognise the relationship between speed and safety in some general way. If drivers were made more aware of the strong relationship between speed and safety this may encourage a more thoughtful, slower and thus safer style of driving.

A considerable number of drivers report that they enjoy driving fast. In most circumstances an affinity to speeding is not compatible with being a safe driver. This needs to be targeted by means of publicity and training of beginning drivers.

The results suggest that enforcement of speeding could be improved in a number of countries. Drivers typically report that they frequently drive faster than speed limits, especially on faster roads. Surprisingly, in the light of this reported behaviour, they also report that there is a good chance of having their speed monitored while driving. This apparent conflict may result from drivers believing that the authorities (whether the police conducting speed checks, or local authorities setting the threshold for triggering speed cameras) allow a certain tolerance over the speed limit before enforcement action is taken. This belief, whether true or not, is supported by the perception of a large majority of speeding drivers. It may lead to a feeling that the authorities do not take speeding (up to a certain point) seriously, and thus condone it as being an acceptable behaviour.

Countermeasures aimed at reducing speeding (e.g. speed limiters) and making speed less glamorous (e.g. in commercials aimed at selling cars because of their speed, acceleration and power) were widely supported. This suggests that ‘driving too fast’ is now being recognised as an unacceptable and antisocial behaviour (in the same way that attitudes to drinking and driving have been changed over the last 20 years from it being acceptable to it being socially unacceptable) and that public support for actions to curb it (such as increased penalties and more enforcement) would be readily accepted by the majority of drivers. The findings can be used by individual countries to inform their future safety measures aimed at reducing the numbers of speed related accidents.

**Seat belt use**

As a first point, the proportion of cars having seat belts installed in the front seats was high in all countries involved in the study. The results show on the other hand that the self-reported wearing rates were relatively low for Greece, Italy, the Czech Republic, Slovakia and Belgium for all traffic environments concerned. The results still support an earlier finding that the rates are generally lower in urban areas than in rural areas. This is the case in all countries although there is strong evidence that the belts are most effective in low speed accidents that occur more frequently in urban areas. One reason for this might be that in many countries seat belt wearing was made mandatory in rural regions only, thus supporting an assumption that the belts are less necessary in urban areas. Nevertheless, given that most countries have currently introduced a compulsory law for seat belt use in all traffic environments, it seems that measures such as education, information campaigns and enforcement are generally the most effective means to improve seat belt wearing in urban areas. In order to be effective, these means should focus on seat belt wearing in urban areas. In addition, the countries having a substantial percentage of cars with no belts in the rear seats should consider rear-belt installations for older cars.
The comparisons of the results from the survey and observational studies suggest that the survey results resemble the observational data. This conclusion was also made in the first survey.

The results show that in each country, a great majority of drivers agreed that seat belts reduce the risk of serious injury. This does not mean though that drivers would understand how important the seat belt wearing is.

Furthermore, the drivers in countries judging seat belts not to be really necessary if they drove carefully wore seat belts more infrequently. These results suggest that there are many drivers who agree that the seat belts are useful in accidents but they assume that they will not be involved in accidents because they drive carefully.

Many earlier findings have demonstrated that education and information as itself do not provide sufficient means to increase the wearing rates. The first requirement for high percentages of drivers wearing seat belts is a legal obligation for the use of belts. This was also demonstrated by comparing the wearing rates in Portugal and Spain before and after the introduction of the law. The improved wearing rates can then be supported and sustained by enforcement, education and information.

The comparisons of seat belt wearing rates and attitudes towards belt wearing showed that the highest correlation was for the feeling of comfort and relief the driver gets from wearing. In addition, the most substantial change of this attitude was for Portuguese and Spanish drivers. One might conclude that these findings support an argument indicating that attitudinal changes frequently follow behavioural changes. Drivers that are used to wear seat belts (required by law), feel less comfortable without belts. This attitude is adopted after using the seat belts for some time, but it is difficult to adopt by education or information.

9.3 Changes between SARTRE 1 and SARTRE 2

The common information gathered in SARTRE 1 and 2 phases allows exploring changes from around ’91 to ’96. Lacking in this case are Denmark, Luxembourg, Finland and Greece from the EU. The trends are also depicted for four non EU countries: Switzerland, Czech Republic, Slovakia and Hungary.

