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COMMISSION STAFF WORKING DOCUMENT

The functioning of the vehicle fuels markets for consumers in the European Union

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1. BACKGROUND

The European consumer agenda¹ sets out a strategic vision for consumer policy, envisaging that all planned initiatives are backed up with continuously updated sources of key information such as the Consumer Markets Scoreboard. It provides important insights into how the single market is working for the benefit of consumers and ranks over 50 consumer markets for goods and services according to how well they perform from a consumer perspective. The performance of different markets is measured using a composite market performance indicator. It includes parameters such as consumers' ability to compare offers for goods and services sold by different retailers or suppliers, how much they trust retailers to comply with consumer protection legislation, problems experienced and complaints made by consumers, and whether the market has lived up to their expectations.

The Sixth Consumers Market Scoreboard² identified **vehicle fuels** as a poorly performing market from a consumer perspective,³ ranking it second lowest among the 21 goods markets in terms of its overall market performance indicator score. It had the lowest score of all goods markets in terms of consumer choice among different retailers. The difference between the highest and the lowest country scores was also significantly higher than the average difference for all goods markets. The vehicle fuels market also scored below average amongst surveyed goods markets in terms of comparability, trust, problems and meeting consumers' expectations. For these reasons, it was chosen for further in-depth analysis.

This study on the performance of the fuels market for consumers in the European Union looks at those aspects of the market that do not perform satisfactorily for consumers. In particular, it considers whether consumers are able to make informed choices. This encompasses consumers' understanding of a variety of aspects, such as:

- ✓ labels at petrol stations
- ✓ information on the choice between fuel types (such as regular, premium and biofuels)
- ✓ compatibility between fuel types and cars.

The study also considers ways of standardising and harmonising labelling-at-the pump practices, especially following the introduction of new fuel types such as those with biofuel content (i.e. E10⁴ and B7⁵). It assesses the sustainability of biofuels compared to fossil fuels, as perceived by consumers, and considers the extent to which environmental or sustainability concerns affect consumers' purchasing decisions. It also looks at the availability of different fuel and retailer types, as well as retail prices.

Evidence from 29 countries was gathered (27 Member States,⁶ Iceland and Norway), through a consumer survey, a mystery shopping exercise which audited the availability of fuels and information for consumers at the pump, surveys addressed to various types of national stakeholders, price collection and complementary desk research.

¹ COM (2012) 225 final, http://ec.europa.eu/consumers/strategy/docs/consumer_agenda_2012_en.pdf.

² Henceforth, 'the scoreboard'.

³ The Sixth Consumer Scoreboard, published in October 2011, is available at the following link: http://ec.europa.eu/consumers/consumer_research/editions/cms6_en.htm.

⁴ E10: petrol blended with 10 % ethanol.

⁵ B7: diesel that contains up to 7 % biodiesel.

⁶ The field work for the study was carried out before Croatia joined the EU.

The consumer survey⁷ aimed to look more closely at how consumers experience the vehicle fuels market, identifying the difficulties they have when making purchasing decisions and gauging their knowledge of the market.

For the mystery shopping exercise, shoppers went to 25 petrol stations in the capital cities of six Member States⁸ in order to collect information on fuel pricing, the level of service provided and the labelling of different fuel types at the pump. They also made a test purchase at each petrol station⁹ and investigated issues related to potentially vulnerable consumers.¹⁰ They also evaluated comparison websites for fuels and other relevant websites in all 29 countries, investigating price data acquisition, the accuracy and frequency of updates, user-friendliness, the accuracy and comparability of price observations, market coverage and the overall usefulness of the information given to consumers.

Data on prices at the pump was collected by telephone for regular petrol and diesel fuels, during defined time slots on three days of a specified week¹¹ in each country for a sample of stations in the capital, a rural area and at motorway service stations. The data for each region covered at least two leading brands and one independent retailer (and if possible supermarkets or hypermarkets). Complementary price data was collected from comparison websites. The analysis presented in the study report is also based on the collection of multiannual weekly national price data the European Commission provides for euro-super 95 and diesel fuel through the Market Observatory for Energy (EU-27),¹² and on data on refined petroleum product quotations from the Platts energy, petrochemicals and metals information provider.¹³ Other sources provided the rest of the data used in the analysis.

The report includes the responses to surveys of stakeholder organisations, including automobile associations, consumer organisations, competition and consumer protection authorities and car and oil industry associations.

This staff working document highlights the main findings of the study and provides information on related Commission activities relevant for consumers in the fuels market. It covers issues that are problematic for consumers and suggests ways of improving market conditions for them. The final report gives details of the methodology used to carry out the study and the study itself can be found on the website of the Directorate-General for Health and Consumers.¹⁴

⁷ The sample size consists of 27 323 interviews.

⁸ Visits to petrol stations covered 25 petrol stations in each of the six capital cities: Prague (Czech Republic); Berlin (Germany); Paris (France); Rome (Italy); Bucharest (Romania); and Helsinki (Finland). A total of 150 stations were visited.

⁹ They checked the consistency between price data on the billboard, at the pump and on their receipt.

¹⁰ Regarding the experience of potentially vulnerable consumers at these stations, mystery shoppers assessed the level of service provided (e.g. self-service or full service) and the availability of individual services, such as toilets that people with disabilities can access; the presence of labelling and signs in a language(s) other than the primary language of the country; the use of colour at the pump to facilitate fuel type identification and the presence of indications of potential harm as a result of filling the tank with an incompatible fuel type.

¹¹ Monday, 26 November 2012, Wednesday, 28 November 2012 and Friday 30 November 2012.

¹² The EU-27 refers to Belgium, Denmark, Germany, Ireland, Greece, Spain, France, Italy, Luxembourg, the Netherlands, Austria, Portugal, Finland, Sweden, the United Kingdom, Bulgaria, the Czech Republic, Estonia, Cyprus, Latvia, Lithuania, Hungary, Malta, Poland, Romania, Slovenia and Slovakia.

¹³ This data, representing average national fuel prices in different Member States, was combined with other relevant data in a regression analysis of factors that may explain differences in prices between countries.

¹⁴ http://ec.europa.eu/consumers/consumer_evidence/market_studies/vehicle_fuels/docs/study_en.pdf.

2. POLICY CONTEXT

The energy challenge is one of Europe's biggest problems.¹⁵ The European Union is committed to reducing greenhouse gas emissions to 80–95 % below 1990 levels by 2050¹⁶ in the context of necessary reductions by developed countries as a group. The Commission has proposed long-term solutions for doing this in the roadmap for moving to a competitive low-carbon economy in 2050,¹⁷ the Energy Roadmap 2050¹⁸ and the Transport White Paper.¹⁹

EU energy policy is at a crossroads. So is its consumer policy. Its 20-20-20 targets²⁰ for greater use of renewable energy sources, fewer CO₂ emissions and greater energy efficiency have far-reaching implications for consumers. While there is still considerable uncertainty about energy market developments, related climate and energy policy goals have a significant impact on the availability and affordability of oil and alternative sources of energy. If, as appears to be the case, global energy markets become more interdependent, its neighbours' supply of energy and global energy trends will directly affect the EU's energy supply. Citizens are becoming increasingly aware of these trends, reinforcing the message that consuming energy efficiently is not only good for the environment, but also for their finances. Consumers' acceptance also plays a key role in ensuring that climate targets are reached.

To alleviate the effects of climate change, increase energy security and promote economic development and innovation, there are several European directives covering the fuel sector, such as:

- ✓ the Fuel Quality Directive,²¹ which sets mandatory minimum fuel specifications across the EU and requires fuel suppliers to reduce by 6 % (by 2020) the greenhouse gas intensity of energy supplied for road transport.
- ✓ the Renewable Energy Directive,²² which sets a 10 % target for each Member State for the proportion of energy from renewable sources in final energy consumption in the transport sector by 2020, both of which include harmonised biofuel sustainability criteria to be applied in all Member States.²³

¹⁵ The EU has a clear framework for its energy and climate policies up to 2020. It integrates different policy objectives such as reducing greenhouse gas emissions, securing energy supply and supporting growth, competitiveness and jobs through a high-technology, cost-effective and resource-efficient approach. Three headline targets for greenhouse gas emission reductions, renewable energy and energy savings make it possible to achieve these policy objectives. There are additional targets for energy in the transport sector. In parallel, the EU has put in place a regulatory framework to bolster the creation of an open, integrated and competitive single market for energy, which ensures that energy supplies are secure.

¹⁶ European Council, October 2009.

¹⁷ COM (2011) 112 of 8 March 2011.

¹⁸ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2011:0885:FIN:EN:PDF>.

¹⁹ The Commission's White Paper also proposed a 60 % reduction in greenhouse gas emissions from transport by 2050, measured against 1990 levels: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2011:0144:FIN:EN:PDF>.

²⁰ The Europe 2020 strategy for smart, sustainable and inclusive growth includes five headline targets setting out where the EU should be in 2020. One of them relates to climate and energy — 'Resource-efficient Europe'. Its aim is to help decouple economic growth from the use of resources, support the shift towards a low-carbon economy, increase the use of renewable energy sources, modernise the transport sector and promote energy efficiency. Member States have committed themselves to reducing greenhouse gas emissions by 20 %, increasing the proportion of renewables in the EU's energy mix to 20 % and reaching the 20 % energy efficiency target by 2020.

²¹ <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32009L0030&from=EN>.

²² <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32009L0028&from=EN>.

²³ Both the Renewable Energy Directive and the Fuel Quality Directive set out sustainability criteria that biofuels must fulfil in order to count towards reaching the targets of those Directives or to receive public support. Both Directives also refer to the impact of indirect land use change (ILUC). The Commission's legislative proposal on this matter, adopted in October 2012, is currently being considered by the European Parliament and the Council.

The Fuel Quality Directive also sets the limits on certain biofuel components. Petrol is allowed to contain maximum 10 % ethanol and the fatty acid methyl esters content in diesel is limited to 7 %. The Member States are allowed to authorise the placing on the market of diesel fuel containing more than 7 % fatty acid methyl esters.

These directives also underline the need to inform consumers in order to make them aware of changes in the fuels market.

- ✓ The Fuel Quality Directive provides certain consumer safeguards for petrol blended with ethanol and diesel blended with fatty acid methyl esters. Among these are the requirement that Member States ensure appropriate information is provided on the biofuel content of petrol and diesel. If petrol is provided with a 10 % ethanol content, Member States can also require suppliers to market petrol with a 5 % ethanol content too.²⁴
- ✓ The Renewable Energy Directive requires that if the percentage of biofuel blend exceeds 10 % in volume, Member States must require this to be indicated at the point of sale.
- ✓ The Directive²⁵ on deploying alternative fuels infrastructure²⁶ also sets out minimum requirements on building up alternative fuels infrastructure through Member States' national policy frameworks, including common technical specifications for recharging points for electric vehicles and refuelling points for natural gas (liquefied natural gas and compressed natural gas²⁷) and hydrogen. It also requires that consumers be given relevant, consistent and clear information on compatibility between cars and fuels. For some years now, alongside fossil fuels, different biofuels blended with regular market fuel and other alternative fuels having an impact on the fuels market. The Directive requires the Commission to develop an EU common methodology to have a fair price comparison of the different oil based fuels with the alternative fuels launched on the market.

The Commission has also carried out a number of studies²⁸ to analyse issues relating to vehicle fuels, and a stakeholder conference on the labelling of fuels took place in 2012.²⁹ Further harmonising the labelling of fuel across the single market remains one of the key objectives for the benefit of both the industry and consumers, who must have access to fuels suitable for their car while driving in their country and across the EU. Labelling is one of the key ways of helping consumers choose which fuel to purchase in their country and across the EU.

To support the competitiveness and sustainable growth of the European automotive industry, the Commission set up the CARS 21 High Level Group.³⁰ In its final report

²⁴ Until 2013 all Member States were obliged to require suppliers to do so.

²⁵ Following the agreement reached in the trilogue, the Committee of Permanent Representatives endorsed the proposal for a Directive on deploying alternative fuels infrastructure on 26 March 2014 and approved by the European Parliament on 15 April 2014.

²⁶ At the time of writing, this Directive is in the final stage of the legislative process.

²⁷ That is natural gas which includes biomethane in gaseous form (compressed natural gas) and liquefied form (liquefied natural gas).

²⁸ The JEC Consortium study on EU renewable energy targets in 2020: Analysis of scenarios in transport (March 2011); the *Future Transport Fuels Report* (January 2011); the package on clean power transport, including a Communication which sets out a comprehensive European alternative fuels strategy (COM (2013) 17); *Bringing biofuels on the market. Options to increase EU biofuels volumes beyond the current blending limits* (July 2013); *A harmonised Auto-Fuel biofuel roadmap for the EU to 2030* (November 2013); the updated JEC well-to-wheels study on automotive fuels and powertrains (March 2014).

²⁹ The conference was triggered in part by the experience of introducing biofuels (E10) in Germany, where many consumers experienced problems due to unclear and misleading labelling practices at the pump and on car and fuel compatibility.

