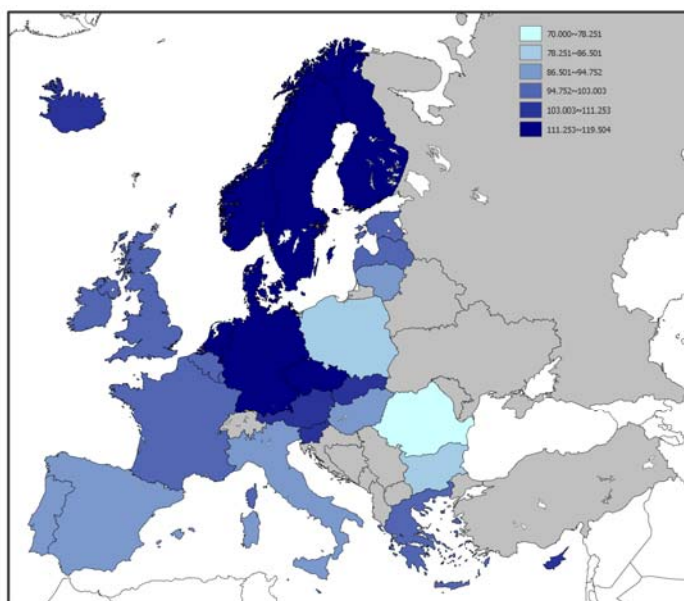# The Consumer Empowerment Index

A measure of skills, awareness and engagement of European consumers

**Michela Nardo, Massimo Loi,
Rossana Rosati , Anna Manca**

	70.000~78.251
	78.251~86.501
	86.501~94.752
	94.752~103.003
	103.003~111.253
	111.253~119.504

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Consumer Empowerment Index

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Executive summary

The interest and debate on the notion of 'consumer empowerment' has been rapidly increasing during the last decades. M. Monti in his report to the president of the European Commission "A new strategy for the single market"[1] places consumers and consumer welfare at the centre of next stage of the single market (page 41). Wider choice, better information and an enhanced corpus of rights, protections and means of redress are keywords of this view of consumer empowerment. On the other hand, the literature emphasises the connections with skills, competences, and the abilities of the consumers stating that a thorough knowledge of actual capacities, information and assertiveness of consumers is crucial for being able to design and develop policies that effectively enhance consumer protection. At the European Level the 2007-2013 EU Consumer Policy Strategy, while setting as a main objective "to empower EU consumers", also emphasizes the importance of a better understanding of how consumers actually behave, advocating for the need of having *real choices, accurate information, market transparency and the confidence that comes from effective protection and solid rights*.[2]

It is to answer to these political needs that DG Health & Consumers and DG ESTAT lunched in 2010 a Eurobarometer survey (Special Eurobarometer n. 342) on consumer empowerment aiming at collecting internationally comparable data on (i) consumers' basic numerical and financial skills, (ii) consumers' level of information on rights and prices, and (iii) consumers complaint and reporting behaviour, as well as consumers' experience with misleading or fraudulent offers. The dataset covers 29 countries (EU27 plus Iceland and Norway) and had 56,470 respondents. The DG Health & Consumers together with the DG Joint Research Center synthesized part of these data into a unique measure of consumer empowerment, the Consumer Empowerment Index. The Index describes consumer empowerment along three main dimensions: *Consumer skills*, *Awareness of consumer legislation* and *Consumer engagement*, acknowledging the multifaceted concept of empowerment.

This report describes the steps followed in the construction of the Index of consumer Empowerment. In particular the definition of the theoretical framework, the quantification of categorical survey questions, the univariate and multivariate analysis of the dataset, and the set of weight used for calculating the scores and ranks of the Index. The report also discusses the robustness of the results and the relationship

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[1] See, http://ec.europa.eu/bepa/pdf/monti_report_final_10_05_2010_en.pdf
[2] COM(2007) 99 final, page 6.

between the Index and the socio-economic characteristics of the respondents in order to identify the features of the most vulnerable consumers.

The Consumer Empowerment Index is a pilot exercise, aimed at obtaining a first snapshot of the state of consumer empowerment as measured by the Eurobarometer survey. It is neither a final answer on empowerment nor a comprehensive study on all the different facets of consumer empowerment, but instead it is meant to foster the debate on the determinants of empowerment and their importance for protecting consumers.

The Consumer Empowerment Index identifies Norway as the leading country followed by Finland, the Netherlands and Germany and Denmark. The middle of the ranking is dominated by western countries such as Belgium, France, and UK, with an average score 13% lower than the top five. At the bottom of the Index are some Eastern and Baltic countries like Bulgaria, Lithuania, Poland, and Romania with a score 31% lower on average (this gap reaches 40% and 38% in *Awareness of consumer legislation* and *Consumer skills*). A group of southern countries, Italy, Portugal, and Spain score poorly in the Index, especially in the pillar *Consumer skills* where the gap with the top performers reaches 30%.

The survey asked the respondents to express their opinion on whether, as consumers, they feel confident, knowledgeable, and protected. The comparison between these perceptions and the Consumer Empowerment Index shows that consumers who feel to be knowledgeable are also those who show higher basic skills and better capacity to read logos and labels. Consumers who feel confident seem not to read completely and carefully terms and conditions when signing contracts, while they seem to be more interested in information on their rights as compared to non empowered consumers. Detriment and redress is not significantly related to the perception of protection.

How can we construct an identikit of the most/least empowered consumers? A possibility is to study the socioeconomic characteristics of the survey respondents. Below the main conclusions.

- Gender. In all European countries but Norway male respondents score systematically better than female in all pillars and the Consumer Empowerment Index even if 31.7% of them have the lead in shopping decisions vis à vis the 68.4% of female respondents.

- Age. The age of respondents plays an inverse role in their empowerment: younger generations seem to be more skilled, aware and engaged than older generations, with the notable exception of Italy where respondents in the age cohort over-54 are 16.4% more engaged than those in the age cohort 15-24, 11% more aware of their rights and 6% more skilled.

- Occupation. Overall the non active population is less empowered than active population, in 18 out of 29 countries the least empowered are retired consumers, in 5 countries consumers not working (either unemployed or looking after the home) and in 3 countries the least empowered are unskilled manual workers. In all countries but Italy students are among the most empowered.

- Education. Education has an important role in explaining empowerment. Lower levels of empowerment are usually associated to low levels of education (ISCED 1-2). The highest gap is found for Malta, the United Kingdom (UK) and the Czech Republic while the reverse is registered only for Norway and Bulgaria where respondents with low education score respectively 19% and 10% more than higher educated respondents.

- Income. Income seems to have an inverse relationship with engagement in Finland, the UK, Ireland, Norway and Denmark: high income respondents (overall 26% of the sample analyzed) result to be less engaged than respondents experiencing income shortages. The reverse holds for the rest of EU countries, and especially for Bulgaria, Germany, Poland, Portugal, and Romania. Income is not decisive in Cyprus, France, Iceland, Malta, and Spain.

- Language spoken. The language spoken is not decisive for defining consumer engagement in most of the surveyed countries, exceptions are Greece, Hungary and Italy where consumers speaking the official language are 30% more empowered than those using a different language. The opposite holds for Malta and the UK. As expected the dimension *Consumer skills* is driving the results in both directions (the only exception is the UK where consumers with a foreign language perform well above the native speakers in all dimensions).

- Internet use. Internet use seems to be related to empowerment: consumers with some experience in using internet have higher scores in skills, awareness and engagement (with the exception of Norway). The difference is large especially in Finland, where consumers not using internet are 50% less empowered, and in Malta, Poland and the UK where the gap is around 40%.

1. Introduction

As largely recognized by the scientific literature, the empowerment of a consumer is a multifaceted concept encompassing skills, competences and rights, as well as the ability of the consumer to gather and use information and the capacity of the market to provide legal and practical protection devices. The EU Consumer Policy Strategy 2007-2013, 'Empowering consumers, enhancing their welfare, effectively protecting them' (COM(2007) 99 final), indicates that 'empowered consumers need real choices, accurate information, market transparency and the confidence that comes from effective protection and solid rights'. On the other hand, policy processes without tangible goalposts are meaningless.

It is to answer to these political needs that DG Health & Consumers and DG ESTAT lunched in 2010 a Eurobarometer survey on consumer empowerment (Special Eurobarometer n. 342) aiming at collecting internationally comparable data on three main aspects:

- Consumers' skills: consumers' basic numerical and financial skills as well as their knowledge of logos and symbols;

- Consumers' level of information: consumers' knowledge of their rights (awareness of unfair contractual terms, unfair commercial practices, guarantee rights, distance-purchasing rights, etc.), of prices, of governmental and non-governmental institutions protecting them and of different sources of information about consumer affairs;

- Consumers' assertiveness: consumers complaint and reporting behaviour, as well as consumers' experience with misleading or fraudulent offers.

The dataset resulting from this initiative covered 29 countries (EU27 plus Iceland and Norway), and reached 56,470 consumers (on average 2,000 consumers per country) aged 15 and above.

Using this survey the DG Joint Research Center (together with DG Health & Consumers) constructed a composite measure of consumer empowerment encompassing the plurality of aspects implied by the EU policy Strategy.