About road risk context of this survey

When the period 1990-1996 is considered there are three distinct groups of European countries in terms of road safety, with the specific point of view given by the number of injured road users and the number of injury accidents.

First, there is a group of countries where road safety clearly improved in the period 1990-1996, Austria, Belgium, France, Germany, Finland, Hungary, Spain, Sweden, UK. Most of these countries introduced sometimes radically new policies or new measures in the period 1990-1996 that may partially explain the improvement in road safety. For instance, France introduced a penalty point system, Belgium and France lowered the legal alcohol limit to 0.5 BAC and Spain devised a social contract that encourages government, industry and other parties to work towards better road safety. Spain also lowered the speed limit within built-up areas to 50 km/h.

Second, there is a group of countries with a seemingly stable safety situation over the period 1990-1996. The Netherlands, Portugal and Switzerland are in this group. However here also some new measures have been taken.
Third, there is a group of countries where road safety in the nineties appears to have worsened. Italy, Ireland, Czech Republic, Slovenia, Slovakia, Greece and Poland belong in this group. In some of these countries, for example Poland, the deterioration is bound up with a strong growth of private and commercial motorised traffic, spurred by economic development. The road safety figures for Italy show rather strange fluctuations from the first to the second sampling that are probably best accounted for by unreliable registration.

**Evolution of opinions about safety measures**

Generally, in Europe there have only been a few large changes in opinions about road safety measures from 1991 to 1996. Most changes for nearly all countries were within the range of 3 to 4 percentage points. For most of the countries, the support has hardly changed from SARTRE 1 to SARTRE 2. But the approval for the Europe-wide mandatory installation of a third braking light has increased greatly from minority support in 1991 to clear majority support in 1996. Presumably, the slowly increasing exposure to and (positive) experience with this device in daily traffic in the nineties has caused this considerable opinion shift.

Taking a look at results on a country basis reveals some large opinion changes for a number of countries. From SARTRE 1 to SARTRE 2, most and largest changes in opinions about measures have occurred among Italian, Hungarian, Portuguese and Swiss drivers. The change of opinions among Swiss drivers is consistent in the sense that they are far less supportive of different legislative road safety measures in SARTRE 2 than in SARTRE 1. This may in part be due to the fact that in the summer of 1996 the fines for various traffic offences have raised considerably.

Like the Swiss, the Portuguese appear also to be less supportive of a number of different measures in SARTRE 2 - with the exception of government devoting more attention to improving driver education which they favour more in 1996 than in 1991.

In contrast to the findings for the Swiss and Portuguese drivers, the shift of opinions among Hungarian and Italian drivers goes more in the direction of growing support for a number of measures. In SARTRE 2, Hungarian drivers are more supportive of road safety campaigns and of increased testing of vehicles, are more in favour of the Europe-wide introduction of penalty point system. They give more support to an obligation that car manufacturers restrict speed of cars and they are more critical in regard to individual freedom of choice in drinking-and-driving.

In SARTRE 2 compared to SARTRE 1, Italian drivers are more supportive of enforcement of traffic laws, restriction on the freedom of car manufacturers to use speed in advertisements, the European introduction of a penalty point system and of a requirement that car manufacturers restrict the maximum speed of cars. On the other hand, Italian drivers are less supportive of more severe penalties and less extreme in their disapproval of freedom in drinking and driving.

Finally, some national groups of drivers have rather unique positions on certain subjects. Belgium is unique in its low approval for the European introduction of a penalty point system. France is unique in its strong support for restricting the freedom for car manufacturers in using speed in car advertisement and in obliging car manufacturers to restrict the maximum speed of their cars.

Italian and Greek drivers may have what we call a 'twofold norm' regarding drinking-and-driving: very strict when thinking about drinking-and-driving as problem of specific target groups or as cause of accidents, but less strict when thinking about general freedom in drinking-and-driving. Swiss are rather unique in their meagre enthusiasm for measures on a European scale and in their decreasing support for a number of road safety measures.
The Netherlands have a relatively unique position on drinking-and-driving: very strict regarding freedom in drinking-and-driving, but at the same time Dutch drivers do not see much usefulness in an alcohol-meter. Portugal is unique in its decreasing support for a number of measures. Among Italian drivers there is increased support for a number of measures, but there is no increase in the strictness concerning penalties for traffic offences and drinking-driving. Austrians are relatively unique in their reservations towards 'in car' devices.