³⁰ Set up in 2005 and re-launched in 2010, the CARS 21 High Level Group comprises seven Commissioners, nine Member State representatives and a broad, balanced group of stakeholders (including industry representatives and NGOs). It adopted its final report on 6 June 2012. It presents the group's consensus on the strategic vision for the automotive sector in 2020 and sets out specific recommendations on a number of relevant policy areas. These provided input for the Cars 2020 action plan adopted on 8 November 2012: <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52012DC0636>.

adopted in 2012, it recognised that in order to improve consumer conditions in the vehicle fuels market, consumers should be given clearer information at the pump and in their vehicle manuals regarding the compatibility of their vehicle with the fuel products available. Following this report, the Commission adopted a Communication on the Cars 2020 action plan in which it recognises the importance of giving consumers clear information on fuels and their compatibility with vehicles. The action plan foresees pursuing discussions on a fuel labelling scheme with relevant stakeholders – a scheme that is consistent with the relevant European standards in order to ensure that the consumer receives comprehensible information about the compatibility of his or her vehicle with the different fuels offered at petrol stations.

Substantial progress towards achieving this objective has been made. Nonetheless, lack of information is still one of the main problems for consumers in the fuels market. They relate above all to the provision of information on the quality differences between fuels available at the pump and on compatibility between fuels and cars³¹.

The results of the fuels market study corroborate these concerns, which are summarised below, together with recommendations to improve conditions for consumers in this market.

3. CONSUMER INFORMATION

Informed consumers better understand the importance of their purchasing decisions and can therefore make better choices. That is why policymakers and retailers need to understand how they make their decisions and what sources of information they use, in order to identify the areas that need to be improved.

To find out more about the provision of information and its effectiveness in the vehicle fuels market, consumers were asked some questions about their sources of general information and of specific information on fuel and vehicle compatibility. They were also asked how easy they find it to get clear information on various market aspects such as fuel prices, fuel types, fuel quality and the compatibility of different fuel types with their vehicle. They were asked if they find it easy to get clear information about the effects of fuel types on engine or vehicle performance and the effects of particular fuel types on the environment. Their responses are summarised below.

- The main sources of information about vehicle fuels

The study showed that respondents get information on vehicle fuels from a variety of sources: 59 % get it from labelling on the pump or vehicle, 54 % through personal advice, 44 % from the internet and 26 % from traditional media. The main variation between countries is in the use of personal advice, more frequent in EU-12³² (68 %) than in EU-15³³ countries (50 %). More people in EU-12 than in EU-15 countries look at the label on pumps and vehicles (62 % vs 58 %) and get information from traditional media (31 % vs

³¹ In terms of consumer protection, Directive 2005/29/EC on unfair commercial practices (the UCPD) is the main general body of EU legislation regulating misleading advertising and other unfair practices harming consumers' economic interests. It applies to all business-to-consumer commercial practices including those involving claims on vehicle fuels. The Directive prohibits traders from providing false or otherwise deceiving information on a wide range of elements including the main characteristics of the product (e.g. composition, benefits, risks, results to be expected from its use, results and material features of tests or checks carried out on the product), its price and the nature and attributes of the trader. In addition, the Directive requires traders to provide in a clear, intelligible and timely manner material information that consumers need in order to take an informed purchase decision. Annex I to the Directive contains a list of 31 practices which shall in all circumstances be regarded as unfair. The Guidance document on the implementation and application of the UCPD adopted in 2009 provides clarification on the application of the Directive to key topics including environmental (such as fuel) claims.

³² The EU-12 is Bulgaria, the Czech Republic, Estonia, Cyprus, Latvia, Lithuania, Hungary, Malta, Poland, Romania, Slovenia, and Slovakia.

³³ The EU-15 is Belgium, Denmark, Germany, Ireland, Greece, Spain, France, Italy, Luxembourg, the Netherlands, Austria, Portugal, Finland, Sweden, and the United Kingdom.

25 %). In both the EU-12 and the EU-15, the same proportion of consumers (44 %) gets their information from the internet (websites and blogs).

- **The main sources of information about fuel and vehicle compatibility**

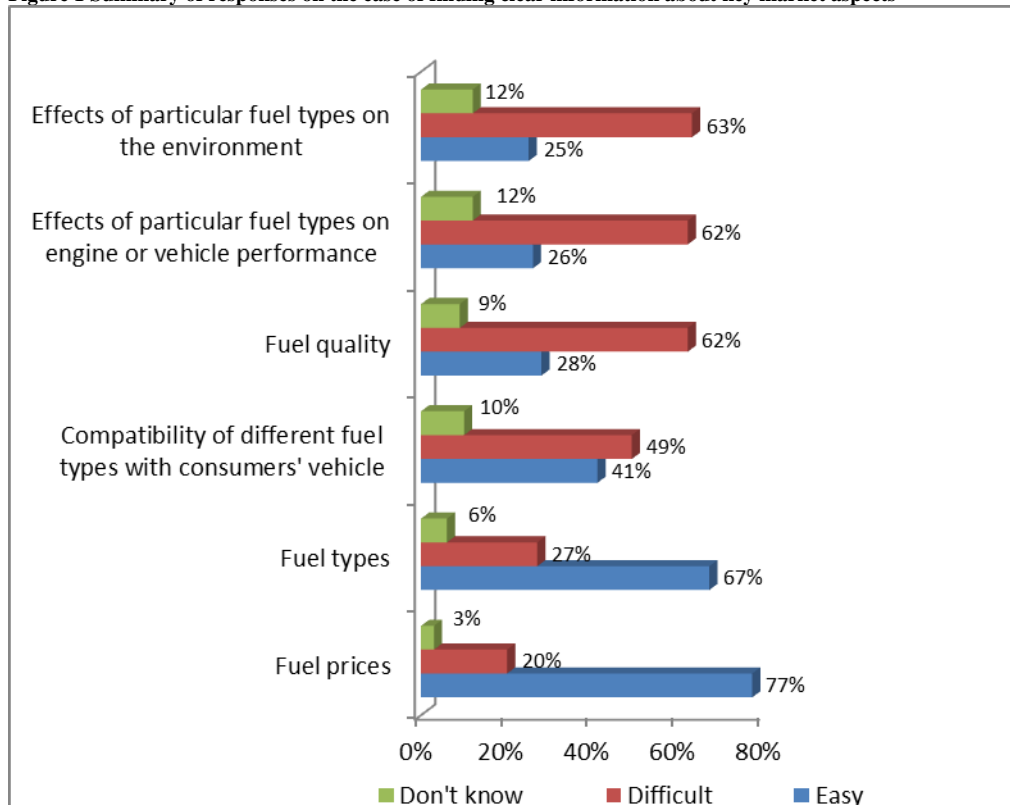
With regard to consumers' main source of information on fuel and vehicle compatibility, 33 % of respondents look at the pump (fuel labels or other signs), 33 % at the vehicle's operating manual, 27 % talk to a car dealer or mechanic, 24 % look at the information given on or next to the vehicle's filling cap, 22 % get advice from their family, friends or colleagues and 20 % get their information the staff working at petrol stations. Overall, 66 % use labelling on the pump or vehicle as their main source of information while 56 % use personal advice. They use the internet (28 %) and traditional media (13 %) less frequently. More people in EU-12 than in EU-15 countries use labelling (70 % vs 65 %), personal advice (67 % vs 52 %) and traditional media (15 % vs 12 %). There are no significant differences between the EU-15 and the EU-12 in the use of the internet (websites and blogs).

- **The availability and clarity of information**

The study also shows that information provided in the vehicle fuels market could be made even clearer. As the diagram below shows, most consumers find it difficult to get clear information on the effects of particular fuel types on the environment (63 %), the engine or vehicle performance (62 %) and fuel quality (62 %). Fewer respondents find it difficult to get information on the compatibility of different fuel types with their vehicle (49 %), fuel types (27 %) and fuel prices (20 %)³⁴.

³⁴ Directive 98/6/EC on consumer protection in the indication of the prices of products offered to consumers obliges traders to display unit prices and to ensure that the selling prices are unambiguous, easily identifiable and clearly legible.

Figure 1 Summary of responses on the ease of finding clear information about key market aspects



Source, consumer survey: Q2 "How easy is it to find clear information about ..." (N = 25797 for EU-27)

The organisations responding to the stakeholder survey were asked about the same issues. A comparison between their replies and the results of the consumer survey suggests that there is a substantial disconnect between the ease with which stakeholders think consumers can get clear information about key market aspects and the difficulty of doing this in practice (as expressed by consumer survey respondents).

Table 1 Ease of finding information on various market aspects

	Consumer survey	Stakeholder survey				
Finding clear information on fuel types	EU 27 average	EU27 average	Competition authorities	Other public authorities	Consumer organisations and auto clubs	Industry organisations
Total 'Easy'	67%	82%	86%	86%	78%	81%
Total 'Not Easy'	26%	17%	7%	14%	22%	19%
Consumers do not look for this information	6%	2%	7%	0%	0%	0%
Number of stakeholders	n.a.	66%	14%	7%	18%	27%

Source, consumer survey: Q2 “How easy is it to find clear information about ...” (N =25797 consumers for EU-27 and 61-69 stakeholders).

The greatest disparity relates to information about compatibility between fuels and consumers’ vehicles. While 70 % of stakeholders said it was easy to find clear information, only 41 % of consumer survey respondents thought likewise. For fuel prices, 94 % of stakeholders and 77 % of consumer survey respondents reported that it was easy to obtain clear price information. This was also the case for information about fuel types (82 % of stakeholders, compared to 67 % of consumer survey respondents), fuel quality (41 %, compared to 28 %), and the effects of fuels on vehicle performance (34 %, compared to 26 %). Only for the effects of fuels on the environment did a similar proportion of stakeholders and consumer survey respondents say that it was easy to obtain clear information.

Improve consumer information on vehicle fuels

Under the Unfair Commercial Practices Directive, traders are already required to provide clear and intelligible information on the main characteristics of a product. However, the study found that this is not always the case in the vehicle fuels market. It stresses that stakeholders in this market, including public authorities, industry associations, individual oil companies, fuel retailers and automobile clubs, should be aware of how difficult it is for some consumers to obtain clear information on key market aspects and take action in order to give them clear, transparent information that is not misleading. This is especially relevant in the context of the introduction of new fuel types, the success of which may depend on consumers being given better information.

3.1 Information provision at the pump

Clear, transparent and comparable information is essential for empowering consumers and ensuring that markets function well and are competitive. Labels help consumers select a product according to its quality and features. However, the proliferation of labels available might also confuse consumers. Labels indicate that a product reaches a certain standard for quality, but consumers cannot always be sure of the exact standard the label indicates. Consumer and stakeholder survey respondents said that fuel labelling at the pump was their primary source of general information about vehicle fuels and of specific information about fuel and vehicle compatibility.

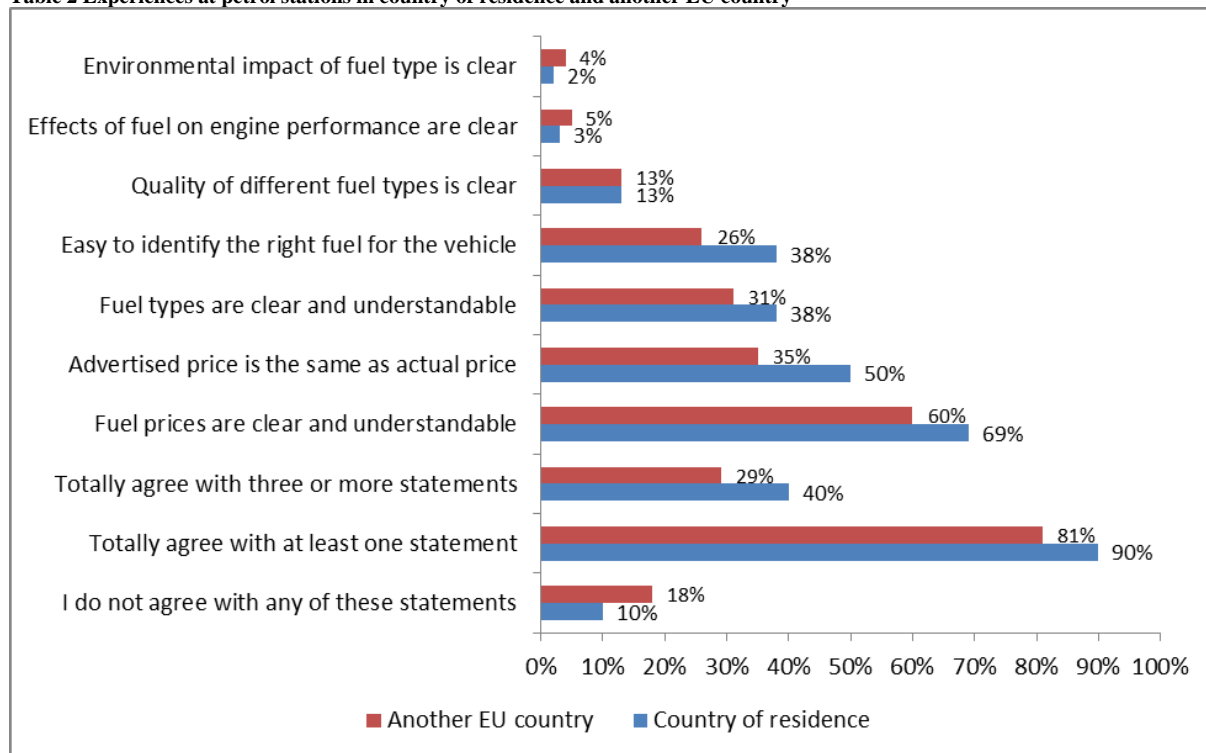
Consumers assess differently the clarity and accuracy of labelling in their country of residence and another EU country. They have a higher opinion of the clarity of labelling concerning the environmental impact of fuel types abroad than in their country of residence (4 % vs 2 %), and concerning the effects of fuel on engine performance (5 % vs 3 %). However, for most aspects the cross-border experience of labelling at the pump appears more problematic compared to that in the country of residence. It appears to be easier to identify the right fuel for one's vehicle in one's country of residence than abroad (38 % vs 26 %). This is also the case for the clarity of information on fuel types (38 % think it is clearer in one's country of residence than abroad (26 %). Similarly, 50 % of consumers report that the advertised price is the same as the actual price in their country of residence, while 35 % say that this is the case abroad. The balance also tips in favour of the country of residence for the clarity and intelligibility of information on fuel prices (69 % vs 60 %). Consumers think that information on the quality of different fuel types is as clear in their country of residence as it is abroad (13 %).