The Consumer Empowerment Index (CEI) is a pilot exercise, aimed at obtaining a first snapshot of the state of consumer empowerment as measured by the Eurobarometer survey. It is neither a final answer on empowerment nor a comprehensive study on all the different facets of consumer empowerment, but instead it is meant to foster the debate on the determinants of empowerment and their importance for protecting consumers.

This report is structured as follows: the first part introduces the concept of consumer empowerment as developed by the specialised literature over the last 20 years. Section 3 describes the dataset and how we constructed the 22 indicators used in the Index. Sections 4 illustrates the statistical analysis of the dataset, while Sections 5 and 6 present the Consumer Empowerment Index and discuss some statistical issues related to the framework and its robustness, including the set of weights used. Section 7 relates the Index to the socio-economic dimensions of the sample of consumer surveyed, like e.g. age, gender, income, internet use, etc. The objective of this section is to portray the features of the most vulnerable consumers. Section 8 concludes. Four Appendices complement the report detailing tables, data, statistical analysis and country profiles.

2. The concept of Consumer Empowerment

The interest and debate on the notion of 'consumer empowerment' has been rapidly increasing during the last decades. The literature, while assuming rather than explicitly supplying an agreed framework for the notion of consumer empowerment (Shaw, Brailsford, 2006), emphasises the connections with skills, competences, rights and the abilities of the consumer on one hand, and with greater choice on the other (Hunter, Harrison and Waite, 2006). Below we offer a brief (and necessarily incomplete) excursus into the literature on consumer empowerment leaving for Appendix 3 a discussion on the general notion of empowerment. A brief section on the operational definition of consumer empowerment concludes.

2.1 Consumer empowerment and markets

Social psychology and marketing literature are the main sources for the definition of consumer empowerment, both referring to the strategic role of consumers vis à vis of producers and to the role of information as an empowerment source.

In sociology Denegri-Knott, Zwick and Schroeder (2006) map the research on consumer empowerment presenting three dominant explanatory models: consumer sovereignty, cultural power and discursive power.

Under consumer sovereignty a consumer is empowered *when he or she is free to act as rational and self-interested agent. [...] consumers combine resources and skills to make producers do what they would not do otherwise…* (Denegri et all, 2006, page 963). Consumers' choices are thus positive instruments to direct and to correct the market, *which results in more efficient production, better and cheaper products, social progress, and increased general welfare (ibid.*

page 955). An important feature of this approach is the relationship between consumer empowerment and strategic behaviours. Following the game theoretic idea of a zero-sum game, power is distributed among the 'players' of the market, where gains on one side consist in detriment for the opposite part: the measure of empowerment is a 'function of assessing who influences whom more'. In this literature, empowerment has a long tradition, dating back to Adam Smith's *invisible hand* theory (The Wealth of Nations, 1776). Offsprings of the sovereignty model relate empowerment to the level of consumers' ability, skills, knowledge, motivations (Nelson, 2002; Pitt et all., 2002, Sirgy and Su, 2000); or relate empowerment to actions in defence of consumers rights: class actions, boycott, movements against specific producers (Friedman, 1996; Garret, 1987; Gueterbock, 2004).

In the cultural model the market is a place of conflict between consumers and producers where the later try to condition and control consumers' choices. Consumer empowerment resides not in the simple capability to stand firm against these manoeuvring, but it implies a strategic behaviour, tactics to react to buyers' actions and *motivations and processes whereby communities of various form resist and attempt to distinguish them from markets* (Kozinets 2002, page 23 but also Kozinets et al., 2004). In this context quantitative studies to measure empowerment are less common, and cultural consumer power appears more connected to ethnographic and phenomenological research, often based on direct evidence, observation and interviews.

Finally, the discursive model recognises a positive role to the interaction between consumers and marketers, who are co-responsible of the market definition (Denegri-Knott, 2004; Hodgson, 2000; Holt, 2002). Here empowerment is *the ability to construct discourse as a system* [...] *determine(s) what is true or false* [...] *the ability to the consumer to mobilize discursive strategies to determine what can know and what actions can be undertaken...* (Denegri et all, 2006, page 956). Researches in this field are interested in social, economic and juridical differences, cultures, and knowledge variety as drivers of empowerment or disempowerment. Added value of this literature is the identification of the internalised norms, codes, and rules, which represent the 'normal' consumer engagement.

The notion of consumer empowerment is also used in the marketing literature (Hunter and Garnefeld, 2008) to indicate both a subjective state/experience related to an increase in abilities (Wathieu et al., 2002) or an objective condition related to greater information or understanding (Brennan and Ritters, 2004; Rust and Olive, 1994). In this latter a wider choice, easier information access, and more generally higher education are the premises to empowerment and have, as consequence, grater consumer involvement. Wathieu et al. (2002) connect empowerment to consumer outcomes, and in particular, satisfaction. Does a grater empowerment imply higher satisfaction? The evidence is mixed: Goldsmith, 2005; Henry, 2005; Pitt et al, 2002 show that consumer empowerment is indeed an advantage for consumers while Dhar, 1997, suggests the risks connected to a more complex market and a greater choice that could generate increasing

introspection and judgement efforts (Brennan, 2005; Wilson et al., 1993) as well as the increased costs in terms of time necessary to make decisions (MacStavic, 2000).

Conger and Kanungo, 1988 in their definition of (individual) consumer empowerment as an enabling process highlight (among other aspects) two crucial aspects of information as enabler of empowerment: *source credibility* and *information framing* (referring to the positive or negative context of the message to consumers).

Pires et al. (2006), in the field of ICT, describe the transfer of power from the historical gatekeeper of the market, the suppliers, to the consumers, new holders, or co-holders, of such a power, thanks to greater availability and sophistication of choices. Consumer empowerment is not considered as the antithetic face of producers defeat in the market-game. On the contrary suppliers' strategies are a way to 'regain control over marketing process, that is, to manage the technological empowerment of consumers'. In this view, consumer empowerment appears as profitable for the market on both the buyer and the producer side.

Finally Len Tiu Wright, presenting a special issue on consumer empowerment in 2006, suggests that empowerment, and its experience, produces changes in consumers, *who become less passive consumers in accepting whatever is offered by suppliers*. She defines consumer empowerment, in marketing, as *a mental state usually accompanied by a physical act which enables a consumer or a group of consumers to put into effect their own choices through demonstrating their needs, wants and demands in their decision-making with other individuals or organisational bodies in the marketplace*. Consumer empowerment is *intrinsically peculiar to the individual consumer psyche*, […] but it has *a beneficial effect in the short and long term of leading to improved business results* (Wright et al., 2006, page 926). The management efforts to enhance market environments are considered by the authors as products of consumer empowerment, in contrast with the more traditional visions based on exploiting and manipulating by the firms. According to this view "ignorance" is the real danger.

2.2   Consumer empowerment: towards an operational definition

In the surveyed literature reported so far consumer empowerment remained an 'abstract' notion, lacking both a formally agreed definition and an operational specification of parameters that would allow us to measure it (also see *Benchmarking the performance of the UK framework supporting consumer empowerment*, 2008). It is clear that skills, competences, rights, information, consumer involvement should be part of this operational definition. More difficult is to specify and measure the capacity of the market to provide legal and practical devices to protect consumers.

According to the EU Consumer Policy Strategy 2007-2013[3], empowered consumers need *real choices, accurate information, market transparency and the confidence that comes from effective protection and solid rights* (page 5). Moreover, it is recognised as a major objective that of ensuring *the effective application of the rules notably through enforcement cooperation, information, education and redness* (page 6). The concept of consumer empowerment seems therefore to build on knowledge, skills and assertiveness, while it is accepted that it can derive from different sources, including consumer education, valuable information, and institutional regulations.

In particular the following elements seem to be important for a definition of empowerment:

- consumers should be aware of their decisions when buying (e.g. terms and conditions, comparing prices, products' labels);

- consumers should be able to get information on their rights;

- consumers should have access to advocacy and redress mechanisms.

These three elements are those surveyed by Eurobarometer and captured in the Consumer Empowerment Index.

To the extent that consumer empowerment is outcome driven, the public authority ought to be capable of identifying features of the market which impede the realisation of consumer benefits or cause consumer detriment, and put in place the necessary tools to deal with such problems: e*mpowered consumers are thus capable of making informed choices, which in turn requires a consumer empowerment regime to put in place the tools for consumers to secure the best possible outcome for themselves […]* (Benchmarking the UK Framework Supporting Consumer Empowerment, page 30).

2.3 The Consumer Empowerment Index and its components

The Consumer Empowerment Index is a composite measure constructed from a set of 56,470 individual data gathered from the Special Eurobarometer n°342. The structure of the Index is reported in Figure 1. We consider 22 indicators grouped in 3 main dimensions of empowerment: (1) *Consumer skills*, (2) *Awareness of legislation on consumer rights* and (3) *Consumer engagement*. The index has a pyramid structure: the Index is the weighted average of three pillars (Skills, Awareness and Engagement). Each pillar is the weighted average of a variable number of sub-pillars and finally each sub-pillar is made by various indicators constructed from the survey questions. Weights are either decided by the experts of DG Health & Consumers or obtained via the Consumer Market Expert group (see section 5.1).