**About traffic-related attitudes and behaviour**

There were numerous examples of very marked changes having taken place between the two surveys. Regarding drink driving, shifts regarding awareness of the alcohol risk in traffic within a period of five years indicate that these opinions and attitudes are subject to positive influences such as information campaigns and legal measures. A decrease of the awareness in countries where measures have been taken or in countries which seem to perform well compared to other countries, show the necessity to continue the support of the awareness of accident risk due to driving under influence.

Regarding speeding, there are also very marked differences in changes that have occurred between SARTRE 1 and 2. There is widespread recognition that speed is a major factor in causing traffic accidents - and this belief has increased since the first SARTRE survey. There is also a widespread belief that many other drivers frequently drive faster than the speed limit - and again this perception has increased since the first SARTRE survey.

Regarding seat belt wearing, seat belts in the rear seats were much more frequently installed than five years ago (SARTRE 1). The fitting of seat belts in all seats being now mandatory in every country, it is just a matter of time when the car fleets will be completely equipped. In comparison to the results of SARTRE 1, the most substantial difference was that the wearing rate was higher in towns for many countries. However, the results still supported an earlier finding that the rates are generally lower in urban areas than in rural areas.

**9.4 Most important results**

The most important results of the SARTRE-studies are:

- There are three target groups in drinking and driving: the group that refuses the combination, the group that wants to go as far as is permitted trying to stay under limit, and the group that easily exceeds the limit. The first group should be used to influence the others, the second could be recommended to test how drunky they are and that even low impregnation has effect on driving.

- The social norms regarding use of speed and speeding are not favourable from a safety point of view. Although the drivers decide on their speeds not without respect to limits but they handle them flexible, especially outside urban areas. Changing the social norm regarding speed excess tolerance should continue to receive a higher priority. The danger related to speeding is under-evaluated or denied.

- For many drivers seat belt wearing is not a habit yet, especially inside urban areas

- There is a wide support for road safety measures, e.g. higher standard of roads, zero alcohol limit for new drivers, better public transport, technical devices in cars. Even though this support can often be ambiguous, this is an indication of improving attitudes towards traffic risks.
- There are some important findings and examples where countries can learn from each other. In some countries drivers are not well informed about the risk of drinking some units and driving, sometimes drivers do not even know the legal limits, in other countries drivers even wish for higher limits.

- The level of control varies greatly among countries; perceived enforcement, as reported in the questionnaires, appears low or weak in some of the countries.

Regarding some trends between SARTRE 1 and 2 we underline:
-- there is more enjoying speed and less punishments for speeding
-- higher seat belts use in esp. Spain and Portugal after the introduction of new legislation
-- more support for third braking light
-- less police controls have been reported
-- except for 2 or 3 countries, improvements have been made regarding drink-driving

9.5 Recommendations

The trend of waning support for a number of different road safety measures in some European countries may indicate some saturation with the road safety problem in these countries. Especially in these countries (but also in others) effort should be put into devising innovative road safety campaigns that are able to renew (personal) interest in road safety topics.

Preferably, mass-media communications should be locally supplemented with more personal forms of communication directed at specific target groups or at local regions. In some European countries where the enthusiasm and support for a number of road safety measures has been greatly increased, there is good momentum for introducing and implementing a more active, new road safety policy.

European publicity about the dangers of drink-driving should tackle possible misperceptions that equate drinking-and-driving with drunk driving, or that reduce the drinking-and-driving problem to problem behaviour of specific target groups.

Future transport and traffic planning should explicitly take into account the fact that at least half of the European car drivers agree on the idea that very much consideration should be given to alternative modes of transport besides the car, i.e. walking, cycling and the use of public transport.

Overall, the results support a recently presented recommendation of ETSC (1996) to introduce national quantitative targets for seat belt wearing and to promote the favourable development of wearing rates by several means including law enforcement programmes, education/information programmes, monitoring and reminders. In addition, high wearing rates may require technical solutions.

Several of the present results suggest that there is a need and room for safety improvement in Europe by increasing the seat belt wearing rates. A specific application of the programmes depends on the current situation in a given country.