Overall, 90 % of respondents agree with at least one statement about the clarity of information at petrol stations in their country of residence (94 % in the EU-12 and 89 % in the EU-15). For petrol stations abroad, the percentage is 81 %. The percentage of respondents who agree with three or more statements is also higher for one's country of residence than for abroad (40 % vs 29 %). Still, 10 % of respondents do not agree with any of the statements for their country of residence. The percentage is even higher for abroad (18 %).

Socio-demographic patterns for experiences at petrol stations in one's country of residence and abroad show the following.

- ✓ Men are more likely than women to agree with three or more statements about information given at petrol stations.
- ✓ There is also a difference depending on the level of education, with those who finished their education by the age of 15 less likely to agree with three or more statements than those who finished their education between the ages of 16 and 19 or at the age of 20 or above.
- ✓ There is no difference between respondents who use petrol and those who use diesel, but respondents who use other types of fuel are less likely to agree with three or more statements.
- ✓ Those who buy branded fuel frequently are more likely to agree with three or more statements than those who rarely or never do.
- ✓ Respondents who compare fuel prices more often are more likely to agree with three or more statements than those who rarely or never do.
- ✓ Respondents who frequently (31 %) or regularly (35 %) buy fuel in other EU countries are more likely to agree with three or more statements than those who rarely or never buy fuel in other EU countries (28 %).

Table 2 Experiences at petrol stations in country of residence and another EU country



Source: consumer survey (N = 25797, Country of residence and N = 12648, Respondents who buy fuel in another EU country)

Mystery shoppers broadly agree that the petrol stations whose labelling practices tended to be clearest were those which used colour codes to differentiate fuel types, e.g. green for petrol and black for diesel. For petrol variants, the labels at the stations with the best labelling practices tended to clearly display the research octane number, i.e. 95 or 98. Mystery shoppers also reported that when they evaluated labelling negatively, it was partly due to the use of terms specific to the primary languages of the countries in which stations were located.³⁵ One example some mystery shoppers gave of this was the use of the term ‘gasoil’ or ‘gazole’ instead of the more common ‘diesel’. It emerged during focus group discussions that the commonly used terms for petrol types in certain countries had also led to some misunderstandings. In particular, the term ‘super’, commonly used to identify regular petrol 95 in Germany, was confusing for non-Germans, as it often denotes premium fuel variants in other countries.

Mystery shoppers also reported that they found it confusing when different colour codes were used to indicate the same fuel type at various stations in the sample. A majority of the mystery shoppers said in the focus groups that they were able to distinguish regular and premium fuels according to the price difference between them (because they knew that premium fuels were more expensive). In terms of improving fuel labelling at the pump, a broad consensus emerged in the focus groups on the use of an international colour-coding scheme and putting the octane number next to the name of the fuel. The need for large, clear numbers on roadside billboards frequently came up, as did a desire to see advertisements on the billboards frequently came up as did a desire to see advertisements on the billboards minimised or removed.

As with other aspects relating to the information given to consumers in this market (see above), stakeholders’ views appear to be at variance with consumers’ experience. The

³⁵ The mystery shoppers acted as cross-border consumers, attempting to identify regular petrol 95 and diesel fuel in languages not native to them.

vast majority (85 %) of stakeholders surveyed thought that labelling at the pump in their country was clear. This should be cause for concern, considering that providing consumers with the information they need to differentiate fuel types and arrive at reliable conclusions about fuel and vehicle compatibility is one of the main purposes of fuel labelling at petrol stations.

Harmonised fuel labelling (e.g. using an EU-wide colour-coding scheme)

The study strongly suggested that labelling practices can have a major impact on the ease of distinguishing regular petrol 95 from regular diesel fuel. Fuel retailers and vehicle manufacturers have already taken some steps to help consumers correctly identify these fuel types.

For example, several stakeholders interviewed for this study reported widespread use of a green-black colour scheme on pumps or nozzles to indicate petrol and diesel fuels respectively. To some extent, this colour-coding was observed during the station visits that took place in the capital cities of six of the countries chosen for the study. However, while green was the colour most commonly associated with regular petrol 95 (66 % of all sampled stations that offered it), other colours such as yellow (15 %) and blue (6 %) were also used to denote this fuel type.

Consumers must be able to determine compatibility between fuel type and vehicle model and to identify different fuel types. It is therefore essential to improve this aspect of fuel labelling practices.³⁶

The study recommends putting in place an EU-wide colour-coding scheme for fuel labelling so that the same colours are used at petrol stations across the EU to indicate regular petrol and regular diesel fuel. The label should be simple, easy to understand and placed in a clearly visible manner at the fuel pump and on the car.

As also stressed in the Cars21 report,³⁷ minimum standards for the same type of fuel across Member States would make fuel markets more transparent and boost consumers' confidence in them. The report also suggested using a simple colour or symbol system to enable consumers to verify vehicle and fuel compatibility. The Alternative Fuel Infrastructure Directive proposed a similar approach to harmonising labelling at the pump.³⁸

Since the study showed that there were also problems with displaying the research octane number³⁹ at petrol stations, Member States should better label all fuel types at the pump.

Furthermore, according to the study, uniformly displaying relevant fuel types throughout the EU would also be a good idea, since the use of different types in different countries may add to the confusion of consumers who need to fill their tank abroad.⁴⁰

³⁶ This is in line with a suggestion the CARS 21 High Level Group put forward in 2012 that a 'simple colour or symbol code system could be proposed to allow consumers to verify vehicle and fuel compatibility'. Article 7(4) of the forthcoming Directive on deploying alternative fuels infrastructure also reflects this.

³⁷ The full report is available at http://ec.europa.eu/enterprise/sectors/automotive/files/cars-21-final-report-2012_en.pdf.

³⁸ Article 7 of the Alternative Fuel Infrastructure Directive provides that where such standards refer to a graphical expression, including a colour-coding scheme, the graphical expression shall be simple, easy to understand and placed in a clearly visible manner. (a) on corresponding pumps and their nozzles at all refuelling points, from the moment fuels are put on the market; (b) on or in immediate proximity to the filling caps of the fuel tanks of all motor vehicles for which that fuel is recommended and with which the vehicles are compatible, and in motor vehicle manuals, when those motor vehicles are put on the market after [the date of the transposition of this Directive].

³⁹ The European standard EN228 for motor petrol also provides that the research octane number be easily recognised at the pump.

⁴⁰ Uniformly showing fuel types at the pump would make the material differences or similarities between petrol types clearer and provide valuable information for cross-border fuel consumers who might otherwise be confused by the use of national terminology instead of the fuel's research octane number. For example, 'Super' is the commonly used term for petrol 95 in Germany, but its

3.2 Consumers' knowledge and perceptions

One of the reasons consumers may struggle to make the right choice is that they have limited knowledge of the market. The study shows that the great majority of respondents are poorly informed about the vehicle fuels market. This may cause significant problems of informational asymmetry which suppliers are in a position to exploit to their benefit.

Respondents were asked about their general knowledge of the market and their opinion and understanding of premium fuels and biofuels. They were given a list of six statements and asked which they thought were true.⁴¹ Overall, only 2 % of them correctly identified the three true and three false statements, while just 9 % made only one mistake, by not selecting a true statement or not indicating a false one. Respondents made between two and four mistakes in most cases (85 %). Above all, this shows that consumers have insufficient knowledge of newer fuel types with biofuel content such as E10 and B7.

These results corroborate the reported lack of clear information discussed earlier. Poor knowledge may be the result of consumer inertia or lack of information. In both cases, however, tailored measures are needed to fill the gap. Lack of information can lead consumers to make decisions they would not have made had they been better informed. The study acknowledged some good labelling in some European countries where consumers are given clear, transparent information.⁴²

Perceptions of new fuels

Every day consumers are exposed to messages encouraging them to make their behaviour environmentally friendly. Despite their being encouraged to drive less in order to save resources and reduce air pollution,⁴³ finding ways to bridge the gap between environmental awareness and behaviour change has proved difficult.⁴⁴

In its White Paper *Roadmap to a Single European Transport Area — Towards a Competitive and Resource Efficient Transport System*, the Commission advocates reducing the transport sector's dependence on oil. It suggested an array of policy initiatives to do so, such as putting alternative fuels⁴⁵ on the market, including electricity, hydrogen, biofuels,⁴⁶ synthetic and paraffinic fuels and natural gas.⁴⁷ As a result, a market that used to be relatively easy to understand has become more complex than ever. In some countries, this has caused confusion, uncertainty and misunderstandings about the right fuel for the right car, as happened in Germany for example, where consumers

research octane number was clearly displayed at only 52 % of the stations visited in Berlin. While such labelling practices would be unlikely to cause problems for a resident of Germany, they could do so for a visitor from another Member State.

⁴¹ Three of the six statements were true and three were false. Respondents could also reply: 'None of the listed statements are correct' (wrong statement).

⁴² Examples of very good labelling at the pump are included in the mystery shopping report published on the Commission's website at the following link: http://ec.europa.eu/consumers/consumer_evidence/market_studies/vehicle_fuels/docs/study_en.pdf.

⁴³ In its statement accompanying Directive 2008/50/EC of the European Parliament and of the Council of 21 May 2008 on ambient air quality and cleaner air for Europe, the Commission recognised the need to reduce emissions of harmful air pollutants in order to make significant progress towards achieving the objectives set out in the Sixth Community Environment Action Programme. In particular, it made new legislative proposals to further reduce Member States' permitted national emissions of key pollutants, reduce emissions associated with refuelling petrol cars at service stations and tackle the problem of the sulphur content of fuels, including marine fuels.

⁴⁴ For more details see *Bridging the Gap: The Connection Between Environmental Awareness, Past Environmental Behavior, and Green Purchasing*, Darcie Honabarger, 2011.

⁴⁵ According to the Clean Power for Transport Strategy, alternative fuels are fuels that are alternative to oil (including but not limited to renewables). According to Article 2 of the Alternative Fuels Infrastructure Directive they are fuels or power sources which serve, at least partly, as a substitute for fossil oil sources in the energy supply for transport and which can contribute to its decarbonisation and enhance the environmental performance of the transport sector.

⁴⁶ Biofuels are currently the most important type of alternative fuels, accounting for 4.7 % of the energy supply in EU transport in 2011. Well known biofuels include bioethanol, biomethanol, biodiesel, biogas, bio-oil and etherised bioethanol.

⁴⁷ They include biomethane in gaseous form (compressed natural gas) and liquefied form (liquefied natural gas), and liquefied petroleum gas.

were concerned about the compatibility of fuels with their car.⁴⁸ Respondents' perceptions of premium fuels⁴⁹ and biofuels also reflect such confusion.

Perceptions of premium fuels

Respondents' perceptions of premium fuels are mixed. Whereas 24 % agree with the statement that premium fuels are better quality than regular fuels and 21 % agree that they considerably improve the engine or vehicle performance, 47 % say that premium fuels are too expensive and 8 % think that premium fuels offer no benefits compared to regular fuels. Overall, 39 % of respondents agree with at least one of the positive statements about premium fuels, while 54 % agree with at least one of the negative statements and 27 % say that they have never used premium fuel.

On average, there is no difference between the views of EU-12 and EU-15 consumers on whether premium fuels are too expensive. There is however a big difference between their views on whether premium fuels are superior in quality. Of EU-12 respondents, 38 % think so, compared to just 20 % of EU-15 respondents.