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[3]COMMUNICATION FROM THE COMMISSION – EU Consumer Policy strategy 2007-2013 - 'Empowering consumers, enhancing their welfare, effectively protecting them' COM(2007) 99.

The first pillar measuring *Consumers Skills* uses 6 questions divided into 2 sub-pillars: *Basic Skills* and *Logos and Labels*. The pillar aims at measuring the ability to perform basic arithmetic operations deemed necessary for consumers to make informed purchase decisions. It includes basic financial skills as the capacity to identify the best interest rate for a saving or deposit account, or the calculation of a yearly interest on a loan as well as the consumers ability to interpret packaging information (nutritional or "best before" dates). The correct identification and interpretation of various commonly used EU logos related to consumer information and protection is also included in this pillar.

The pillar *Awareness of consumer legislation* gathers together 7 indicators grouped in 3 sub-pillars: *Unfair practices*, *Cooling off period*, and *Guaranteed period*. The pillar describes the actual knowledge of consumers of several pieces of EU consumer legislation related to unfair commercial practices, length of guarantee rights validity, cooling-off period in distance or doorstep selling.

Figure 1. Framework and weights of the Consumer Empowerment Index (the budget allocation weights for the three pillars are detailed in Table 6)

Pillar	Sub-pillar	Indicator
Consumer Skills	Basic skills (0.5)	QA42: Recognize cheaper product (0.25)
		QA43: Find the best interest rate (0.3)
		QA44: Calculate the interest on a loan (0.45)
	Capacity to read logos /labels (0.5)	QA45: Correct interpretation of "grams of fat" (0.2)
		QA46: Find expiring date for a product (0.3)
		QA47(b): Recognize correctly logos (0.5)
Awareness of consumer legislation	Unfair commercial practices (0.4)	QA8: Rule for illegal advertisement (0.33)
		QA11: Rule for gifts received by post (0.33)
		QA13: Rule for advertising prices (air tickets) (0.33)
	Cooling-off period after purchase (0.4)	QA6: Rule for money back guarantee (0.33)
		QA9: Rule for the purchase of car insurance (0.33)
		QA10: Rule for door-to-door sales (0.33)
	Guaranteed period (0.2)	QA7: Rule for commercial guarantees
Consumer engagement	Comparing products (0.2)	QA17: Comparisons when purchasing a good (0.5)
		QA18: Actual behavior in comparing products (0.5)
	Reading terms and conditions (0.2)	QA14-15: Reading terms and conditions
	Interest in consumer Information (0.2)	QA16: Knowledge of consumer organizations (0.33)
		QA40: Knowledge of programs related to consumer rights (0.33)
		QA41: Actual behavior in obtaining info on consumer rights (0.33)
	Tendency to talk (0.2)	QA25: Tendency to communicate negative experiences (0.5)
		QA26: Tendency to communicate positive experiences (0.5)
	Detriment and redress (0.2)	Combination of the questions QA27, QA28, QA31, QA36, and QA37: actual behavior when experimenting problems for which there is a legitimate cause for complaint

Consumer engagement is the most heterogeneous pillar as it refers to many different aspects of consumer behaviour. The *Attitude in comparing products* (2 indicators) aims at measuring the effort consumers make in obtaining information on products. Reading specialized consumer magazines, using internet, visit different shops, or just talking with friends and family are some of the available options. This sub-pillar also includes the consumer attention to price differences. The sub-pillar *Consumers habits when reading terms and conditions* (2 questions combined in one indicator) aims at capturing consumers' behaviour when signing contracts: do they read carefully and completely terms and conditions? If not, why?

The sub-pillar *Interest in obtaining information on consumer rights* (3 indicators) measures the pro-active attitude of consumers when looking for information on their rights or when following specialized TV (radio) programmes. It also includes the knowledge of organizations protecting consumer rights. The sub-pillar *Tendency to talk* (2 indicators) aims at capturing consumer attitude to talk about negative and/or positive experiences. This is the only aspect of consumer empowerment we could not extensively survey in the literature. Finally the sub-pillar *Detriment and redress* is related to consumers' attitude when experiencing a problem causing a legitimate case for complaint. This was the most difficult sub-pillar to construct, due to the structure of filtered questions (see Appendix 1 for details). Finally we have chosen to combine 5 questions describing the actions taken by consumer when experiencing problems.

The attribution of numerical scores to each question has been done in tight collaboration with DG Health & Consumers. All the details of the construction of the indicators starting from the survey questionnaire can be found in Appendix 1.

3. The dataset

The Special Eurobarometer n°342 contains about 70 questions on Consumer empowerment and on the socio-economic characteristics of the respondents. The questionnaire has been administered to 56471 respondents in 29 countries (EU 27 member states plus Iceland and Norway) through face-to-face interviews.

The data were collected over two waves: the first wave was held from 26 February to 17 March 2010 and involved 28.304 consumers; the second wave took place from 12 March to 1 April 2010 and covered of 28.167 consumers.

From the complete questionnaire we chose 27 questions to compile 22 indicators measuring different aspects of consumer empowerment. The remaining questions were discarded mainly for three reasons:

1. when it was impossible to relate the question to a measure of empowerment (e.g. QA12: have you personally brought airline tickets over the last 12 months? Or QA23: Over the past 12 months did you buy or order any good or service over the internet?);

2. when the question depended on the use/not use of internet. For example QA21 and QA22: did you red the conditions when you purchased a good or a service over the internet? If not, why? The answer of this question depended on the use of Internet. More than 1/3 of the sample (those not using internet) could not answer, so the inclusion of this question in the Index would have implied discarding a substantial part of the sample.

3. when the questions were related to the socio-economic background of respondent.

To take into account the information contained in these questions (especially for cases 2 and 3) we extracted sub-samples of respondents, those possessing the desired characteristics, e.g. education, age, use of Internet, etc., and we calculated the Index evaluating the differences in scores and ranks with respect to the full sample.

Original questions were all in an ordinal scale[4], most of them dichotomous[5]. Some questions implied a multiple choice and some others contained filters (e.g. if the respondent answers category 1 and 6 in question X, then he/she is interviewed in question Y, if the respondent answers category 2,3,4, 5 in question X then he/she is interviewed in questions Z). Whenever possible we combined the filtered questions to construct a unique indicator able to resume all available options. This happened for QA14 and QA15 and for QA27, 28, 31, 36, 37. Together with DG Health & Consumer, we assigned scores to each question. Scores vary within [0, 10] with 10 associated to the correct answer and 0 associated to the wrong answer. The details of the codification of questions are in Appendix 1.

In the Eurobarometer survey the sample design used in each country was not able to give all the individuals in the population aged 15 and above precisely the same chance of selection (all surveys share this problem). Therefore raw data had to be corrected to avoid under or over representation of certain group of respondents, e.g. retired people, male/female, respondents living in cities or in the countryside, etc. The company conducting the survey provided a set of design weights to correct for the different probabilities of selection. This set of <u>individual</u> design weights therefore theoretically corrects each country sample for the following features: (i) stratification of the sample with respect to the reference population

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[4] Usually allowing answers of type: High, Medium, Low.
[5] Dichotomous data are data from outcomes that can be divided into two categories (e.g. female/male, yes/no), where each participant must be in one or other category, and cannot be in both.

(the population aged 15 and over) in terms of age and gender; (ii) sample characteristics in terms of geographical location of the respondents.

It was not clear to which extent the design weights supplied corrected for the population size in order to make European countries comparable. Lacking this information, we opted for not adding any other design weight to our figures to correct for the representativeness of each country in Europe. European Average is thus calculated as the simple arithmetic average of the values by country (themselves calculated starting from raw figures weighted with design weights).

Notice that the design weights should not be confused with the set of weights attached to each indicator to obtain the composite. The first set of weights corrects a biased sample, whereas the second set is a measure of the importance (or trade-off) of each indicator in the composite and will be discussed in the following sections.

After applying the design weights to the dataset raw data were no longer distributed between 0 and 10 so we had to rescale the sample. We used the max-min scaling (i.e. for each question and each individual score we subtracted the sample minimum and divided by the sample range). Notice that the min and the max used were those of the whole dataset (and not the min and max of each country). This is to avoid equating average respondents in poorly scoring countries with exceptionally highly scoring respondents in virtuous countries. The dataset so normalised had all individual scores ranging from 0 to 100. Each country score has been calculated taking the sample average of all country's individual values. Sample average has been preferred to the median (or to other measures of central tendency) because it rewards higher performances.

4. Statistical dimensionality of the framework

As explained by the OECD-JRC handbook on constructing composite indicators (OECD-JRC 2008[6]), there exists an "ideal sequence" of steps to construct a composite indicator, from the development of a theoretical framework to the analysis of detailed data, once the indicator is built.

A preliminary univariate and multivariate analysis is the first step in assessing the suitability of the dataset and it is useful to understand the implications on ranks and scores of the methodological choices, e.g. weighting and aggregation, used during the construction of the composite indicator. In particular

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[6] See http://composite-indicators.jrc.ec.europa.eu/

univariate analysis allows the assessment of each indicator with respect to e.g. missing data, outliers, the presence of skewness and kurtosis. This statistical check aims at finding anomalies in indicators that could influence the analysis (like the presence of outliers that could bias calculations). Multivariate analysis (and especially Principal Component Analysis) helps the analyst to decide whether the nested structure of the composite indicator is well-defined and if the set of available individual indicators is appropriate to describe the phenomenon.