Some last considerations from results about important topics are:
- more innovative ways of safety campaigns are needed
- the legislation regarding seat belts has to be combined with education, enforcement, reminders and monitoring
- with regard to drinking and driving, over optimism has to be counteracted
- with regard to speed, problems are recognised but risk perception is not adequate or the drivers do not view the limits are reasonable: integrated approach, including enforcement, information and road layout, is necessary
-- in general attitudes towards road safety are not bad, but drivers need more guidance to convert these into safe behaviour
-- more consideration to walking, cycling and public transport in policy seems to get higher priority from road users than from policy makers

In addition, we would like to stress on the utility of SARTRE database to complement a European road safety information system.

9.6 Need for further research

The results reported here are only concerned with the overall results obtained for each country, while research typically identifies a variety of individual differences within the driving population (such as age, sex, lifestyle and driving exposure) that are important in determining an individual's accident liability, as well as defining types of drivers.

An in-depth analyses of the speeding behaviour and attitudes of all European drivers that looks at such individual differences should therefore provide additional implications of how the results can be used to improve safety. Modelling speed behaviour will help to determine some explaining variables.

There is also need to search for global indicator of change between the two periods, as well as detecting what are the main differences between countries. The results of such analyses will be reported in a next 'in-depth report'.
Annex

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Comparison of samples (see Chapter 1)

Table 1.4: Age ratio

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Table 1.5: Town size

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<td>GERMANY WEST</td>
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<tr>
<td>SWITZERLAND</td>
<td>37</td>
<td>49</td>
<td>46</td>
</tr>
</tbody>
</table>
SOCIAL ATTITUDES TO ROAD TRAFFIC RISK
Phase 2

SARTRE 2 Questionnaire

International reference version in English

After pilot tests in CZ, NL, UK

• face to face interview at home
• drivers having full car driving licence
• and driven a car in the last 12 months
• representative sample: size ≥1000 drivers

8/10/96 version

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Filters:
— Firstly, do you have a (full) car driving licence or permit? Yes (continue) No (= Thank you)
— Have you driven a car in the last 12 months? Yes (continue) No (= Thank you)

a- Questionnaire: Country:  __  __  Number: __ __ __ __
b- Language of this questionnaire: __  __
c- Region: __  __ (strate: see list in Annex B Local codes))
d- Size of town: (justify on right, about)  __  __ , __  __  __ , _0 0 inhabitants
   (strate: <2,000, 2,000 to <100,000, >=100,000 inh)
e- Sex (if quota take: same) Male.............1 Female............2
f- Age last birthday? (ASK and WRITE IN)  __ __ years
   (if quota take: <25, 25 - 39, 40 - 54, 55 and over)
g- What is your occupation? WRITE IN JOB ________________
   self employed Farmer, fisherman.................................01
   Professional lawyer, accountant, etc............................02
   Business-owner of shops, craftsman, proprietor..............03
   employed Manual worker.................................................04
   White collar, office worker.........................................05
   Middle management, trainee......................................06
   Executive, top management, director.............................07
   not employed Retired...................................................08
   Housewife, not otherwise employed..............................09
   Student, military service..........................................10
   Unemployed.............................................................11
   (if quota take: same)
h- In total about how many kilometres (miles) have you driven in the last 12 months?
   __  __  __ , __ __ __ kilometres (or miles)  [MUST ANSWER]

I “In the following interview, after a general question, all other questions relate to you as a car driver”
(SHOW CARD 1)
Q1. How concerned are you about each of the following issues?

<table>
<thead>
<tr>
<th></th>
<th>Very</th>
<th>Fairly</th>
<th>Not much</th>
<th>Not at all</th>
<th>[DK]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate of crime</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Pollution</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Road accidents</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Standard of health care</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Traffic congestion</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Unemployment</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

(SHOW CARD 2)
Q2. Would you be in favour of, or against, the Government devoting more effort to the following road safety measures?

<table>
<thead>
<tr>
<th></th>
<th>Strongly in favour</th>
<th>Neither in favour or against</th>
<th>Against</th>
<th>Strongly against</th>
<th>[DK]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improving driver training</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Have more enforcement of traffic laws</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
c- Have more road safety publicity campaigns

<table>
<thead>
<tr>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neither agree or disagree</th>
<th>Strongly disagree</th>
<th>[DK]</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
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<td>5</td>
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</tbody>
</table>

d- Test the road worthiness of more vehicles

<table>
<thead>
<tr>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neither agree or disagree</th>
<th>Strongly disagree</th>
<th>[DK]</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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</table>

e- Improve the standards of roads

<table>
<thead>
<tr>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neither agree or disagree</th>
<th>Strongly disagree</th>
<th>[DK]</th>
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</table>

Q3. Do you agree or disagree with the following statements?