There are other significant differences between the perceptions of EU-12 and EU-15 consumers with regard to the following statements about premium fuels: they improve the performance of the engine or vehicle (36 % vs 17 %); they are better for the environment (23 % vs 10 %); they are the best option for the vehicle (15 % vs 9 %). A minority of respondents (4 % in the EU-12 and 9 % in the EU-15) think that premium fuels do not offer benefits.⁵⁰

Of EU-15 respondents, 29 % say they have not used premium fuels, compared to 18 % of EU-12 respondents. More EU-12 (60 %) than EU-15 consumers (34 %) agree with at least one positive statement about premium fuels.

The socio-demographic analysis shows that respondents who are more knowledgeable about fuels are more likely to agree with at least one of the negative statements about premium fuels (62 % of those in the 'most knowledgeable' group, compared to 56 % of those in the 'more knowledgeable' group and 51 % in the 'least knowledgeable' group).⁵¹

In general, views tend to be more positive in countries in which the use of premium fuel is more prevalent (as is the case in Romania, Greece and Bulgaria).

While 36 % of stakeholders surveyed said it was easy for consumers to assess the performance of premium fuels compared to that of regular fuel. Only 4 % of them thought it was very easy to do so and 42 % said it was not at all easy, while 23 % said it was not very easy.

Perceptions of biofuels

Respondents were also asked what they thought were the main advantages and disadvantages of biofuels for vehicles.⁵² Overall, EU-12 respondents are more likely than EU-15 respondents to agree with the alleged advantages of biofuels (43 % in the EU-12 vs 32 % in the EU-15 agree with three of the alleged advantages). According to

⁴⁸ While the introduction of E10 fuel in Finland and France went smoothly, this was not the case in Germany according to stakeholders interviewed for this study. When E10 was introduced on the German market, concerns from consumers emerged about possible engine damage to their vehicles. The problems appeared to be the result mainly of incomplete information provision rather than a widespread risk of engine deterioration.

⁴⁹ Premium fuels have a higher research octane number.

⁵⁰ The percentage of 'don't know' replies is zero.

⁵¹ Survey respondents were given a list of statements about fuels and asked which ones they thought were true. In fact, three of the statements were true and three were false. They could also reply 'None of the listed statements are correct' (false). They were divided into three groups based on their answers: 'the most knowledgeable respondents who got no more than one answer incorrect'; 'less knowledgeable respondents who got two or three incorrect'; and the 'least knowledgeable group who got four or more incorrect, or answered 'None of the listed statements are correct'.

⁵² In each case respondents had to choose up to three statements from a list of six.

respondents, the main advantages of biofuels are that they make us less dependent on oil (50 %), that they are better for the environment than fossil fuels because they produce fewer air-polluting emissions (47 %), and that they are renewable, whereas fossil fuels will run out (46 %).

On the other hand, 15% did not agree with any of the claimed advantages of biofuels. Among the countries where E10 fuel is widely available (i.e. France, Germany and Finland), the percentage of consumer survey respondents indicating that biofuels have no advantage is substantially higher than the EU average in Germany (40%), while in Finland (12%) and France (15%) the results are broadly similar to the EU average.

When considering the disadvantages of biofuels, consumers are most likely to agree with the statement that they are taking land away from food production (40 %) and are too expensive (38 %), while 23 % agree with the statement that they lead to the destruction of rainforests, and 22 % with the statement that they worsen engine or vehicle performance. In total, 18 % of respondents agree with three of the alleged disadvantages of biofuels, while 13 % do not agree with any of them.

Overall agreement with the alleged disadvantages of biofuels is similar in EU-15 and EU-12 countries. Nevertheless, the proportion of respondents who agree with individual statements varies. Respondents in EU-15 countries are more likely to agree with the statement that biofuels are taking land away from food production (43 % compared to 31 %) and that they lead to the destruction of rainforests (26 % compared to 10 %), while respondents in EU-12 countries are more likely to agree with the statement that biofuels worsen vehicle performance (33 % compared to 19 %) and are unsustainable (16 % compared to 10 %).

Improving the provision of information on biofuels for consumers

Information will only serve its purpose if consumers can understand it. It should enhance consumers' knowledge of the product and not mislead them about its characteristics. Since consumers have to process so much information and digest so many messages, they should be made as easy as possible for them to understand.

The study shows that consumers are ambivalent about the environmental performance of biofuels and their impact on vehicle performance, with respondents seeing both advantages and disadvantages. Concerns about the impacts of biofuel production on land use change and their contribution to climate change mitigation need to be addressed in order to build consumer trust. Consumers should also be given information on the compatibility with their car of fuels containing biofuels. The information should be easy to understand and not misleading. Consistently implementing EU legislation on all

relevant information, including information on sustainability regulations,⁵³ the quality specifications of biofuels⁵⁴ and providing information for consumers⁵⁵ should help reassure them⁵⁶.

3.3 Price information for consumers

Price appears to be the determining factor in consumers' selection of the retailer (68 % of respondents indicated 'offers the lowest price' as an important consideration in choosing a petrol station), and the fuel type (67 % indicated price as the main reason for buying their preferred fuel type).

A high percentage of consumer survey and stakeholder survey respondents reported that it is easy to find clear information about fuel prices (77 % and 94 % respectively). However, the reported ease of comparing prices for consumers is at odds with the fact that fuel prices were the subject of most of the complaints the stakeholder organisations received during the previous five years. Complaints concerned allegedly high or increased retail prices, which might indicate a lack of price transparency, and opaque or non-competitive wholesale markets.

More than half of consumer survey respondents compare fuel prices always or very often (56 %). Only one in five rarely or never compares them. The extent to which respondents compare fuel prices depends on how much they drive. The more they drive, the more they compare. Those who drive 10 000 kilometres or more a year are more likely to compare prices always or very often than those who drive less than 10 000 kilometres a year (59 % vs 53 %). Overall, those who compare prices find it easy to do so (87 %, including 39 % who say it is very easy). Just 13 % do not find it easy to do so. Respondents who compare prices always or very often are more likely to find it easy to do so than those who compare prices less often.

There were some differences in the proportions of respondents who compare prices always or very often, based on socio-demographic factors.

- ✓ The proportion of consumers who compares prices always or very often increases with age (from 53 % of 18-24 year olds to 59 % of those aged 55 or over).

⁵³ The EU biofuels sustainability criteria currently require that biofuels save at least 35 % of direct greenhouse gas emissions compared to fossil fuels (this will increase to 50 % in 2017 and to 60 % for new installations in 2018). Directly converting land with high biodiversity value and land with high carbon stock, including forests, is not allowed. Other environmental and social issues related to the production of biofuels are addressed through a number of recognised voluntary biofuels certification schemes and through the Commission's monitoring and reporting requirements. In order to address issues related to indirect land use change, in October 2012 the Commission adopted an ILUC proposal (COM (2012) 595 final), the text of which is available here: http://ec.europa.eu/energy/renewables/biofuels/land_use_change_en.htm. The proposal sought to limit the amount of first generation biofuels (with risk of ILUC emissions) that can count towards the 2020 renewable energy targets to 5 % of overall energy consumption in transport and provide additional incentives for changing to advanced (low-ILUC) biofuels. The European Parliament agreed a position on the proposal in September 2013 and the Council reached political agreement on 13th June 2014. Both the European Parliament and Council proposed a limit of greater than 5% for first generation biofuels (6% and 7% respectively) and sub-targets for advanced biofuels. The European Parliament will now consider the Council's text and agreement could be reached by the end of the year.

⁵⁴ The Fuel Quality Directive regulates the quality specifications for automotive fuels, namely petrol and diesel. They set the minimum requirements for ensuring the trouble-free functioning of fuels. The European Standard EN 228 sets the quality requirements for motor petrol and the EN 590 those for motor diesel. Experts decide them in collaboration with fuel and engine manufacturers and other relevant parties. The European Committee for Standardisation (CEN) adopts them and they are then implemented in national legislation. CEN members are the national standards bodies of the EU/EEA Member States and associated countries, including the Former Yugoslav Republic of Macedonia, Iceland, Norway, Switzerland and Turkey.

⁵⁵ Article 7(2) of the proposal for a directive on deploying alternative fuels infrastructure suggests giving consumers information based on the labelling specifications for fuel compliance contained in CEN standards setting out the technical specifications for fuels.

⁵⁶ Subject to a case-by-case assessment, misleading or confusing marketing practices could be considered as unfair under the Unfair Commercial Practices Directive.

However, older consumers are less likely than younger ones to find it easy (55 % vs 47 %).

- ✓ Respondents who spend a large proportion of their income on fuel are also more likely to compare prices always or very often (ranging from 51 % of those who spend no more than 5 % of their income on fuel, to 68 % of those who spend 21 % or more of their income on fuel).
- ✓ Respondents who are more knowledgeable about fuels are also more likely to compare prices. Of those in the most knowledgeable group, 61 % compare prices always or very often, compared with 57 % of those in the more knowledgeable group and 55 % of those in the least knowledgeable group.

Consumers' ability to effectively compare prices may however be hampered by petrol stations' practice of very frequently changing prices. This means that if consumers base their selection of retailer on price, the basis for their selection can change several times a day. There are regulatory provisions on fuel prices in several Member States, including Austria, Belgium, Luxembourg, Malta and Slovenia. These regulatory arrangements generally use price ceilings to limit the prices retailers can set. The study highlights the approach taken by Austria, where all fuel retailers must notify their price changes, and the relevant law permits only one price increase a day. This does not directly limit prices, but it does increase price transparency through the requirement to inform the relevant authority of price changes and a limitation on which time of the day a price increase can take place. Consumers therefore know precisely when retailers are allowed to increase their prices and can act accordingly. An economic analysis carried out as part of the study shows lower prices ex post, with a price reduction of 1.5 % to 2.5 % for diesel fuels and by 3 % to 3.6 % for petrol since the pricing regulation was introduced in 2011.

Streamline vehicle fuel price notification systems

The study suggests that in countries in which vehicle fuel price notification systems are not yet available, national governments should consider introducing them. Retailers could be required to notify their prices for at least regular petrol 95 (or the equivalent, e.g. E10 with research octane number 95 in Finland) and regular diesel fuel each time they are changed.

The resulting price database could then form the basis for a publicly administered comparison website or app for fuel prices.⁵⁷ In Member States in which fuel retailers very frequently change prices, national governments could consider limiting the frequency with which retailers are allowed to increase their fuel prices in one day.

3.4 Price comparison websites

Reliable online price comparison tools could help consumers select the best offer. The study showed that the availability of fuel price comparison websites varied substantially

⁵⁷ When setting up such a comparison website/app, it should be considered whether users' searches should reveal all price observations, the reason being that this could facilitate tacit collusion by making it easier for retailers to monitor each other. One way of getting around this would be for the website reveals only the cheapest stations in a given area. As the study shows, a good example of this is the Austrian Platform, where consumers have two ways of finding out which are the cheapest petrol stations: searching by address or by federal state and/or local districts. The searches by address and by local district show the five cheapest petrol stations in the area, while the search by federal state shows the ten cheapest stations in the federal state in question. The petrol stations are shown on a map, listed separately and sorted by price.

across the 29 countries surveyed.⁵⁸ In total, 60 websites for comparing the price of vehicle fuels were evaluated.

The availability of websites for comparing fuel prices, however, is in itself no guarantee that consumers fully exploit their potential. For instance, they may not be aware that there are price comparison tools or that they can be used for comparing fuel prices. They might not trust price comparison sites, due to their commercial nature (which they may suspect favour providers' interests), or because it is not clear who operates them. Also, competing price comparison sites sometimes show different results for the cheapest offers. This hinders rather than helps matters and also has an impact on trust. Finally, the quality and usefulness of price comparison websites may be limited because the offers covered are incomplete or not updated often enough.

The use of fuel price comparison websites among consumer survey respondents is above the EU-27 average in Austria (40 % compared to the EU-27 average of 24 %) and Greece (35 %). These are two countries in which public authorities operate good comparison websites based on price data that fuel retailers are required to submit.

In addition to the availability of comparison websites, mystery shoppers also looked at their functionality and usefulness. Here are their key findings.

- ✓ Less than half of the comparison websites they evaluated (45 %) provided a clear explanation of the frequency of their price updates. The most commonly reported update frequency was once a day (18 % of the websites in the full sample), followed by a frequency of more than once a day (13 %).
- ✓ The most commonly reported source of price data was crowd sourcing.⁵⁹ At the time of research more than half (53 %) of the comparison websites relied on crowd sourcing for some or all of their price data. Slightly more than a third (37 %) received some or all of their price data directly from petrol stations and 15 % benefited from national regulations that require vehicle fuel retailers to inform relevant authorities of their prices.
- ✓ Mystery shoppers noted very extensive market coverage by 40 % of the websites they evaluated, with fairly extensive coverage by 37 % of them. The remaining 23 % provided fairly limited (13 %) or very limited (10 %) coverage.
- ✓ Findings regarding the prevalence of multilingual functionality and market coverage show that most of the comparison websites in this sample were designed for one national market or a portion of that market.
- ✓ Mystery shoppers rated more than one third of the websites they evaluated very user-friendly (34 %) and rated 43 % fairly user-friendly. They rated only 5 % not at all user-friendly and 18 % not very user-friendly.
- ✓ They rated price comparisons very easy on most of the comparison websites (60 %) and fairly easy on a sizeable minority (20 %). They rated comparisons fairly or very difficult on one fifth of the websites (20 %) and very difficult on 13 % of them.