This section presents the results of the univariate analysis and of the principal component analysis conducted to attest the validity of the structure (pillars, sub-pillars and indicator-association). Further details are in Appendix 1.

4.1   Univariate analysis

Univariate analysis is essentially carried out to discover anomalous pattern in each indicator. In this dataset missing data are not an issue since missingness is related to the nested structure of the questionnaire.

In the Index 13 out of 22 indicators are dichotomous and assume values 0 or 10, this generates in most of the cases skewed distributions highly concentrated either towards ten or zero. In the pillar Skills the indicators (all dichotomous but one) assume value 10 (the maximum value) for more than 81% of the observations in the sample. Questions QA9 and QA41 are equal to zero in 75% and 87% of the cases respectively and QA8 is equal to ten in 75% of cases. Questions QA42, QA43 and QA46 are equal to ten in above 80% of the cases (the high concentration of the values is reflected by the low standard deviation and coefficient of variation). This raises some concerns on the informative power of these indicators and, as consequence, on the low range of variability for the composite. Appendix 1 shows the plots of all indicators.

The distribution of the indicators is non-homogenous across countries. In the pillar Skills Bulgaria behaves differently with respect to the other countries in question QA47B. Peculiar behaviour is found in Poland (QA46), Portugal (QA44), Romania (QA44 and 47B) and Spain (QA45). In the Pillar Awareness strongly peculiar distributions have not been detected, while in the pillar Engagement Norway and Iceland shows a different behaviour in QA25 like Poland and The Netherlands in question QA26. The distribution of each indicator in each country can be found in Appendix 1.

4.2 Multivariate analysis

Multivariate analysis, and in particular Principal Components Analysis is used to compare the theoretical framework with the statistical "framework" emerging in the dataset analysed.

Table 1. Spearman correlation at the individual level (data multiplied by design weights)

Skills	QA42	QA43	QA44	QA45	QA46	QA47
QA42	1	0.583	0.417	0.426	0.585	0.431
QA43	0.583	1	0.406	0.391	0.553	0.390
QA44	0.417	0.406	1	0.339	0.363	0.378
QA45	0.426	0.391	0.339	1	0.528	0.399
QA46	0.585	0.553	0.363	0.528	1	0.440
QA47	0.431	0.390	0.378	0.399	0.440	1

Awareness	QA8	QA11	QA13	QA6	QA9	QA10	QA7
QA8	1	0.135	0.291	0.238	0.046	0.090	0.150
QA11	0.135	1	0.089	0.138	0.121	0.096	0.081
QA13	0.291	0.089	1	0.204	0.029	0.072	0.117
QA6	0.238	0.138	0.204	1	0.175	0.327	0.248
QA9	0.046	0.121	0.029	0.175	1	0.245	0.107
QA10	0.090	0.096	0.072	0.327	0.245	1	0.179
QA7	0.150	0.081	0.117	0.248	0.107	0.179	1

Engagement	QA17	QA18	QA14_15	QA16	QA40	QA41	QA25	QA26	QA_ALL
QA17	1	0.321	0.215	0.303	0.198	0.120	0.226	0.257	0.187
QA18	0.321	1	0.201	0.237	0.251	0.141	0.200	0.231	0.161
QA14_15	0.215	0.201	1	0.134	0.132	0.073	0.106	0.107	0.123
QA16	0.303	0.237	0.134	1	0.226	0.158	0.135	0.185	0.153
QA40	0.198	0.251	0.132	0.226	1	0.135	0.148	0.197	0.145
QA41	0.120	0.141	0.073	0.158	0.135	1	0.091	0.112	-0.008
QA25	0.226	0.200	0.106	0.135	0.148	0.091	1	0.612	0.131
QA26	0.257	0.231	0.107	0.185	0.197	0.112	0.612	1	0.166
QA_ALL	0.187	0.161	0.123	0.153	0.145	-0.008	0.131	0.166	1

Red: values not significant at 5%

Principal component analysis (PCA) is a statistical technique that linearly transforms an original set of indicators into a substantially smaller set of uncorrelated factors, the principal components, while retaining as much as possible of the variation present in the dataset.[7] The principal components theoretically portray the latent factors hidden in the dataset. PCA is therefore appropriate in a framework where a composite aims at capturing multidimensional aspects of an undefined concept like consumer empowerment. Ideally a framework is confirmed if the number of latent factors is equal to the number of pillars/sub-pillars of the index. Likewise a pillar/sub-pillar dimension is confirmed if a unique latent dimension is found. In the case of the Consumer Empowerment Index we could not perform this latter analysis because sub-pillars do not contain enough indicators; we conducted a PCA on the whole set of indicators and on the pillars using the standard correlation matrices on the dataset weighted with design weights.

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[7] A description of PCA can be found in J, E., Jackson (2003), *A user's guide to principal Components, Wiley series in probability and statistics*, John Wiley & Sons, Hoboken, New Jersey. See also Joliffe, I.T., (2002). *Principal Component Analysis (2nd edition)*. New York: Springer-Verlag.

Before using individual data to perform the PCA we checked for the existence of linear correlation at the individual level (i.e. using individual data, see Table 1). The Spearman rank correlations of the whole dataset are all significant at the 5% level except few cases (QA-all with QA41 and QA14-15 with QA9). Yet, the correlations are low (below 0.33) especially within the pillars Awareness and Engagement, negatively influencing the results of the PCA.

The analysis has been performed also on the whole dataset and at the pillar level for raw data without design weights with the aim of assessing the impact of the weighting design on the latent dimensions of the Index.

a. Whole dataset

The principal component analysis on the data without design weights (henceforth raw data) reveals the presence of 7 relevant factors explaining only 47.4% of the variance of the dataset.[8] Ideally, therefore, PCA identifies 7 latent dimensions whereas CEI counts 3 pillars and 10 sub-pillars. The low percentage of the variance explained (due to the low overall correlation of the dataset) explains the low performance of PCA. The first factor alone accounts for 13.9% of the total variance while the remaining factors explain between 6.9% (second component) and 4.4% (seventh component) of the total variance (Figure 2.a).

The same analysis repeated on the data multiplied by design weights reveals the existence of 5 relevant factors accounting for 47.36% of the variance of the dataset. The application of the design weights, while marginally changing the number of factor (all explaining a low percentage of variance) improves the relevance of the remaining ones, especially the first factor that now accounts for 26.1% of the total variance. The remaining factors explain between 6.1% (second component) and 4.8% (fifth component) of the total variance (Figure 2.b).

The inspection of the loading factors (Table 2)[9] reveals that, independently of the dataset used (with or without design weights), the indicators have significant and autonomous explanation power: although the signs of the loadings corresponding to the first component (that is the component accounting for most of the variance) are the same for all the indicators, confirming that indicators correlate in the same direction with the most important latent dimension. The loadings are low, especially for QA14-15, reflecting the low correlation within the dataset, so the PCA is not decisive to infer the structure of the whole CEI.

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8 Following Kaiser (1960), a principal component is considered relevant when its eigenvalue is superior or equal to 1.

Figure 2. Whole dataset: scree-plot of the principal components

2.a) Data without design weights
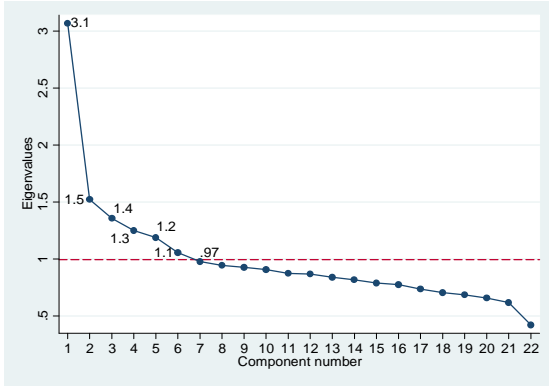
2.b) Data multiplied by design weights
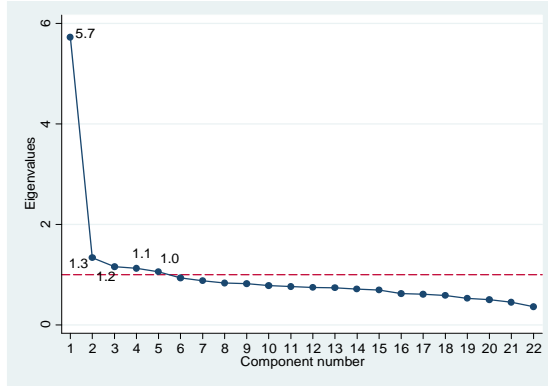
Table 2. Whole dataset: loadings of the principal components