SHOW CARD 3

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
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</table>

SHOW CARD 4

Q4. How often do you think each of the following factors are the cause of road accidents?

Never | Rarely | Sometimes | Often | Very often | Always | [DK] |
<table>
<thead>
<tr>
<th></th>
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<tbody>
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<td>7</td>
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<td>g-</td>
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</table>

Q5. When planning for the future, how much consideration do you think the Government should give to the following?

Very | Fairly | Not much | Not at all | [DK] |
<table>
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<td>4</td>
<td>5</td>
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</tbody>
</table>

Q6. In general how safe do you think the following ways of travel are?

Very | Fairly | Not much | Not at all | [DK] |
<table>
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<th></th>
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<th></th>
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</thead>
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<td>5</td>
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<tr>
<td>a-</td>
<td>b-</td>
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</tr>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

145
II “Now some questions about yours and other drivers behaviour”

Q7. Compared to other drivers, do you think your driving is...? (dangerous)
   much more a bit more about the same a bit less a lot less [DK]
   1    2    3    4    5    6

Q8. How often do you think other drivers break speed limits?
   Never Rarely Sometimes Often Very often Always [DK]
   1    2    3    4    5    6    7

Q9. Compared with other drivers, do you generally drive...? (...than average speed)
   much faster a little faster about average a little slower much slower [DK]
   1    2    3    4    5    6

Q10. In general, how often do you drive faster than the speed limit on the following types of road?

   a- Motorways................................................1 2 3 4 5 6 7
   b- Main roads between towns...........................1 2 3 4 5 6 7
   c- Country roads...........................................1 2 3 4 5 6 7
   d- Built-up residential areas............................1 2 3 4 5 6 7

Q11. Compared to the present limits, what do you think the speed limit should be...?

   a- … in built-up residential areas.....................1 2 3 4 5 6 7
   b- … on main roads between towns..................1 2 3 4 5 6 7
   c- … on motorways......................................1 2 3 4 5 6 7

Q12. On a typical journey, how likely is it that you will be checked for speed?

   Never Rarely Sometimes Often Very often Always [DK]
   1    2    3    4    5    6    7

Q13. In the last three years, have you been fined, or punished in any other way, for breaking the speed limit?
   No.......................................................1
   Yes, Only fined......................................2
   Yes, Fined and/or other penalty....................3
   [DK]....................................................4

Q14. How often do you...?

   a- … follow the vehicle in front too closely
   b- … give way to a pedestrian at pedestrian crossings
   c- … drive through a traffic light that is on amber
   d- … overtake when you think you can just make it
   e- … signal other drivers to warn them of a police speed trap ahead

Q15. Does the car that you drive most often have seat belts fitted?
   only in the front.......1
   both front and rear.......2
   no............................3 __ SKIP TO Q17

(SHOW CARD 4 )
Q16. When driving this car in the following situation, how often do you wear the seat belt in making a journey...? Never Rarely Some- Often Very Always [DK] times often

a- … in town..........................................................1 2 3 4 5 6 7
b- … on main road between towns........................1 2 3 4 5 6 7
c- … on motorway.................................................1 2 3 4 5 6 7

(SHOW CARD 1)

Q17. I'll read some statements to you concerning seat belts. Please tell me in each case how much you agree. Very Fairly Not Not [DK] much at all

a- If you drive carefully seat belts aren't really necessary 1 2 3 4 5
b- In most accidents seat belts reduce the risk of serious injury for drivers and passengers 1 2 3 4 5
c- When I'm not wearing my belt I feel less comfortable; as though something was missing 1 2 3 4 5
d- There is a risk of being trapped by the belt in case of emergency 1 2 3 4 5

Q18. In the last 3 years, have you been fined, or punished in any other way, for not wearing your seat belt? No…………………………………………………1
Yes, Only fined………………………………………2
Yes, Fined and/or other penalty………………….3
[DK]………………………………………………………..4

III “Now some questions concerning drinking and driving.”

(SHOW CARD 10)

Q19. In general how many days per week do you drink alcoholic beverages?