⁵⁸ The larger markets tended to be serviced by more comparison websites. In France, Germany, Italy and Spain at least three websites for comparing vehicle fuel prices were identified. The notable exception among the large markets is the United Kingdom, where only one price comparison website that worked well and that everyone could access could be identified (other websites were identified, but they required paid membership or were of no use). One relevant comparison website could be identified in Belgium, Bulgaria, Czech Republic, Iceland, Ireland, Latvia, Luxembourg and Malta. The only country for which a functioning website for comparing vehicle fuel prices could not be identified is Slovenia. This may be due to the specificities of the Slovenian vehicle fuels market, in which the government regulates fuel prices and they therefore change relatively infrequently.

⁵⁹ Crowd sourcing refers to a function that allows users of a website to upload price data based on their observations of prices or visits to petrol stations. They may do so using SMS, a proprietary mobile phone application or a form on the website.

- ✓ They found the vast majority (70%) of the comparison websites helpful in terms of helping consumers make an informed fuel purchasing decision, although they strongly agreed with this statement for only 20% of the websites.

The mystery shopping results show that there is room for improvement in the quality of existing comparison websites in many countries, in particular with regard to the following.

How to improve comparison websites

- ✓ Updating prices more often
- ✓ Give consumers more information to help them select the correct fuel type
- ✓ Give consumers more information on fuel quality and/or comparison test results
- ✓ Explain environmental issues more clearly
- ✓ Extend availability and coverage
- ✓ Make data sources clearer
- ✓ Make them more accessible and provide more information for people with disabilities

Some mystery shoppers suggested other improvements, such as adding information and resources on car – sharing, offering driving advice, presenting key data in a graphic format, making it clearer which public institutions are responsible for different aspects of the market, improving search options, making websites user-friendly and ensuring that explanations can be widely understood.

Improving comparison tools

Reliable comparison websites can help consumers a lot in choosing between fuel retailers. This is why consumers should be made more aware of their availability.

Regulatory requirements for fuel retailers to inform the authorities of their prices help make comparison websites reliable and up-to-date.⁶⁰ The study suggests that the accreditation or direct operation of such websites by public authorities could guarantee reliability and improve consumer confidence.

The study recommends that national authorities, especially those in EU-12 Member States, initiate or maintain efforts to improve the quality of information comparison websites give consumers. It also suggests that comparison websites run by public authorities could consider providing their services as part of a smart mobility portal.⁶¹ For example, a route-planning service could include information on the cheapest petrol station on the route (based on real-time price data). It could also provide information on alternative fuels (including prices) and facilitate the use of alternative, more sustainable modes of transport, e.g. by suggesting routes involving public transport (bus and railway) and bicycle routes (where distances and associated time constraints make these a realistic alternative).

In the 2012 Consumer Agenda and in its e-commerce Communication, the European Commission announced that it intended to work on making comparison tools more

⁶⁰ See: footnote 53 above.

⁶¹ See <http://www.cleanvehicle.eu>.

reliable and transparent through a dialogue with stakeholders. It is for this reason that the multi-stakeholder dialogue on comparison tools (MSDCT) was set up.⁶² It summarised its initial findings and recommendations in a report⁶³ it presented at the 2013 Consumer Summit. In line with the results of this study, it found that the way products and services are presented often makes comparisons difficult and that consumers have trouble getting accurate information. Transparency, high quality information and the availability of redress for consumers were considered essential for ensuring that comparison websites work well for them. Other criteria, whilst not mandatory, were considered useful for improving the consumer's experience. The stakeholders in the MSDCT also recognised that it would be necessary to do more research on and analysis of comparison tools before the Commission can develop a set of guidelines on the subject.⁶⁴

The Unfair commercial Practices Directive (UCPD) also applies to comparison tools. A misleading or confusing comparison e.g. on the characteristics of the product, its price or the attributes of the trader could potentially be considered as unfair in the sense of the Directive. The Communication⁶⁵ on the application of the UCPD and its accompanying Report⁶⁶ adopted on 14 March 2013 identify priority actions in order to step up the enforcement of the Directive. Key priorities include updating the UCPD Guidance document to address new marketing techniques such as online comparison tools. The Commission plans to adopt a revised document by the end of 2014.

In one of its recitals, the Alternative Fuels Infrastructure Directive⁶⁷ recognises that straightforward, easily comparable information on the prices of different fuels could help vehicle users to better evaluate the relative cost of individual fuels available on the market. Therefore, when displaying fuel prices at a petrol station, in particular for natural gas and hydrogen, unit price comparison to conventional fuels, such as 'equivalent to one litre of petrol', may be displayed for information purposes. Article 7(3a) also states that where appropriate, when displaying fuel prices at a petrol station, in particular for natural gas and hydrogen, comparison between the relevant unit prices shall be displayed for information purposes. Displaying this information shall not mislead or confuse the consumer. To increase consumer awareness and give clear-cut information on fuel prices consistently throughout the EU, once the directive adopted, the Commission will be empowered to adopt, by means of implementing acts, a common methodology for comparing the unit prices of alternative fuels.

4. CONSUMER CHOICE

Based on their understanding of the vehicle fuels market and the information they are able to find, active consumers in this market need to regularly make decisions about which retailer to purchase fuel from. In this sense, the vehicle fuels market shares certain characteristics with markets for services of general interest and essential goods. Although

⁶² The purpose of the MSDCT was to (a) provide a better understanding of how the various types of comparison tools work; (b) analyse the roles and interaction between all those involved in running comparison websites; (c) map best practices in different sectors and (d) identify areas for improvement. It is composed of representatives from consumer organisations, national regulators and enforcers and the business sector, including comparison tool operators.

⁶³ http://ec.europa.eu/consumers/events/ecs_2013/docs/comparison-tools-report-ecs-2013_en.pdf.

⁶⁴ For this reason, the European Commission decided to launch a more comprehensive mapping study of comparison tools in order to gain a better understanding of the tools already on the market and their effect upon consumer behaviour. It maps existing comparison tools and assesses their use by consumers in six key sectors: electric and electronic appliances, fast-moving consumer goods, travel and hotels, energy, electronic communications and financial services. Results from the study, expected by July 2014, will help the Commission decide what to do next.

⁶⁵ COM (2013) 138 final

⁶⁶ COM (2013) 139 final

⁶⁷ See footnote 25

the exact purchase rate depends on how often and how far consumers drive, fuel purchasing decisions are generally made on a consistent and relatively frequent basis.

Results from the stakeholder survey showed that the most widely available fuel types were regular diesel and unleaded petrol with a research octane number of 95, followed by unleaded petrol with a research octane number of 98 and premium fuels (though not to the same extent as the regular fuel types). Consumer survey respondents said that they most frequently buy petrol (61 %), followed by diesel (36 %) and other types of fuel (3 %). Petrol users were most likely to use only regular petrol (76 %), an identical proportion to diesel users who were most likely to use only regular diesel, as opposed to premium or other types of diesel such as biodiesel.⁶⁸

Almost half (46 %) of consumer survey respondents said that they usually filled up their vehicle when the tank was nearly empty, while 19 % fill it up whenever they see a good deal or see that prices have fallen. Only 2 % fill it up on specific days of the week. This suggests that there is limited scope for consumers to thoroughly compare prices and especially to take advantage of low points in price cycles. This is because filling up when the tank is nearly empty requires quick decision-making and reduces the possibility to schedule purchases for certain days.

While price is the main factor in consumers' selection of the retailer and the fuel type (see the next section), one statement stakeholders made was that consumers tended to value location, good service and convenience, rather than simply price. Apart from price, key factors in selecting a particular petrol station include a convenient location (43 %) and the offer of a loyalty card or membership scheme (22 %). With regard to fuel type preferences, factors other than price include previous good experience with a given type of fuel (27 %), its perceived benefits for engine or vehicle performance (22 %) and its quality (18 %).

One in 10 consumer survey respondents say they don't have a choice between fuel types as there is only one type of fuel available in their area that is compatible with their vehicle. This percentage is higher for respondents living in rural areas (14 %, compared with 10 % in urban and 6 % in metropolitan areas).

Only 20 % of EU-27 stakeholders surveyed thought that it was easy for consumers in their country to compare the performance of branded fuels, generic/non-branded fuels and fuels sold at supermarkets. Most stakeholders (52 %) reported that it was not at all easy for consumers to do so.

The socio-demographic analysis shows the following:

- ✓ Diesel users are more likely than petrol users to say that the price is important (69 % compared with 65 %). This percentage is even higher among users of other types of fuel (87 %). Diesel users tend to drive more than petrol users (29 % of them drive 20 000 km or more compared to 12 % of petrol users). The same goes for users of other types of fuels (24 % drive more than 20 000 km).
- ✓ Respondents who buy branded fuel frequently are more likely to value quality (22 % vs 10 % of those who rarely or never buy branded fuel). These respondents are less likely to say that price is important (62 % vs 74 % of those who infrequently or never buy branded fuel).

⁶⁸ In the three countries in which E10 fuel was widely available at the time of research (Finland, France and Germany), 22 % of respondents buy it for the vehicle they most frequently drive. The proportion is higher in Finland (30 %) than in France (24 %) or Germany (21 %). In contrast only 1 % of respondents in the EU reported using B7 biodiesel exclusively.

- ✓ Respondents who compare fuel prices frequently are more likely to say price is the main reason for choosing their preferred type of fuel (72 % of those who compare prices always or very often, compared with 66 % of those who often compare prices and 55 % of those who rarely or never do).

Consumers were also asked about the aspects of advertisements for vehicle fuels that can influence their purchasing decision. Almost two thirds (63 %) say that they are not affected by ads for vehicle fuels, either because they do not trust them (32 %) or because they have never looked at or listened to them (31 %). Respondents in EU-15 countries are more likely than those in EU-12 countries to say that they are not affected by advertisements for vehicle fuels (67 % vs 46 %). On the other hand, a quarter of respondents say that their purchasing decision may be influenced by ads about the effects of fuels on engine or vehicle performance and 19 % by ads about the effects of fuels on the environment.

While in many markets competition can ensure that price is a good sign of quality, this is not necessarily the case in the vehicle fuels market. Consumers pay significantly more for premium fuel than regular fuel, while it is unclear to what extent there are material differences between the fuels sold that would lead to significant differences in performance.⁶⁹

Improve consumer trust and choice by reporting on the performance of various fuel types

Fuel performance and efficiency are important drivers of consumer choice. Trust in good fuel quality influences client satisfaction and loyalty. It can only be gained if the information provided is clear, complete and not misleading.

The Unfair Commercial Directive Practices provides that in order to be fair environmental claims (including on fuels), should be presented in a specific, accurate and unambiguous manner and substantiated by scientific evidence. The study shows that there is a need for more research and sound empirical data in order to better inform consumers of the actual differences in performance and environmental effects of fuels. Consumer organisations, automobile clubs and other organisations should be encouraged to report on the performance of various fuel types in order to help consumers make better decisions.

5. PRICE DIFFERENCES WITHIN AND BETWEEN COUNTRIES

Consumers' focus on comparing prices and trying to identify the cheapest retailer in their area also depends on the price differentials between different retailers and retailer types.

Overall, in 2012 the most expensive Member States for petrol fuel, including all taxes, were Italy, France, the Netherlands, Denmark and the UK (all significantly above the EU average). Conversely, prices were lowest in some EU-12 Member States, namely Bulgaria, Estonia, Poland, Malta and Cyprus.

⁶⁹ Fuel industry representatives' and independent observers' opinions on this do not always coincide with each other. In the absence of consistent, independent testing with multiple types of vehicles and under different road conditions, claims of better quality are often considered a matter of marketing and customer segmentation. At least in the independent tests recently carried out in Portugal and in previous tests by the national German automobile club, premium fuels were not found to be substantially superior in performance, contrary to popular opinion (as the results of the consumer survey show).

The average price in rural areas was lower than the average price in the capital city in 17 of the 29 countries the study covered. In France, Ireland, Italy and Belgium the average rural price was far below the average price in the capital city.⁷⁰ In Estonia and Luxembourg, the average price of regular petrol 95 at the rural petrol stations in the sample was equal to the average price at the sample stations in the capital city. In the 10 remaining countries, the average rural price was higher than the average capital city price.

Motorway prices are generally more expensive than those in capital cities and rural areas.⁷¹ The average motorway price for petrol 95 was higher than the average capital city price in the vast majority of countries. In Austria, Belgium, Germany, Hungary, Greece and the Netherlands, the average motorway price was at least 3 % higher than the average capital city price.