2.a) Data without design weights

	Comp1	Comp2	Comp3	Comp4	Comp5	Comp6	Comp7
QA42	0.27	-0.08	-0.27	0.04	0.11	0.18	-0.17
QA43	0.23	-0.04	-0.24	-0.02	0.20	0.21	-0.29
QA44	0.30	-0.13	-0.21	0.10	-0.03	0.17	-0.20
QA45	0.29	-0.02	-0.35	0.02	-0.10	-0.17	0.34
QA46	0.26	0.02	-0.35	0.04	-0.01	-0.25	0.44
QA47B	0.35	-0.03	-0.17	0.03	-0.05	0.02	0.07
QA8	0.06	0.04	0.19	-0.01	0.50	0.34	0.28
QA11	0.13	-0.16	0.06	-0.06	-0.07	0.52	-0.05
QA13	0.11	0.03	0.06	0.04	0.50	0.14	0.25
QA6	0.26	-0.20	0.22	-0.28	0.04	-0.18	0.05
QA9	0.17	-0.26	0.22	-0.30	-0.15	0.04	-0.06
QA10	0.22	-0.27	0.26	-0.32	-0.10	-0.16	-0.07
QA7	0.17	-0.17	0.29	-0.14	0.10	-0.15	0.27
QA17	0.23	0.09	0.12	0.26	-0.18	-0.11	-0.18
QA18	0.18	0.11	0.27	0.33	0.05	0.01	-0.07
QA14_15	0.05	0.07	0.17	0.41	0.18	-0.33	-0.03
QA16	0.25	-0.09	0.10	0.27	-0.22	0.05	-0.12
QA40	0.19	0.08	0.26	0.21	0.12	-0.01	-0.10
QA41	0.16	0.08	0.25	0.23	-0.29	0.13	0.26
QA25	0.17	0.61	0.04	-0.30	-0.06	0.02	-0.07
QA26	0.23	0.56	0.07	-0.28	-0.03	-0.01	-0.07
QA_27_ALL	0.11	-0.08	-0.08	-0.08	0.41	-0.42	-0.41

2.b) Data multiplied by design weights

	Comp1	Comp2	Comp3	Comp4	Comp5
QA42	0.29	-0.01	-0.20	-0.04	-0.12
QA43	0.27	-0.01	-0.22	-0.04	-0.08
QA44	0.24	0.10	-0.14	-0.04	-0.31
QA45	0.25	-0.02	-0.19	-0.15	-0.25
QA46	0.29	-0.07	-0.20	-0.05	-0.12
QA47B	0.29	0.01	-0.08	-0.08	-0.20
QA8	0.18	-0.06	-0.14	0.18	0.35
QA11	0.14	0.21	0.00	-0.09	-0.13
QA13	0.17	-0.07	-0.22	0.19	0.30
QA6	0.23	0.26	0.09	-0.11	0.23
QA9	0.13	0.40	0.20	-0.23	0.15
QA10	0.18	0.39	0.20	-0.20	0.22
QA7	0.16	0.26	0.15	0.08	0.31
QA17	0.24	-0.07	0.12	0.13	-0.13
QA18	0.23	-0.08	0.14	0.27	0.03
QA14_15	0.11	-0.11	0.01	0.56	0.11
QA16	0.21	0.13	0.17	0.18	-0.29
QA40	0.19	-0.04	0.19	0.27	0.07
QA41	0.12	-0.03	0.53	0.21	-0.26
QA25	0.21	-0.49	0.23	-0.34	0.17
QA26	0.23	-0.44	0.23	-0.31	0.19
QA_27_ALL	0.17	0.02	-0.37	0.05	0.26

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[9] A factor loading is the correlation coefficient between the indicator and the factor. The squared factor loading is the percent of variance (i.e. information) in that indicator explained by the factor.

b. Pillar-level analysis

Consumer skills

The pillar Consumer Skills displays an acceptable level of correlation (Table 1). This is reflected in the results of the principal component analysis conducted on the raw data. PCA suggests the existence of 2 relevant factors explaining respectively 35.8% and 16.5% (in total the 52.2%) of the variance of the dataset. Given that this pillar is composed by 2 sub-pillars the finding seems to confirm the framework of the index. Design weights, however, induce some manipulation in the dataset; the PCA on the data multiplied by design weights, in fact, indicates the presence of only one principal component explaining 51.9% of the variance (Figure 3).

The loading factors between the indicators and the first principal component have the same signs in both datasets confirming that these indicators correlate in the same direction with the most important latent factor (Table 3). A perfect matching between the statistical and the theoretical frameworks would entail the two components loading principally the respective indicators (QA42,43,44 in the first and the rest in the second). This is partially the case. Table 3a shows that indicators QA43 (belonging to the Basic skills sub-pillar) and QA46 (covered by the Logos and labels sub-pillar) loads with the same principal component suggesting that they explain the same latent characteristic of consumer empowerment. Furthermore, this table displays a good correlation between the question QA47 and the first principal component. Finally, the same analysis on the weighted data, could be an argument for not breaking this pillar down into sub-pillars (Table 3b). Overall the statistical analysis confirms the structure of this pillar for the raw data. Results for data with design weights are less clear pointing to the existence of a unique relevant latent dimension.

Figure 3. *Consumer Skills*: Scree-plot of the principal components

3.a) Data without design weights
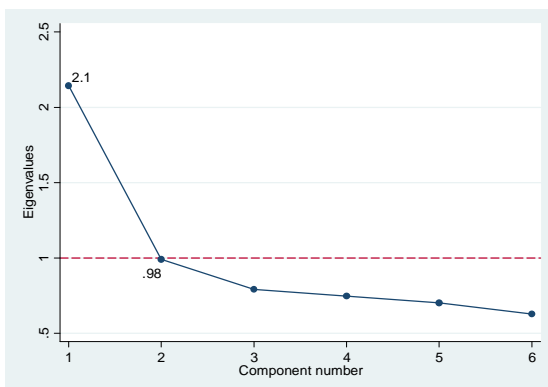
3.b) Data multiplied by design weights
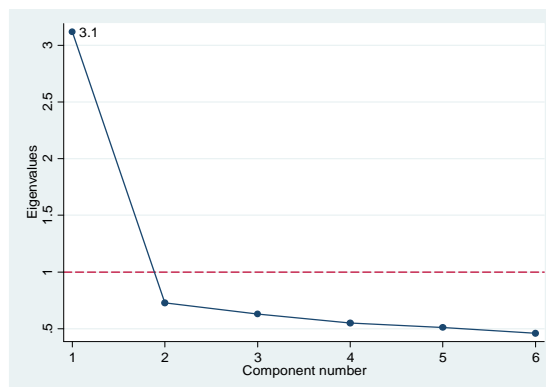
Table 3. *Consumer skills*: loadings of the principal components

3.a) Data without design weights

	Comp1	Comp2
QA42	0.40	0.37
QA43	0.35	0.51
QA44	0.42	0.29
QA45	0.44	-0.46
QA46	0.40	-0.56
QA47B	0.44	-0.04

3.b) Data multiplied by design weights

	Comp1
QA42	0.42
QA43	0.40
QA44	0.37
QA45	0.40
QA46	0.43
QA47B	0.42

Awareness of consumer legislation

In this pillar the Spearman correlation at the individual level is much less pronounced. The PCA on the raw data shows a number of principal components – 3 – that is identical to the number of its sub-pillars. The variance explained by this 3 principal components ranges between 23.9% of the first and 14.1% of the third (overall, they account for 53.8% of the total variance). In the case of the weighted data, only two principal components are detected accounting for 44.8% of the total variance (the first explains 29.7% of the variance).

Furthermore, the analysis of the loading factors suggests that the indicator QA11 has an autonomous behaviour, being loaded alone by one factor (Table 4).

All together, these findings highlight that the theoretical framework of the pillar is confirmed with the usual caveats due to design weights presented above

Figure 4. *Awareness of consumer legislation*: scree-plot of the principal components

4.a) Data without design weights

4.b) Data multiplied by design weights

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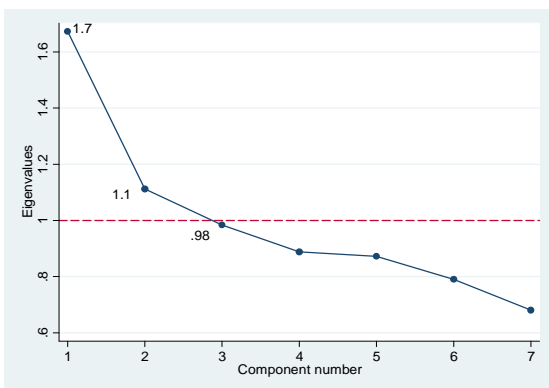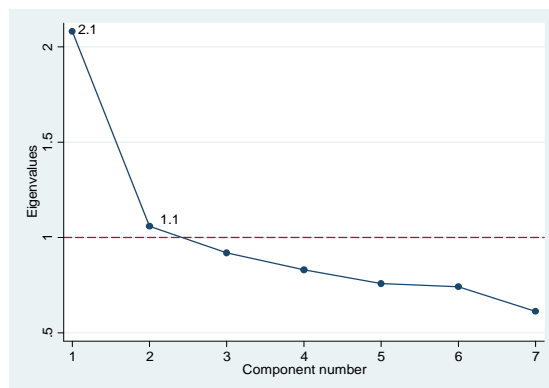
Table 4. *Awareness of consumer legislation*: loadings of the principal components

4.a) Data without design weights

	Comp1	Comp2	Comp3
QA8	0.14	0.67	0.16
QA11	0.25	0.03	0.84
QA13	0.15	0.66	-0.12
QA6	0.52	-0.04	-0.23
QA9	0.44	-0.23	0.25
QA10	0.52	-0.22	-0.13
QA7	0.39	0.09	-0.35

4.b) Data multiplied by design weights

	Comp1	Comp2
QA8	0.34	0.54
QA11	0.30	0.04
QA13	0.31	0.61
QA6	0.49	-0.11
QA9	0.36	-0.43
QA10	0.44	-0.39
QA7	0.37	-0.01

Consumer engagement

The principal component analysis of this pillar detects 4 relevant factors (this pillar has 5 sub-pillars in the CEI) in the raw dataset explaining 58.2% of the variance, ranging from 22.9% of the first component to 10.7% of the fourth one. The same technique identifies 3 principal components in the weighted dataset accounting for 53.9% of the variance, ranging between 29.7% of the first component to the 11.3% of the third one (Figure 5).