<table>
<thead>
<tr>
<th>Most</th>
<th>5 to 6</th>
<th>3 to 4</th>
<th>1 or 2</th>
<th>&lt;1</th>
<th>Never</th>
<th>[DK]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>SKIP TO Q.24</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

Q20. In general, when you are drinking, how much alcohol do you typically drink…? (WRITE IN)

Interviewer convert in units (see SHOW CARD 6): ___ ___ Units of alcohol

(SHOW CARD 10)

Q21. How many days per week do you drive after drinking even a small amount of alcohol?

<table>
<thead>
<tr>
<th>Most</th>
<th>5 to 6</th>
<th>3 to 4</th>
<th>1 or 2</th>
<th>&lt;1</th>
<th>Never</th>
<th>[DK]</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

Q22. Over the last week, how many days did you drive, when you may have been over the legal limit for drinking and driving?

<table>
<thead>
<tr>
<th>Most</th>
<th>5 to 6</th>
<th>3 to 4</th>
<th>1 or 2</th>
<th>&lt;1</th>
<th>Never</th>
<th>[DK]</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<td>7</td>
</tr>
</tbody>
</table>

Q23. In general, when you are drinking and driving afterwards, what is the maximum quantity of alcohol that you drink…? (WRITE IN)

Interviewer convert in units (see SHOW CARD 6) ___ ___ Units of alcohol

(SHOW CARD 13)

Q24. People have different opinions about what the legal limit should be. Which of the following statements best matches your opinion. Do you think that drivers should be allowed to drink …?

...no alcohol at all…………………………………………………1
...less alcohol than at present……………………………………2
...as much alcohol as at present…………………………………..3
...more alcohol than at present…………………………………..4
...as much as they want.................................................................5

Q25. In the last three years, have you been fined, or punished in any other way, for drink-driving?

No............................................................1
Yes, Only fined...........................................2
Yes, Fined and/or other penalty......................3

SHOW CARD 4

Q26. On a typical journey, how likely is it that you will be checked for alcohol?

Never Rarely Sometimes Often Very often Always [DK]

1 2 3 4 5 6 7

IV “In the next part, you are asked questions on a variety of subjects.”

Q27. There is a possibility of having similar laws and regulations applied to driving throughout Europe. In order to achieve this ‘harmonisation’ would you be in favour the introduction of the following measures throughout European countries?

a- A penalty points system for traffic offences which results in loss of licence when exceeded.................................1 2 3 4 5
b- A requirement that manufacturers modify their vehicles to restrict their maximum speed.........................................1 2 3 4 5
c- Regular technical check-ups for all types of vehicle..............1 2 3 4 5
d- Installation of a third braking light....................................1 2 3 4 5
e- Not allowing new drivers to drink any alcohol before driving...1 2 3 4 5

Q28. How much do you agree to the following statements?

a- I sometimes get very annoyed with other drivers..............1 2 3 4 5
b- I enjoy driving fast.........................................................1 2 3 4 5
c- I worry when members of my family are out driving...........1 2 3 4 5
d- I think a car is just a means of transport.........................1 2 3 4 5

SHOW CARD 1

Q29. In general how dangerous do you think each of the following activities are...?

a- Walking alone in a town at night 1 2 3 4 5
b- Smoking two packets of cigarettes a day 1 2 3 4 5
c- Drinking a bottle (0.75l) of wine or 3 pints (1.5l) of beer/day 1 2 3 4 5
d- Driving a car 1 2 3 4 5

Q30. In order to reduce air pollution, how much would you accept the following propositions:

a- Reduce the usage of your car 1 2 3 4 5
b- Share with other drivers the use of your respective cars 1 2 3 4 5
c- Use most often public transport 1 2 3 4 5

Q31. Would you find it useful for you to have a device on your car like...?

a- a guidance system to find the way to destination.................1 2 3 4 5
b- a device to assist you not to exceed the legal speed limit..............1 2 3 4 5

c- a distance control system to maintain a safe distance automatically.................................................................1 2 3 4 5
d- an alcohol-meter to check if you are over the legal limit..................1 2 3 4 5
e- a mobile telephone................................................................1 2 3 4 5

(SHOW CARD 11)
Q32. About how many people do you think were killed in road accidents in your country last year?
(replace N by '95 national value)

\[
\begin{array}{ccccccc}
4 \times N & 2 \times N & 1.5 \times N & 1 \times N & 0.5 \times N & 0.25 \times N & \text{[DK]} \\
1 & 2 & 3 & 4 & 5 & 6 & 7
\end{array}
\]

(SHOW CARD 12)
Q33. What is the legal level of blood alcohol over which it is not allowed to drive?
(gramme/liter, use national unit)

\[
\begin{array}{cccccccc}
0.0 & 0.2 & 0.3 & 0.5 & 0.7 & 0.8 & 1.0 & \text{[DK]} \\
1 & 2 & 3 & 4 & 5 & 6 & 7 & 8
\end{array}
\]

Q34. In your opinion, how much alcohol are we allowed to drink before driving and stay under the legal limit?
(WRITE IN: ......................................................)