The pattern for diesel prices is similar to that for petrol prices. Again, petrol is cheaper in absolute terms for the end consumer in EU-12 Member States. Cyprus, Lithuania, Poland, Romania and Slovenia had the cheapest diesel, while Sweden, Italy and the UK had the most expensive.⁷²

In terms of differences between average rural prices for regular diesel fuel and average prices in the capital cities, France and Ireland stand out as having the lowest average rural prices compared to those in their capital cities. In contrast, average rural prices in Finland, Greece, Norway and Austria were 1 % or more above those in their capital cities. In Estonia, Slovakia and Luxembourg, average motorway prices for regular diesel were lower than average capital city prices, while in Austria, Belgium, Germany, Hungary, Greece and the Netherlands the average motorway price was at least 3 % higher than the average capital city price.

On average, minor brands, and independent fuel retailers sell at lower prices than major brands, while supermarket stations are by far the cheapest,⁷³ according to the data collected. Unmanned stations nearly always sell petrol and diesel fuel at lower prices than manned stations.⁷⁴

Premium petrol was always more expensive than regular petrol 95 and premium diesel more expensive than regular diesel fuel.⁷⁵

⁷⁰ This was most notably the case in France, where the average price for petrol in rural areas in the study sample was 4 % below the average price in Paris.

⁷¹ In Luxembourg, Portugal, Slovenia and Iceland the average motorway price for regular petrol 95 was similar to the capital city price. In France, Romania and Italy the average motorway price was below the capital city price.

⁷² The exception among EU-15 Member States is Luxembourg, where diesel prices were among the lowest.

⁷³ The Pöyry survey of oil product markets in the EU (2009, p.115) found that most countries with lower gross retail margins have more hypermarket stations or vice versa. However, some countries deviate from this. The report postulates that the range of margins for countries with low hypermarket penetration suggests that there may be a pivotal point at which hypermarket pricing begins to affect incumbents' pricing and operating decisions. While this penetration has resulted in major adjustments and cost efficiencies amongst competitors in the French and British markets, the existence of low margins in other countries where hypermarkets are not dominant (Germany, Sweden and Austria in this case) suggests that other fundamental cost drivers, or alternative effective competitive models, exist.

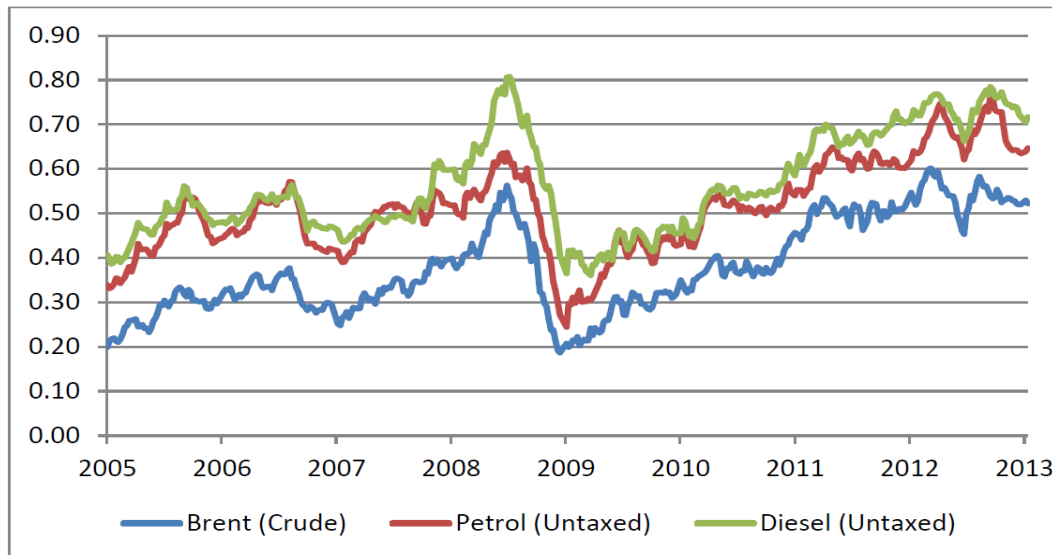
⁷⁴ For regular petrol 95 prices, the average price at unmanned stations was lower in 13 of the 14 countries in which prices were collected from unmanned stations. Only in Greece was the average price for regular petrol higher at unmanned stations than manned stations. On average across these 14 countries, unmanned stations sold regular petrol 95 for 1.9 % and regular diesel fuel for 2.7 % cheaper than manned stations.

⁷⁵ The cost difference for premium petrol compared to petrol 95 ranged from 6.1 % in Italy (or 1.92 € compared to 1.80 €) to 8.3 % in the Czech Republic (39.63 Czech crowns compared to 36.35 Czech crowns); for premium compared to regular diesel, the difference ranged from 1.8 % in Finland (1.55 € compared to 1.53 €) to 9.3 % in Germany (1.60 € compared to 1.45 €).

Changes in fuel prices

The last several years have been characterised by high price volatility, as the graph below shows. It shows a time series of crude Brent oil prices, as well as the fuel prices excluding taxes. On average, the price of untaxed petrol increased by about 72 %, while the price of diesel increased by 67 % between 2005 and 2012. The final taxed price of petrol changed by 46 % and of diesel by 50 % during the same period.

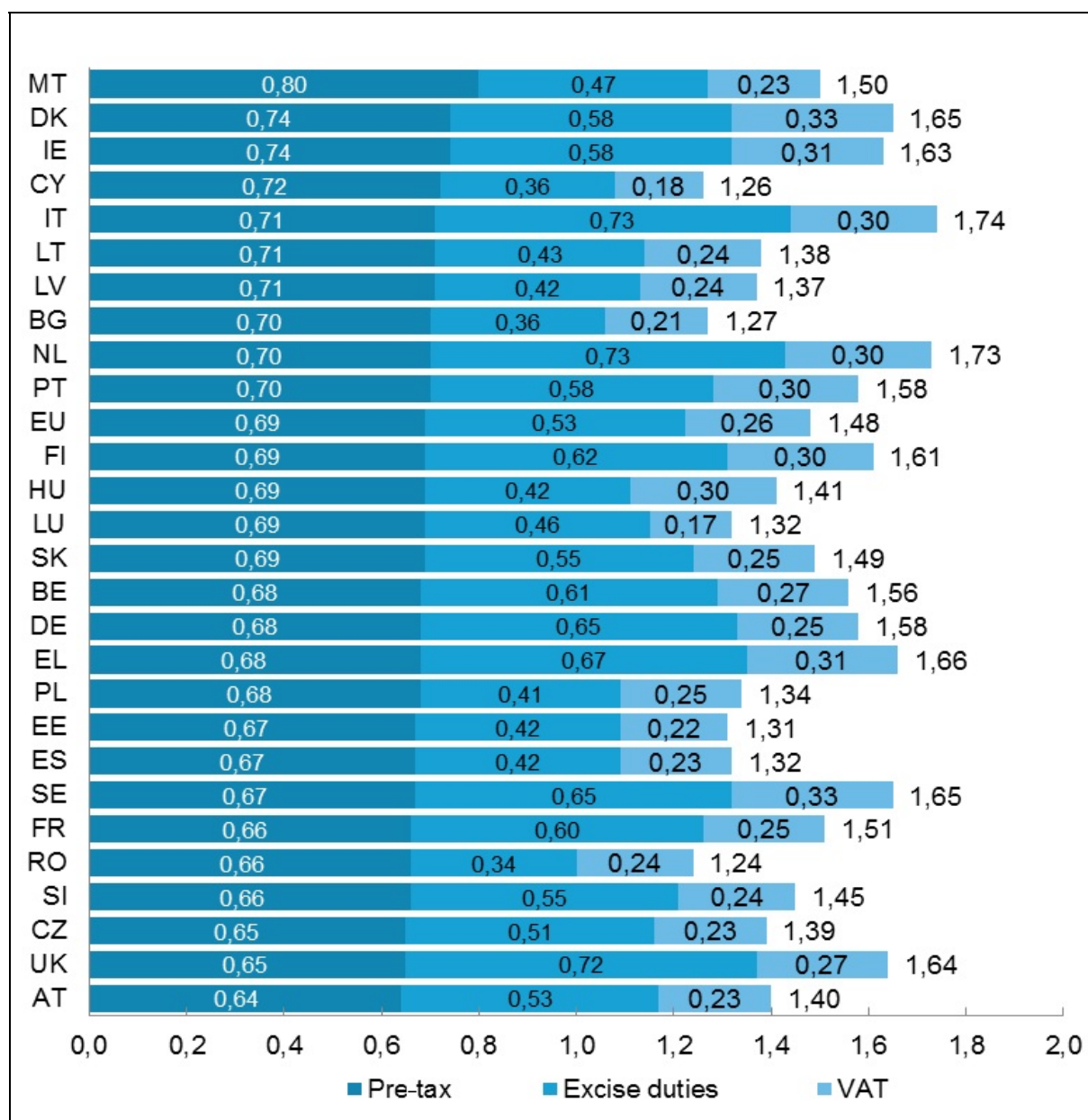
Table 3 Wholesale and untaxed retail fuel prices in the EU (in €/litre)



Source: Market observatory for energy

Prices in different European countries show very similar patterns. Fuel prices increased between 2005 and 2008, fell to a new low in 2009 and then increased again to a new peak in 2012. The different prices reflect different taxation arrangements, economic and geographic conditions. The price of taxed petrol and diesel fuel increased in the EU-12 more than in the EU-15 during the same period. Fuel taxes and VAT rates, which differ among Member States, are major components of final consumer prices. Differences in pre-tax prices are much smaller than those in post-tax prices. This shows that national policies explain many of the differences in prices that affect consumers. The countries with the highest tax-related price components are generally EU-15 Member States, with the absolute highest levels in the Netherlands, Italy, Greece, Sweden and the UK.

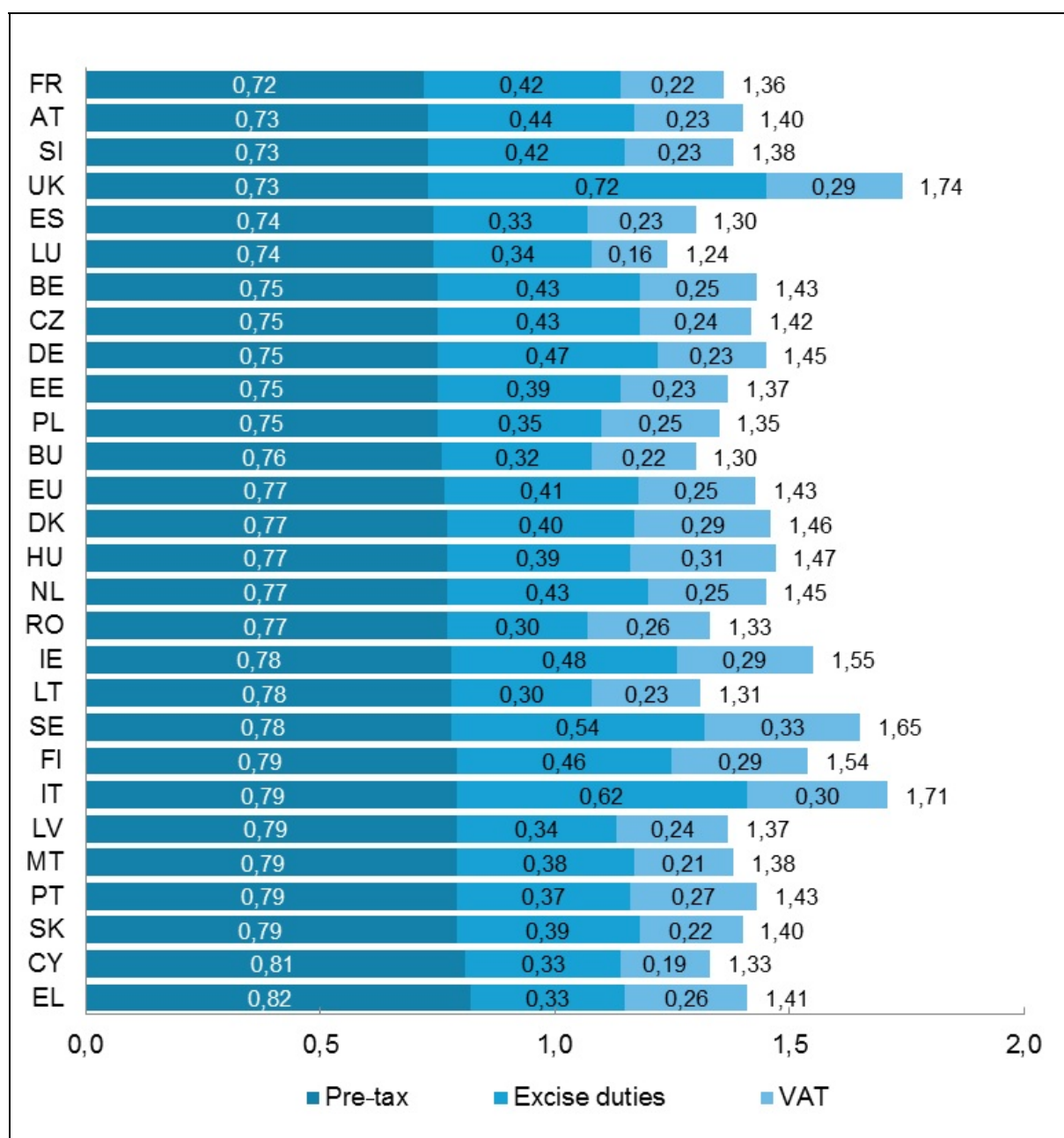
Table 4 Average petrol prices with and without taxes and excise, December 2012



Source: EU Oil Bulletin

As shown below, the picture is similar for diesel prices. As before, differences in pre-tax prices are smaller than those in post-tax prices, while the ranking of countries is similar, with EU-15 Member States on top, though this time the UK leads followed by Italy, Sweden and Ireland.