The indicators QA14-15 and QA27_ALL seem to be stand-alone and are loaded in separate factors (both indicators are constructed starting from filtered questions). The loading factors analysis conducted on both datasets (raw and weighted data), while confirming the aggregation of the indicators QA25 and QA26 into an independent sub-pillar, it suggests some degree of communality between the indicators QA41 (covered by the sub-pillar on Interest in information) and QA27_ALL (the Detriment and redress sub-pillar) into the same sub-pillar (Table 5).

Figure 5. *Consumer engagement*: scree-plot of the principal components

5.a) Data without design weights
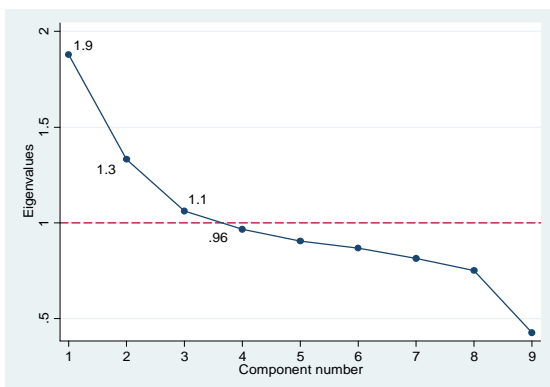
5.b) Data multiplied by design weights
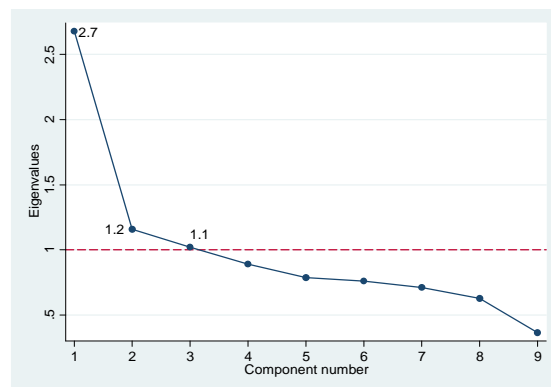
Overall the statistical analysis confirms the framework in the case of raw data. Less in the case of weighted data suggesting a relevant impact of the design weights.

Table 5: *Consumer engagement:* **loadings of the principal components**

5.a) Data without design weights

	Comp1	Comp2	Comp3	Comp4
QA17	0.37	0.26	-0.02	-0.21
QA18	0.33	0.28	0.03	0.24
QA14_15	0.14	0.29	0.27	0.78
QA16	0.30	0.37	-0.10	-0.45
QA40	0.32	0.24	0.14	-0.07
QA41	0.29	0.22	-0.47	0.06
QA25	0.45	-0.54	0.00	0.09
QA26	0.50	-0.48	0.05	0.01
QA_27_ALL	0.07	0.06	0.82	-0.28

5.b) Data multiplied by design weights

	Comp1	Comp2	Comp3
QA17	0.40	0.15	0.01
QA18	0.38	0.20	0.01
QA14_15	0.21	0.35	0.22
QA16	0.33	0.32	-0.14
QA40	0.33	0.21	-0.02
QA41	0.24	0.18	-0.66
QA25	0.39	-0.59	-0.03
QA26	0.42	-0.53	0.00
QA_27_ALL	0.23	0.10	0.70

5. The Consumer Empowerment Index

5.1 A set of weights for the Index

Central to the construction of a composite index is the need to combine in a meaningful way different dimensions measured on different scales. This implies a decision on which weighting model will be used and which procedure will be applied to aggregate the information. Weights should ideally be selected according to an underlying and agreed, or at least clearly stated, theoretical framework. Weighting imply a "subjective" evaluation, which is particularly delicate in case of complex, interrelated and multidimensional phenomena. The menu of weighting methods is rather large and increasing with the creativity of the practitioners. Ideally, weights should reflect the contribution of each indicator to the overall composite. Different weights may be assigned to component series in order to reflect their economic significance (collection costs, coverage, reliability and economic reason), statistical adequacy, cyclical conformity, speed of available data, etc.

Most composite indicators rely on equal weighting, i.e., all indicators are given the same weight. This could correspond to the case in which all indicators are "worth" the same in the composite. Statistical models such as *principal components analysis* or *factor analysis* (Nicoletti et al., 2000) or *benefit of the doubt* (Melyn and Mosen, 1991, and Cherchye et al., 2004) can be used to weight individual indicators. Alternatively, *participatory methods* that incorporate various stakeholders -- experts, citizens and politicians -- can be used to assign weights. This is the way followed in the Consumer Empowerment Index.

We decided in agreement with the DG Health & Consumers to follow a two-step procedure. The set of weights within each pillar (detailed Figure 1), have been chosen by DG Health & Consumers experts. The weights of the main three pillars (Skills, Awareness and Engagement) instead have been elicited using a participatory approach, whereby a group of experts are asked to provide this information. This technique is known as Budget Allocation.[10] By using the Budget Allocation technique we intended to provide a more systematic representation of experts' opinion tempering the temptation of presenting the Index as "objective". The reader should bear in mind that, no matter which method is used, weights are essentially value judgments and have the property to make explicit the objectives underlying the construction of a composite (Jacobs et al., 2004).

To elicit the set of weights used in the CEI, we asked each of the 20 participants of the Consumer Market Expert Group to allocate 100 points to the three dimensions of consumer empowerment. This produced 20 different sets of weights and obliged us to find a measure of central tendency to construct an "official" weight for the CEI (see Table 6). The small sample size suggested the use of the median instead of the average of the 20 sets of values, as it is less sensitive to outliers as compared with other measure of central tendency. In any case the median is very similar to the mean, so similar to produce about the same scores and exactly the same ranks. More interesting is the range of variation of the weights. Provided that no expert gave 0 points to any dimension (Skills, Awareness and Engagement) the minimum weight ranged between 15 and 20 and the maximum between 50 and 60. The implication of this variability will be discussed in the section dedicated to the robustness of the Index, where all the 20 set of weights are used to calculate alternative scores and ranks for the CEI.

Table 6. Weights based on experts' elicitation (0=minimum; 100=maximum)

	Consumer skills	*Awareness of consumer legislation*	*Consumer engagement*
average	32.07	32.72	35.22
median	32	30	34
stdev	9.21	10.78	10.79
min	20	20	15
max	60	60	50

5.2 Overview of the Index: scores and ranks

Table 7 presents the scores and ranks for the Consumer Empowerment Index. Norway leads the group of surveyed countries, followed by Finland and the Netherlands, Germany and Denmark (close together in terms of scores). At the opposite end Romania, Poland, and Bulgaria with a score 31% lower on average. Norway has the best score in the pillars *Consumer skills* and *Awareness of consumer legislation* but occupy the 22nd position in the pillar *Consumer Engagement* due to its poor performance in *Reading terms and conditions* and its below average performance in *Tendency to talk* and *Detriment and redress* (Table 8). Notice however that countries' scores of the pillar *Consumer Engagement* are closer together than those of the remaining two pillars: In the first two pillars the worst three countries have an average score 38% and 40% lower than the upper 5, while this difference is 27% in the third pillar. Being so close, small differences in the score of two countries could result in high differences in their rank.

Furthermore, for all countries, the scores of the first pillar are higher than the scores of the remaining two pillars. This is due to the high scores obtained by all countries in questions QA42, QA43, QA46 (EU27

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average of 22.91, 22.93, and 23.45 respectively, see Table 20 at the end of the document) and the low scores obtained in the questions QA10 and QA16 (EU27 average of 9.76 and 9.61 respectively) but especially in questions QA41 (EU average of 3.37) and QA9 (EU average of 6.01). In all three pillars the range of variability is rather small: countries' scores are concentrated between 8 and 23.

Probably the best way to compare Consumer Empowerment is making 100 the EU27 average and calculating the distance of each country from this average. Figure 6. Consumer Empowerment Index, distance from the EU-27 average presents the results (the corresponding Table 19 is at the end of the document). The best performers have a score up to 20% higher than the EU27 average, while the low performers have up to 26% less. Awareness is the pillar where this gap is higher (reporting up to 42% higher and 37% lower), followed by Skills (reporting up to 25% higher and 33% lower). Engagement is where country performance is more uniform with 15% higher for best performers and 20% lower for low performers.