VI “Finally can I ask you a few questions about yourself”
Q35. In the last 3 years, how many accidents have you been involved in, as the driver of a vehicle, in which someone, including yourself, was injured and received medical attention? __ __ accident(s)
Q36. In the last 3 years, how many damage only accidents have you been involved in, as the driver of a vehicle? __ __ accident(s)

Q37. Which of the following applies best to you at the moment?
...Single.........................................1
...Living as married..........................2
...Married........................................3
...Separated or Divorced.....................4
...Widowed......................................5
Q38. Do you live:
... in couple....................................1
... with your parents.........................2
... alone..........................................3
... other case....................................4
Q39. How many persons live with you, including adults and children but not including you? __ __ persons
Q40. Do you have any children in the following age ranges, living at home at present?
(A= min age for driving car) Yes No
a- Aged before primary school.........................1 2
b- Aged of primary school.............................1 2
c- Aged after primary school and under A..........1 2
d- Aged of car driving (A and over)..................1 2
Q41. What level of education did you achieve?
Primary school..................................1
Secondary school............................2
Further education............................3
None............................................4
Q42. How old were you when you stopped your full-time education? (98 IF NOT FINISHED) __ __ years
Q43. How would you describe the area in which you live?
Rural/village.......................................1
Small town.........................................2
SARTRE 2

Suburban/city outskirts.........................3
Urban/city/large town.........................4
[DK]..................................................5

Q44. What applies most to you?
   I drive for my profession........................1
   I need to drive during my work...............2
   I drive to and from work.........................3
   None of these.......................................4

Q45. About the car you usually drive, is it...
   ... a car with engine size of less than 1,000 cc............1
   ... a car with engine size from 1,000 to 1,299 cc........2
   ... a car with engine size from 1,300 to 1,999 cc........3
   ... a car with engine size of 2,000 cc or more..........2
   ... a car [but really don’t know engine size].............5

Q46. Identification of the vehicle...............................................__ __ __

Q47. About this car, do you consider yourself as:
   ... the main driver.................................1
   ... an occasional (secondary) driver...................2
   ... other case........................................3
   ... [DK]...............................................4

Q48. How many years car driving experience have you had? __ __ years, __ __ months
   (under 5 years ask also for months)

Q49. Is the vehicle you normally drive owned by...
   ... yourself.....................................................................1
   ... another member of your family.................................2
   ... your employer/or employed by your employer...............3
   ... a friend......................................................................4
   ... a hire or leasing company..........................................5

Q50. Is the vehicle you normally drive insured for...?
   ... minimum amount legally required.............1
   ... fully comprehensive................................2
   ... not insured........................................3
   ... [DK]...............................................4

(SHOW CARD 7)

Q51. We would like to analyse the results of the survey according to the annual income level of family units.
Here is an income scale. Would you give me the number of the category in which your household fall. The wages, allowances, and all types of income from persons who are living at your home should be included.

1 2 3 4 5 6 7 8
[9 DK]

*****************************************************************
Mandatory, anonymous!
Interviewer
Number: __ __ __.
Sex : Male.........1 Female.......2
Age : under 25............1
      25 - 39............2
      40 - 54............3
      55 and over...........4

Interview
Begin: morning (<12AM)..............1
      afternoon (12AM-6PM)......2
      evening (>6PM).............3
Duration : __ __ __ minutes
Date : __ __ (month); __ __ (day)

*****************************************************************
Annexe of Questionnaire
A - SHOW CARDS

SHOW CARD 1
Very
Fairly
Not much
Not at all

SHOW CARD 2
Strongly in favour
In favour
Neither in favour or against
Against
Strongly against

SHOW CARD 3
Strongly agree
Agree
Neither agree or disagree
Disagree
Strongly disagree

SHOW CARD 4
Never
Rarely
Often
Very often
Always

SHOW CARD 5
lower same higher no limit [DK]