Table 5 Average diesel prices with and without taxes and excise, December 2012



Source: EU Oil Bulletin

Across the EU, while average pre-tax petrol prices ranged from 0.64 € in Austria to 0.80 € in Malta, the price in most countries was close to the average of 0.73 €. The most decisive variable in predicting the final pre-tax prices of vehicle fuel is the Brent crude oil price,⁷⁶ followed by fuel taxes⁷⁷ and income. A 1 % increase in the Brent crude oil price results in a 0.47 % increase in final petrol prices. Higher VAT rates are associated with higher pre-tax petrol prices. However, excise duties and other taxes have the opposite effect on both petrol and diesel prices. Unsurprisingly, higher income corresponds to higher demand and therefore higher prices.

⁷⁶ As crude oil prices and wholesale prices are the most important input prices for fuels, weekly crude oil prices in euro per 1000 litres (Brent) are used as the major explanatory variable in the analysis.

⁷⁷ VAT rates vary significantly among Member States. Luxembourg has the lowest rate (15 %), followed by Malta and Cyprus (18 %), while Romania (24 %), Sweden (25 %) and Hungary (27 %) have the highest.

The results of the economic analysis also show that the regulatory measures in Austria, namely the requirement that all fuel retailers inform each other of their price changes, and the associated law permitting only one price increase a day, are associated with lower price levels ex-post. The regressions used for this study show a reduction in petrol prices by 3.0 % to 3.6 % and a reduction in diesel prices by 1.5 % to 2.5 % induced by the 2011 pricing regulation.

6. CONSUMER VULNERABILITY IN THE VEHICLE FUELS MARKET

Consumer vulnerability is a complex aspect encompassing the interaction between socio-demographic factors and market circumstances, including information and knowledge asymmetries, increasing market complexity and particular marketing practices. In order to shed light on drivers and patterns of consumer vulnerability and on marketing practices that tend to exacerbate it and effective measures to mitigate it, the Commission recently launched an in-depth study on consumer vulnerability in key markets. It⁷⁸ will also recommend how to better identify and reflect consumer vulnerability issues in future consumer scoreboards⁷⁹ and in-depth market studies.

The main method the Commission uses to identify consumer vulnerability as part of gathering and analysing consumer evidence is socio-demographic analysis of the main findings, in order to identify the consumer groups whose experience of a given market is particularly problematic. The same method was used in the study on the vehicle fuels market from a consumer perspective.

Based on preliminary research and input from stakeholders, several groups of consumers were hypothesised to be potentially vulnerable in the vehicle fuels market, such as consumers with little or no disposable income, those living in rural areas, people with reduced mobility, consumers who drive old vehicles and consumers who buy fuel outside their country of origin. The analysis of the study's findings along these socio-demographic lines unequivocally supported the vulnerability hypothesis for consumers who spend a large proportion of their income on fuels and people with reduced mobility. For other groups the findings were not fully conclusive.

- Consumers who spend a large proportion of their income on fuel

High prices and price increases bother consumers who spend a large proportion of their income on fuel more. The consumer survey shows that these respondents are more likely to say that they fill up whenever they can afford to (13 % of those who spend 21 % or more of their income on fuel, as opposed to just 3 % of those who spend no more than 5 % of it on fuel).⁸⁰ This category mainly consists of women (54 % vs 46 % of men), with the difference in gender composition even bigger in rural areas (61 % of women vs 39 % of men). In small towns, the same category is composed of 56 % of women and 44 % of men and in metropolitan areas 47 % of women and 53 % of men. This does not appear to be related to the distance driven, but to income differentials. This is because women make up 63 % of those who spend more than 21 % of their income on fuel despite driving less than 10 000 km a year (compared to 37 % for men).

⁷⁸ The study will end in June 2015.

⁷⁹ Consumer conditions scoreboards and consumer markets scoreboards are available at http://ec.europa.eu/consumers/consumer_research/editions/cms9_en.htm.

⁸⁰ This result also follows an age pattern. Of those who spend 21 % or more of their income on fuel, a relative majority (21 %) are aged between 18 and 24, followed by those aged between 25 and 39 (11 %), between 40 and 55 (7 %) and over 55 (4 %).

Respondents in this category are more likely to report having encountered problems in the fuels market (62 % of those who spend over 21 % of their income on fuel compared to 29 % of those who spend 5 % or less of their income on fuel). They are also more likely to experience potentially financially detrimental problems (36 %, compared to 12 % of those who spend no more than 5 % of their income on fuel).

While there is no easy remedy for this situation, these findings have fed into the earlier recommendations on price transparency. It is important to ensure that consumers are given price information so they can compare prices, so that consumers who spend a lot of their income on fuel can select the lowest priced retailer in their area. It is also essential to ensure that markets are competitive so that consumers do not end up paying artificially high prices. More information and greater transparency about prices in general, lower offers and savings for consumers can make by choosing the best price would help matters. Sufficient notice before price increases take effect would also help.

- Consumers living in rural areas

It was hypothesised that consumers living in villages or rural areas may be at a disadvantage compared to their counterparts in urban or metropolitan areas. This is because they have a more limited choice of fuel retailers and fuel types and fuel prices are higher. In terms of choice, the consumer survey provides some evidence that respondents living in rural areas are at a disadvantage. Of EU-27 respondents, 4 % reported 'Is the only one in my area' as one of the main factors affecting their choice of fuel retailer, but this proportion was higher among those living in rural areas (6 % vs 3 % in urban and metropolitan areas⁸¹). Similarly, 14 % of respondents living in rural areas gave the availability of only one type of fuel compatible with their vehicle in their area as the main reason for their choice of fuel type. This contrasts with 10 % of respondents in urban areas and 6 % in metropolitan areas, suggesting that consumers living in rural areas have a narrower choice of fuel types.

With regard to higher fuel prices, the price collection and analysis component of the study did not find evidence to support this claim for prices within countries. The average price indices calculated for regular petrol 95 and regular diesel in rural areas compared to capital cities were both 99.8. This means that the collected prices in rural areas were approximately 0.2 % cheaper than those in capital cities. However, this does not take wage or price levels into account. If wages in rural areas of a given country are lower than in the capital city, even if slightly cheaper in absolute terms, the rural fuel price will be higher in relative-to-income terms. This may be the case in EU-12 Member States more than in EU-15 Member States, where rural areas tend to be significantly poorer than cities.

Consumer survey respondents living in metropolitan areas more commonly report problems filling the tank (44 %, compared to 38 % in urban areas and 34 % in rural areas). This is despite the finding that people living in rural areas tend to drive greater distances (58 % drive 10000 kilometres or more a year) than those living in urban (51 %) or metropolitan areas (50 %).

⁸¹ This is particularly the case in Bulgaria (15 %), Sweden (14 %), Lithuania (12 %), Slovenia (12 %), Estonia (11 %), Greece (11 %), Latvia (11 %), Slovakia (9 %), Malta (9 %), Finland (9 %), the UK (8 %), Luxembourg (8 %), the Netherlands (8 %) and Poland (8 %), where the percentages of consumers with less choice were significantly higher in rural areas than in urban areas.

- **Consumers who drive old vehicles**

Consumer survey respondents with older vehicles (more than 10 years old) were also less likely to have experienced a problem filling up their vehicle (36%) than those with a vehicle less than five years old or between five and 10 years old (both 40%). However, respondents with older vehicles were found to drive less than those with newer vehicles.

- **Consumers' age**

The consumer survey results on the incidence of problems among the different age groups reveal a strong pattern, with problems more common among younger people (60% of 18-24 year olds, compared to 34% of those aged 55 or over). On the other hand, older respondents fared worse than younger ones on the market knowledge assessment questions. Poor knowledge of the market could also indicate lower awareness of problems encountered, leading to the under-reporting of problems in older age groups.

- **People with reduced mobility**

The visits to petrol station in the capital cities of six Member States showed that many of them lacked toilets accessible to people with reduced mobility.⁸² Mystery shoppers' evaluation of comparison websites found that only a few of the comparison websites for vehicle fuels allowed consumers to search for petrol stations based on accessibility criteria, such as full or partial service and toilets that are accessible to people with reduced mobility.

- **Consumers who buy fuel outside their country of residence**

Turning next to the experience of consumers who buy fuel in other EU countries, the relevant socio-demographic results of the consumer survey question on problems experienced while filling up run contrary to the idea that this group is particularly vulnerable. Fewer respondents experienced a problem at a petrol station outside their country of residence in the past year (19%), or a potentially financially detrimental problem at a foreign petrol station (12%), than in their country of residence (38% and 21% respectively). The results also show that few respondents who purchase fuel abroad report problems with unclear labelling preventing a purchase (3%) or leading to the unintended pumping of biofuel (1%). These findings must be qualified however, because the respondents who reported purchasing fuel in another EU country are still likely to purchase most of their fuel in their country of residence, increasing the likelihood of their experiencing problems there rather than abroad. Respondents who reported purchasing fuel in other EU countries tended to drive more kilometres a year, be better educated and be more knowledgeable about the vehicle fuels market.

Ways of improving conditions for the most vulnerable consumer groups

Given the essential part they play in ensuring accessible travel and tourism for disabled people, the study concludes that either voluntarily, or based on regulatory requirements, the proportion of petrol stations with toilets accessible to disabled people should be increased to accommodate the needs of people with reduced mobility.

⁸² This is subject to national regulations. As the mystery shopping exercise showed, even though toilets were available at 66% of all visited stations, only 26% of them had toilets designed to be accessible to people with reduced mobility, according to the staff.

It also suggested that operators of comparison websites should broaden search options to allow vulnerable consumers search for petrol stations that will be able to accommodate their needs.

The key to improving the fuel retail market for consumers is making sure that vulnerable consumers⁸³ in particular do not feel that fuel retailers are overcharging them. As the Austrian regulatory measures for vehicle fuels show, greater price transparency and sufficient notice before price increases take effect can improve the situation.

7. PROBLEMS, COMPLAINTS AND SEEKING REDRESS

For consumer conditions to improve and the market to function better, consumers' problems should be quickly solved to their satisfaction. They can play an active role in making sure recurring problems are tackled by complaining to suppliers or third parties and seeking redress.

Incidence of problems

Results from the consumer survey identified a high percentage of respondents (43 %) who had a problem when filling up their vehicle in their country of residence or in another EU country over the last 12 months (a slightly higher proportion of women (44 %) than men (42 %) reported having had problems). With regard to the incidence of problems, there is no difference between diesel and petrol users (43 %), but users of other fuel types (e.g. LPG, natural gas and E85) are more likely to say they have experienced a problem (53 %). Overall, among the most commonly reported problems at home or abroad were those which led to engine or vehicle performance problems (9 %); receiving less fuel in the tank than one paid for (7 %); paying a higher price than advertised for fuel (6 %); not being able to identify fuel due to unclear labelling (5 %); not being able to buy E10 or B7 because of uncertainty about compatibility (5 %); filling a diesel vehicle with petrol or vice versa due to unclear labelling (3 %); and incorrectly using a biofuel because of unclear labelling (3 %).

The great majority of respondents in Greece, Bulgaria, Romania, the UK and Italy said they had experienced a problem. Fewer respondents had problems in the Netherlands, Cyprus, Belgium, Denmark, Germany, Austria and Luxembourg. Overall, respondents in EU-12 countries are more likely than those in EU-15 countries to say they have experienced a problem (45 % vs 40 %). In Germany, France and Finland, where E10 fuel is widely available (33 %), respondents had fewer problems.

The following groups of consumers were more likely to report having experienced a problem.

- ✓ Younger respondents aged 18-24⁸⁴ (60 % compared to 34 % of those aged 55 or over). They are also more likely to report potentially financially detrimental problems (44 % vs 21 % of those aged 55 or over).
- ✓ Respondents who spend 21 % or more of their income on fuel (62 % compared to 29 % of those who spend no more than 5 % on fuel). They are also more likely to report potentially financially detrimental problems (47 % vs 15 % of those who spend no more than 5 % of their income on fuel).