Table 7. Consumer Empowerment Index. Scores and ranks of the Index and its pillars

	Consumer skills		Awareness of consumer legislation		Consumer engagement		ICE	
	scores	ranks	scores	ranks	scores	ranks	scores	ranks
EU27 average	18.27		13.25		13.45		14.97	
BE	20.23	8	13.52	14	12.16	27	15.25	15
BG	15.03	26	8.64	28	13.59	15	12.52	27
CZ	19.08	17	16.08	4	15.52	1	16.87	7
DK	22.26	3	15.22	5	13.74	13	17.01	5
DE	20.59	7	17.12	2	14.37	8	17.28	4
EE	17.01	21	13.67	11	13.81	11	14.82	18
IE	19.62	11	12.05	25	12.43	23	14.68	19
EL	19.35	13	10.56	27	13.78	12	14.61	20
ES	15.12	25	13.61	12	12.27	26	13.63	24
FR	19.59	12	13.55	13	13.10	17	15.38	14
IT	15.94	23	12.05	24	12.40	24	13.46	25
CY	19.74	10	12.91	20	14.94	3	15.89	10
LV	17.03	20	13.31	15	12.69	20	14.32	21
LT	15.36	24	13.10	18	10.79	29	13.02	26
LU	18.82	18	12.44	23	13.36	16	14.88	17
HU	16.29	22	11.15	26	13.69	14	13.75	22
MT	18.36	19	15.08	6	12.92	18	15.39	13
NL	22.68	2	14.85	7	14.51	7	17.31	3
AT	20.18	9	13.18	17	15.06	2	16.16	8
PL	13.95	28	12.51	22	11.04	28	12.46	28
PT	14.13	27	12.93	19	13.98	9	13.70	23
RO	12.16	29	8.39	29	12.34	25	11.05	29
SI	19.17	15	12.85	21	14.62	5	15.57	12
SK	19.14	16	14.55	9	13.98	10	15.86	11
FI	21.43	5	16.40	3	14.82	4	17.50	2
SE	21.70	4	14.74	8	14.53	6	16.96	6
UK	19.22	14	13.21	16	12.60	21	14.98	16
IS	21.40	6	13.90	10	12.75	19	15.96	9
NO	22.78	1	18.78	1	12.60	22	17.89	1

Figure 6. Consumer Empowerment Index, distance from the EU-27 average
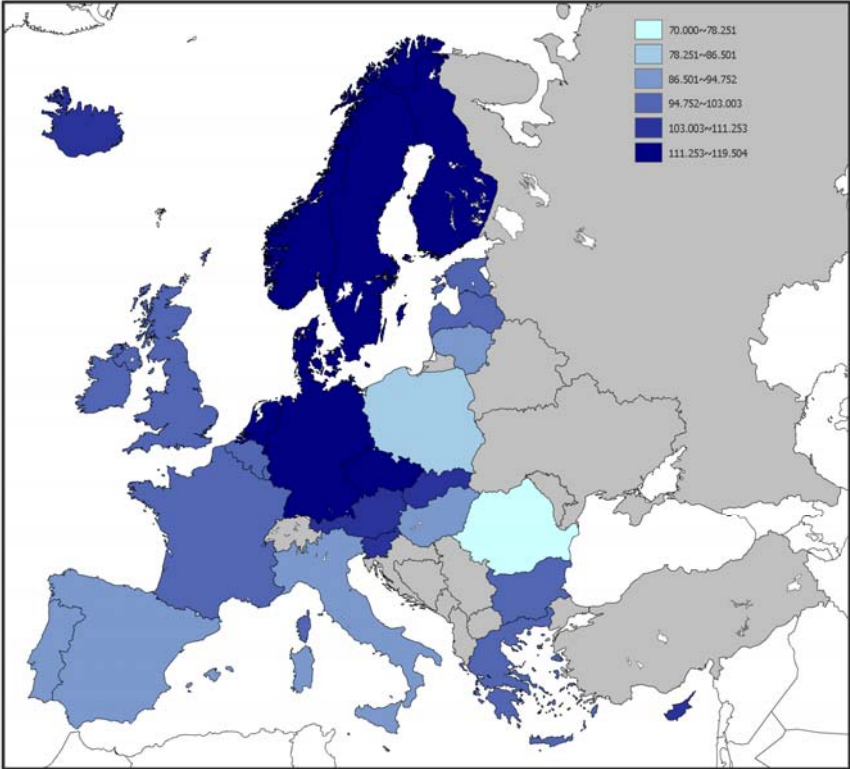
Table 8. Scores for the 10 sub-pillars of the Consumer Empowerment Index

	Basic skills	Logos and labels	Unfair practices	Cooling off	Guaranteed period	Comparing products	Reading terms and conditions	Interest in information	Tendency to talk	Detriment and redress
EU27	**19.72**	**16.81**	**16.55**	**10.85**	**11.42**	**14.44**	**12.39**	**9.36**	**15.18**	**15.86**
BE	21.94	18.52	16.20	11.86	11.46	12.55	10.56	8.88	14.80	14.01
BG	18.66	11.40	15.59	3.58	4.86	13.58	14.89	9.11	16.60	13.77
CZ	21.21	16.95	15.28	13.26	23.30	14.89	16.10	10.93	15.74	19.96
DK	23.49	21.02	16.56	12.43	18.12	15.57	10.47	12.21	15.05	15.41
DE	22.85	18.33	16.68	18.48	15.28	16.05	12.19	10.46	13.66	19.48
EE	16.72	17.31	18.68	9.39	12.18	15.68	14.21	10.38	16.10	12.68
IE	20.26	18.97	14.68	11.19	8.51	11.60	11.12	9.18	13.99	16.24
EL	20.36	18.33	18.51	5.10	5.61	15.24	13.73	7.78	13.50	18.65
ES	16.31	13.92	15.32	11.30	14.80	13.79	9.94	6.10	14.27	17.24
FR	20.15	19.03	15.62	15.38	5.75	13.53	8.87	9.46	17.36	16.30
IT	17.20	14.68	14.85	8.96	12.64	14.07	13.00	8.93	10.39	15.59
CY	22.23	17.25	21.40	5.81	10.14	15.39	14.88	9.79	14.61	20.00
LV	18.32	15.75	18.20	9.44	11.26	14.94	13.87	8.52	15.86	10.25
LT	18.50	12.22	20.00	8.91	7.66	14.53	11.44	7.92	13.49	6.57
LU	19.90	17.74	15.82	8.98	12.59	12.39	11.02	9.04	15.43	18.92
HU	18.42	14.16	14.86	8.81	8.38	15.03	14.97	7.95	15.17	15.32
MT	18.48	18.24	20.32	9.08	16.63	13.00	13.32	8.09	13.39	16.82
NL	24.87	20.49	16.71	14.68	11.46	14.65	9.94	13.07	19.06	15.84
AT	21.09	19.27	14.97	13.44	9.10	15.72	14.46	10.17	17.33	17.64
PL	19.16	8.74	16.22	10.88	8.37	13.02	11.10	7.24	9.83	14.00
PT	14.66	13.60	15.31	9.60	14.80	13.82	12.48	8.24	16.05	19.31
RO	12.44	11.88	13.27	4.22	6.99	14.40	12.72	8.57	15.61	10.42
SI	19.51	18.83	18.16	10.44	7.05	16.57	14.21	8.62	16.89	16.79
SK	20.10	18.19	15.20	11.34	19.67	14.67	14.95	10.62	16.56	13.08
FI	22.49	20.36	19.62	15.44	11.89	16.44	10.63	10.98	17.24	18.81
SE	23.36	20.04	14.38	16.26	12.44	17.15	9.04	11.54	16.15	18.75
UK	19.86	18.59	14.52	14.77	7.51	11.60	10.53	8.82	15.63	16.43
IS	22.91	19.89	18.84	7.10	17.62	15.99	11.85	10.01	11.23	14.66
NO	24.18	21.38	17.79	18.27	21.78	15.67	7.50	14.02	10.84	14.96

5.3 Association of CEI with individual perceptions

The survey questionnaire asks the respondents to express their opinion on whether, as consumers, they feel confident, knowledgeable, and protected. Using a simple correlation coefficient, we compare the scores of Index, pillars and sub-pillars with these perceptions (Table 9). Strong and significant relation is found with all indicators in the pillar Skills. Consumers who feel to be knowledgeable are also those who show higher basic skills and better capacity to read logos and labels. In the pillar Awareness perceptions seem to be related only to the knowledge of correct cooling-off practices when purchasing a good/service. Consumers who feel confident seem not to read completely and carefully terms and conditions when signing contracts, while they seem to be more interested in information on their rights as compared to non empowered consumers. Detriment and redress is not significantly related to the perception of protection

at 5% level but it is at 10% level. Further insights on the relation between reported behaviour and perceptions are in Section 7.8.

Table 9. Correlation between CEI (pillars and sub-pillars) and individual perceptions.