SHOW CARD 6 (adapt if needed)
One unit of alcohol
= 1/2 pint beer = 1 demi de bière
= 1 glass wine = 1 verre de vin
= 1 single spirit = 1 verre d‘apéritif ou digestif

i.e. 1 PINT BEER or DOUBLE SPIRIT = 2 UNITS

SHOW CARD 7
ANNUAL FAMILY INCOME CLASSIFICATION
(in each country take min. and max. income level,
then divide in 8 equal range classes; if more convenient
ask monthly income)

SHOW CARD 8
much more dangerous
a bit more dangerous
about the same
a bit less dangerous
a lot less dangerous

SHOW CARD 9
much faster than average
a little faster than average
about average speed
a little slower than average
much slower than average

SHOW CARD 10
Most days
5 to 6 days a week
3 to 4 days a week
1 or 2 days a week
Less than 1 day a week
Never

SHOW CARD 11 (replace N by national value)
about 4 x N, about 2 x N, about 1.5 x N
about 1 x N, about 0.5 x N, about 0.25 x N

SHOW CARD 12 (adapt unit)
0.0 0.2 0.3 0.5 0.7 0.8 1.0
grammes per liter

SHOW CARD 13
drivers should be allowed to drink :
…no alcohol at all
…less alcohol than at present
…as much alcohol as at present
…more alcohol than at present
…as much alcohol as they want

B - LOCAL CODES

List of samples and codes
Germany/east…………………….1
Germany/west…………………….2
Austria…………………………….3
Belgium…………………………….4
Spain…………………………….5
Finland…………………………….6
France…………………………….7
United Kingdom…………………….8
Greece…………………………….9
Ireland/Eire……………………….10

List of languages and codes
English…………………………….1
French…………………………….2
German…………………………….3
Italian…………………………….4
Spanish…………………………….5
Portuguese……………………….6
Czech…………………………….7
Slovak…………………………….8
Dutch…………………………….9
Swiss German…………………….10
List of regions

01 SCHLESWIG-HOLSTEIN
02 HAMBURG
03 NIEDERSACHSEN
04 BREMEN
05 NORDRHEIN-WESTFALEN
06 HESSEN
07 RHEINLAND-PFALZ
08 BADEN-WUERTTEMBERG
09 BAYERN
10 SAARLAND
11 BERLIN
12 SACHSEN
13 SACHSEN-ANHALT
14 THUERINGEN
15 BRANDENBURG
16 MECKLEMBURG-VORPOMERN
17 NORDESTE
18 NORDESTE
19 MADRID
20 CENTRO E
21 ESTE
22 SUR
23 ILE DE FRANCE
24 BASSIN PARISIEN
25 NORD-PAS-DE-CALAIS
26 EST
27 OUEST
28 SUD-OUEST
29 CENTRE-EST
30 MEDITERRANEE
31 NORD-OVEST
32 LOMBARDIA
33 NORD-EST
34 EMILIA-ROMAGNA
35 CENTRO I
36 LAZIO
37 CAMPANIA
38 ABRUZZI-MOLISE
39 SUD
40 SICILIA
41 NOORD
42 OOST
43 WEST NL
44 ZUID
45 NORTE
46 SUL
47 NORTH
48 YORKSHIRE HUMBERSIDE
49 NORTH-WEST
50 EAST MIDLANDS
51 WEST MIDLANDS
52 EAST ANGLIA
53 LONDON
54 SOUTH-EAST
55 SOUTH-WEST
56 WALES
57 SCOTLAND
58 WIEN
59 OST
60 SUDEN
61 WEST A
62 MITTE
63 CECHY
64 MORAVA
65 SLOVENSKO
66 VLAANDERS
67 BRABANT
68 WALLONIE
69 GOTALAND
70 SVEALAND
71 NORRLAND
72 DEUTSCHE SCHWEIZ
73 SUISSE ROMANDE
74 SVIZZERA ITALIANA
75 IRELAND
76 SARDEGNA
77 LOUNAIS-SUOMI
78 MUU SUOMI
79 NYUGAT
80 KELET
81 BUDAPEST
82 CENTRALNE
83 ZACHODNIE
84 POLUDNIOWE
85 WSCHODNIE
86 POLNOCNE
87 SLOVENIA
88 BOPEIA
89 KENTPIKH
90 NOTIA