⁸³ The Unfair Commercial Practices Directive provides for a specific protection of vulnerable consumers; the unfairness of a given practice should be assessed from the perspective of the average member of the targeted group of vulnerable consumers.

⁸⁴ There were no major differences between men and women in this subgroup of people.

- ✓ Respondents with newer vehicles are more likely to have experienced a problem (46 % compared to 39 % of respondents with older vehicles). Consistent with this finding, respondents with newer vehicles (less than five years old) are also more likely to report potentially financially detrimental problems (31 % vs 27 % of those with a vehicle between five and 10 years old and 26 % of those with a vehicle more than 10 years old).
- ✓ Respondents living in metropolitan areas are more likely to have experienced a potentially financially detrimental problem (33 % compared to 27 % of those living in urban areas and 25 % of those living in rural areas).

The mystery shopping exercises in several European capitals also shed light on the problems consumers buying fuel abroad experience. For instance, there were labels or signs in a foreign language in only one third of the petrol stations visited. Where this was the case, it was considered helpful in 43 % of the cases.

One of the problems in this market is related to perceived fuel quality.⁸⁵ There is a significant disparity between EU-15 and EU-12 countries. While few consumers in the EU-15 reported fuel quality problems (just 4 % of respondents referred to the perceived low quality of fuels leading to lower vehicle performance), a significantly higher proportion of EU-12 respondents reported such problems (17 % of respondents). Bulgaria and Greece (27 % each), Romania (25 %) and the Czech Republic (18 %) had the highest incidence of such problems. The stakeholder survey provided further evidence of this. At least one of the stakeholders consulted in Belgium, Estonia, Greece, Italy, Cyprus, Lithuania, Malta, Poland, Portugal, Slovenia and Finland reported that 25 % or more of consumer complaints related to perceived fuel quality.

The organisations that responded to the stakeholder survey were asked to report the types of complaints they received. The results point to fuel prices as the aspect of the vehicle fuels market consumers complained most about (51 % of complaints on average, as reported by stakeholders), followed by fuel quality (31 %) and unfair commercial practices (11 %).

Consumer detriment

The concept of consumer detriment is not new.⁸⁶ It is one of the tools used to measure misallocated resources within an economy, which, if properly allocated, could lead to substantial savings for consumers. Detriment arises both from missed gains due to ex-ante sub-optimal decisions by consumers,⁸⁷ and from avoidable ex-post financial losses arising out of problems.⁸⁸

⁸⁵ When comparing data stakeholders provided on fuel quality issues with consumer survey findings, it is important to note that 'fuel quality' was not identically defined in the two surveys. Whereas in the consumer survey the item read, 'Low quality fuel led to engine/vehicle performance problems', the explanatory note in the stakeholder survey more broadly defined fuel quality in order to include general fuel quality complaints. Albeit a minor one, this difference may affect the comparability of the results. These conclusions were drawn taking into account the results of the consumer survey. Fuel quality is to be understood here as perceived by consumers, since fuel grades were not sampled and analysed across petrol stations in Europe.

⁸⁶ According to the study *An analysis of the issue of consumer detriment and the most appropriate methodologies to estimate it* (2007) carried out for the Commission, consumer detriment falls into two broad categories labelled 'personal detriment' and 'structural detriment'. These concepts can be defined as follows: the former refers to negative outcomes for individual consumers, relative to some benchmark such as reasonable expectations, while the latter refers to loss of consumer welfare due to market or regulatory failure. Personal detriment focuses on ex-post outcomes for consumers who have a negative experience. It may include financial and non-financial detriment, with the latter including loss of time and psychological detriment. By contrast, structural detriment considers consumers in aggregate and is based on the ex-ante reduction of consumer surplus rather than on ex-post outcomes.

⁸⁷ For example, the Commission's recent study on internet access and provision estimated that EU consumers could save on aggregate between € 7.3 and 8.6 billion a year if they switched to the cheapest offer with the same service characteristics — http://ec.europa.eu/consumers/consumer_research/market_studies/internet_services_provision_study_en.htm.

⁸⁸ The Commission's 2011 Consumer Empowerment Report estimated the detriment suffered by European consumers at 0.4 % of EU GDP. The report is available at http://ec.europa.eu/consumers/consumer_empowerment/index_en.htm.

Of the consumer respondents (28 %) who reported having experienced a problem or problems that could have resulted in financial detriment (in their own country or abroad), 32 % said they did not suffer any financial loss. A further 31 % reported a loss under 20 € and 23 % a loss between 20 € and 99 €. However, there was a small number of much bigger reported losses, so that the average loss was 176 €⁸⁹ and the total ex-post detriment incurred by European consumers was estimated on this basis at over € 11 billion per year.⁹⁰

Respondents are more likely to say they incurred a financial loss if they spend a large proportion of their income on fuel. Among consumers who reported problems that could have led to financial detriment, around three quarters of those who spend 21 % or more of their income on fuel said they had suffered a financial loss, compared to 67 % of those who spend 6 % to 10 % and 62 % of those who spend up to 5 %. At 359 €, those who spend 21 % or more of their income on fuel also suffered a considerably higher financial loss.

An in-depth analysis also shows that while consumers who bought diesel were overall less likely to suffer a financial loss as a result of problems. However, the average loss of those who did was nearly twice as high (257 €) as that of those who bought petrol (132 €) and more than three times that of those who bought other types of fuel (72 €). This highlights the considerable welfare and efficiency gains that could be made through better consumer protection and empowerment.⁹¹

Of those who experienced problems, respondents in Greece (85 %), Bulgaria (82 %) and Italy (80 %) are most likely to say they experienced a financial loss, while the proportion is lowest in Denmark (43 %), the Netherlands (47 %) and Malta (45 %). There is no difference between EU-15 and EU-12 countries (68 % in each case).

Complaints and redress

Consumers who experience a problem may complain to the supplier or to a third party. The level of complaints across the different Member States varies greatly, with 28 % of consumers overall reporting having taken some form of action in response to problems they encountered (23 % complained to the petrol station and 5 % complained to a third party).

Respondents in Greece, Malta, Bulgaria and Italy are most likely to have taken some form of action after experiencing a problem when filling up their vehicle. The figure is lowest in the Netherlands, Portugal, France, Denmark and the UK. On average, respondents in EU-15 countries are slightly more likely than those in EU-12 countries to have taken some form of action about a problem (29 % compared to 24 %).

Across more than 50 consumer markets for goods and services the Commission's Consumer Markets Scoreboard monitors,⁹² the vehicle fuels market is among those with consumers' lowest propensity to complain about problems.

⁸⁹ The median loss is about 35 €

⁹⁰ This estimate is based on the number of cars in use in Europe in 2010 (according to the European Automobile Manufacturers' Association (ACEA), more than 230 million), the proportion of consumer survey respondents (28 %) who reported a problem which may result in financial detriment and the average mean loss reported (176 €).

⁹¹ Consumers found it difficult to recall and estimate losses accurately in the consumer survey, so this figure is probably an underestimate, given it does not include ex-ante detriment, or non-financial losses such as loss of time or psychological detriment.

⁹² http://ec.europa.eu/consumers/consumer_research/editions/docs/8th_edition_scoreboard_en.pdf.

Of the respondents who took action in response to the problem(s) they experienced, 47 % said they were satisfied with the final result. A similar proportion (51 %) was dissatisfied with the final result. Respondents in Malta, Belgium and Finland are most likely to say they were satisfied, while those in Greece and Slovenia are least likely to say so. There are no significant differences between EU-15 and EU-12 countries.

The socio-demographic analysis shows the following.

- Men are more likely than women to take at least one action to complain (30 % vs 25 %) and they are more satisfied with the final result (48 % vs 46 %).
- Respondents who are knowledgeable about fuels are more likely to be satisfied with the outcome of their complaint. Of those in the most knowledgeable group, 55 % were satisfied, compared with 48 % of those in the more knowledgeable group and 44 % of those in the least knowledgeable group.
- People living in metropolitan areas (44 %) were less likely to be satisfied with the outcome of their complaint than those living in urban or rural areas (49 %).

Better enforcement measures

As it is often difficult for an individual to seek redress in the vehicle fuels market due to the difficulty of establishing the facts, the study recommends that relevant national authorities ask automobile associations and consumer organisations how to better monitor the market aspects that are most frequently the subject of consumer complaints, and that they put better preventive and enforcement measures in place.

In order to have better evidence on which to base possible measures, the study recommends that consumer complaints about vehicle fuels be classified and reported regularly, using the harmonised methodology for classifying and reporting consumer complaints and enquiries.⁹³

8. KEY CONCLUSIONS

The study on the vehicle fuels market from a consumer perspective focused on **consumer decision-making** and on whether consumers are able to make **informed purchasing choices**. It showed that they get information on vehicle fuels from **a diverse range of sources**, such as labelling on the pump or vehicle, the vehicle's operating manual, personal advice, the internet and traditional media. However, it also shows that **the information** given to consumers **could be clearer**, especially information on the effects of fuels on the environment and on the engine or vehicle performance, information on fuel quality and information on compatibility between fuels and the consumer's car.

⁹³ This refers to the *Commission Recommendation on the use of a harmonised methodology for classifying and reporting consumer complaints and enquiries* (C (2010)3021 final). The Commission provides IT solutions and support for all interested organisations free of charge, including on-site IT expert visits aimed at developing customised solutions, to facilitate the adoption of the Recommendation and the data transfer to the relevant Commission services. The text of the Recommendation is available at http://ec.europa.eu/consumers/archive/strategy/docs/consumer-complaint-recommendation_en.pdf.

The results of the assessment of fuel labelling at the pump during the station visits in six countries show that **labelling practices** can have a major impact on how easy it is to identify regular petrol 95 and regular diesel. Survey responses and data on misfuellings obtained from stakeholder interviews strongly suggest that labelling practices at many petrol stations could be improved for the benefit of consumers.

Consumers and stakeholder respondents confirm the central importance of **fuel labels** or other signs at the pump as a key source of information about vehicle fuels. This means that the **clarity** and consequently the **effectiveness** of **labelling** are crucial for informing consumers in this market.

Information on or next to the vehicle's filling cap and on **websites for comparing fuel prices** is also important for consumer survey respondents and stakeholders. The availability and functionality of these sources of information can be improved, voluntarily by market actors, through regulatory intervention or through initiatives such as the setting up or accreditation of comparison websites by public authorities.

The study shows that the fuels **market**, which previously required little involvement and knowledge on the part of consumers, is becoming **increasingly complex**, especially with the introduction of new fuels. This complexity is compounded by **consumers' limited knowledge** of the market (in particular of newer fuel types with biofuel content). Consumer perceptions of premium fuels and biofuels are mixed. This suggests that simpler **information that is not misleading** is needed to better enable consumers make informed choices.

The study confirms that **fuel prices often fluctuate** during a given week, even changing several times a day in some EU countries. This is particularly relevant in a market in which **consumers' purchasing decisions** mainly revolve around **price**. **Price comparison websites** have therefore become a tool for regulators in several Member States to increase price transparency. In these countries, regulatory provisions have been enacted requiring fuel retailers to notify their prices to a publicly administered database, which in turn serves as the foundation for one or more comparison websites. In particular, the study found that **regulatory measures in Austria**,⁹⁴ namely the **requirement that all fuel retailers inform the regulatory authority** of each of their price changes, **combined with a regulator-operated price comparison website** and the associated law permitting only one price increase a day, have led to a decrease in fuel prices in Austria compared to the control group of other EU countries. Member States could follow this example of best practice to improve consumer conditions in the vehicle fuels market.

Many consumers reported experiencing **problems** filling up during the previous 12 months in their country of residence or in another EU country. Stakeholders said that **fuel prices** generated the highest number of consumer complaints, followed by **fuel quality** and **unfair commercial practices**. Consumers who spend more than 21 % of their income on fuel were found to be particularly **vulnerable**. High prices and price increases bother them more, they fill up whenever they can afford to and they reported higher financial loss in case of problems. More information and greater transparency about prices in general and about lower offers and the savings consumers could make by

⁹⁴ The 2013 Market Monitoring Survey recorded a significant increase in the market performance indicator in the vehicle fuels market in Austria compared to previous years. This increase is driven by the comparability, trust and expectations components that could be attributed to the regulatory measures put in place in 2011.

choosing the best price, would help improve the situation. While most consumers who reported financial detriment quoted relatively small losses, a small number reported much bigger losses. This brings the total estimated **ex-post detriment** to European consumers in the vehicle fuels market to **more than €11 billion** per year, highlighting the potential welfare and efficiency gains consumers could make by being more empowered.

Finally, the study acknowledges that when having problems, consumers find it difficult to establish the facts and are often discouraged from complaining. The nature of the problems the study identified suggests that **preventive measures**, such as **better fuel labelling at the pump** and better **enforcement of regulations**, can greatly improve the situation. Given the difficulty of establishing the facts, they may even be more useful than ex-post dispute resolution.