	Confident	Knowledgeable	Protected
Basic skills	0.64	0.69	0.69
Logos and labels	0.66	0.69	0.71
Unfair practices	0.04	0.10	-0.12
Cooling off	0.73	0.72	0.80
Guaranteed period	0.29	0.28	0.40
Comparing products	0.09	0.14	0.13
Reading terms and conditions	-0.64	-0.58	-0.65
Interest in information	0.56	0.60	0.69
Tendency to talk	-0.03	-0.05	-0.04
Detriment and redress	0.15	0.16	0.32
Skills	0.70	0.74	0.75
Awareness	0.66	0.67	0.70
Engagement	0.02	0.06	0.15
CEI	0.66	0.69	0.73

Red: values not significant at 5%

5.4 Influence of the design weights

The Consumer Empowerment Index is in theory distributed between 0 and 100, thus a score of 20 seems rather low. The design weights used to make the sample representative of the whole population aged 15 and above play in this case a fundamental role. Table 10 display the scores of the CEI and its pillars if the design weights are not applied. The difference is considerable: the 42.76% of Romania in Consumers skills becomes 12.16% when design weights are applied; a CEI score of 51 for the UK is worth about 15 with design weights in place. Probably the actual sample over represents elderly respondents: 38% of the sample is over 55 and one out of three is retired (see Appendix 3 for details of age distribution of the sample with respect to the whole population). These categories of respondent have the lowest CEI score which is made even smaller by a low design weight due to over-representation in the sample. We suspect that the correction for the place of residence also plays a relevant role in depressing the scores.

Table 10: Consumer Empowerment Index. Scores of the Index and its pillars when design weights are not applied.

	Consumer skills	Awareness of consumer legislation	Consumer engagement	ICE
	scores	scores	scores	scores
BE	69.41	48.37	39.16	52.02
BG	52.76	30.47	44.41	42.80
CZ	66.54	57.08	49.88	57.63
DK	76.04	54.69	44.51	58.10
DE	70.25	60.22	45.71	58.35
EE	57.74	48.24	44.91	50.19
IE	66.88	42.40	40.30	49.73
EL	66.18	37.41	44.18	49.32
ES	51.12	47.81	39.20	45.83
FR	67.29	48.46	42.43	52.52
IT	55.64	42.96	39.84	46.03
CY	68.11	45.62	47.79	53.82
LV	58.55	46.57	41.31	48.65
LT	53.72	46.46	35.44	44.92
LU	64.46	44.38	42.92	50.49
HU	56.21	39.52	44.19	46.70
MT	60.10	53.49	41.75	51.48
NL	78.07	52.76	46.99	59.05
AT	70.17	46.51	48.41	54.99
PL	46.76	43.53	35.07	41.58
PT	47.64	45.28	44.56	45.80
RO	42.76	29.67	40.42	37.83
SI	65.07	45.14	46.87	52.34
SK	66.83	52.10	45.84	54.73
FI	70.69	58.04	47.60	58.49
SE	74.71	52.70	47.05	57.95
UK	65.83	47.18	40.39	50.91
IS	73.29	49.21	41.09	54.26
NO	78.43	67.92	40.58	61.63

Another option in order to verify the influence of design weights is to compare directly the survey indicators. In particular we averaged all individuals in each country in order to find 29 country values for each of the 22 indicators used in the composite. We made these calculations in two datasets: one weighted with design weights and the other un-weighted. Since weights change the range of variability for the figures in the dataset we could not compare "values" but just ranks (comparing values would have implied a further step of transformation to unify ranges). For each indicator the rank across countries was calculated. The result is a matrix with 22 columns (the number of indicators used) and 29 rows (the number of countries participating to the survey) where entry ji is the rank of country j in the indicator i. The same was done using weighed-data, the absolute value of the differences in ranks is in Table 11.

Table 11. Average rank difference (in absolute terms) between weighted and non-weighted data

Change in rank (in absolute value) with respect to the unweighted dataset					
Country	average	st.dev	Indicator	average	st.dev
BE	0.59	0.79	QA42	0.55	0.87
BG	0.41	0.57	QA43	0.62	0.82
CZ	0.32	0.43	QA44	0.62	0.73
DK	0.82	0.92	QA45	0.55	**1.09**
DE	0.73	0.78	QA46	**1.10**	**1.32**
EE	0.68	0.71	QA47	**1.03**	**1.24**
IE	0.45	0.80	QA8	0.52	0.57
EL	0.32	0.65	QA11	0.55	0.74
ES	0.41	0.58	QA13	0.52	0.69
FR	0.45	0.56	QA6	0.31	0.54
IT	0.45	0.73	QA9	0.45	0.57
CY	0.27	0.45	QA10	0.14	0.35
LV	0.50	0.58	QA7	0.31	0.47
LT	0.32	0.56	QA17	0.38	0.62
LU	0.50	0.66	QA18	0.55	0.91
HU	0.50	0.58	QA14_15	0.59	0.87
MT	**1.23**	1.59	QA16	0.28	0.59
NL	0.36	0.65	QA40	0.72	0.80
AT	0.68	1.10	QA41	**1.03**	**1.24**
PL	0.82	0.85	QA25	0.72	**1.07**
PT	0.55	0.65	QA26	0.59	0.73
RO	0.18	0.40	QA_ALL	0.62	0.62
SI	0.59	0.71			
SK	**1.14**	1.25			
FI	**1.45**	1.28			
SE	0.86	1.02			
UK	0.45	0.48			
IS	0.45	0.46			
NO	0.32	0.72			

Overall, it seems that the design weights have a substantial impact on the absolute values of the scores but they do not alter in a significant way the relative performance of countries. The countries mostly affected are Finland, Malta and the Slovak Republic but on average less than 2 positions. Looking at the single indicators those belonging to the sub-pillar *Logo and Labels* are the mostly affected. Interestingly these indicators are not those suggested as "critical" by the correlation analysis (with the exception of QA25).

5.6   Association between the Index and its components

While in a composite is rather normal to have little (but positive) associations between pillars (pillars ideally describe different aspects of the underlined latent dimension the composite aims to capture), one would expect a certain degree of correlation between the indicators of the same pillar.[11] When this happens we could talk about a common "direction" for the indicators in the pillar. Problems could arise when the association is negative. In this case the negative sign could be the symptom of a trade-off between the indicators that aggregation dilutes. We calculate correlation both using the sample of individual answers and the sample of scores aggregated at the national level. The first gives a flavour of the correlation pattern at the disaggregated level; the second allows highlighting patterns at the national level.

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[11] We warn the reader that correlation is a crude measure of association being limited to the linear case. It does not imply any cause-effect behavior.

Table 12 summarises the association between indicators and pillar scores (calculated at the country level). *Consumer skills* display all positive and statistically significant correlations. This is not the case for the other two pillars where most of the correlations are non significant at 5% and in some cases significant but with the negative sign (QA9: *Rule for the purchase of car insurance* with QA13: *Rule for advertising prices (air tickets)* in the pillar Awareness and QA41: *Actual behaviour in obtaining info on consumer rights* with the combination of QA14 with QA15: *Reading terms and conditions* in the pillar Engagement). Notice also that some indicators (e.g. QA11: *Rule for gifts received by post*, QA18: *Actual behaviour in comparing products*, QA25: *Tendency to communicate negative experiences*, QA_ALL: *actual behaviour when experimenting problems for which there is a legitimate cause for complaint*) are randomly related with the rest of its pillar.[12] On the other hand one has to remember that with judgemental data correlations can be much lower than with hard data (measurement errors are usually higher in survey data). Furthermore this questionnaire contained several filtered questions (QA14-15 and QA27-28-31-36-37 – we named it QA_ALL). Overall it seems that the indicators used for the construction of the CEI follow different patterns in different countries.

Table 12. Score correlation (country level) between indicators grouped in pillars

Skills	QA42	QA43	QA44	QA45	QA46	QA47
QA42	1	0.609	0.773	0.591	0.202	0.740
QA43	0.609	1	0.613	0.382	0.191	0.576
QA44	0.773	0.613	1	0.668	0.389	0.694
QA45	0.591	0.382	0.668	1	0.507	0.608
QA46	0.202	0.191	0.389	0.507	1	0.579
QA47	0.740	0.576	0.694	0.608	0.579	1

Awareness	QA8	QA11	QA13	QA6	QA9	QA10	QA7
QA8	1	0.008	0.387	-0.165	-0.313	-0.207	0.152
QA11	0.008	1	0.089	0.313	0.293	0.259	0.062
QA13	0.387	0.089	1	-0.271	-0.424	-0.277	-0.027
QA6	-0.165	0.313	-0.271	1	0.762	0.779	0.378
QA9	-0.313	0.293	-0.424	0.762	1	0.812	0.335
QA10	-0.207	0.259	-0.277	0.779	0.812	1	0.325
QA7	0.152	0.062	-0.027	0.378	0.335	0.325	1

Engagement	QA17	QA18	QA14_15	QA16	QA40	QA41	QA25	QA26	QA_ALL
QA17	1	0.296	0.093	0.641	0.296	0.331	0.007	0.446	0.317
QA18	0.296	1	0.130	0.191	0.297	-0.047	-0.127	0.223	-0.072
QA14_15	0.093	0.130	1	-0.203	-0.032	-0.597	0.252	-0.062	0.000
QA16	0.641	0.191	-0.203	1	0.408	0.543	-0.228	0.582	0.271
QA40	0.296	0.297	-0.032	0.408	1	0.140	0.005	0.425	-0.018
QA41	0.331	-0.047	-0.597	0.543	0.140	1	-0.247	0.538	0.191
QA25	0.007	-0.127	0.252	-0.228	0.005	-0.247	1	0.244	0.102
QA26	0.446	0.223	-0.062	0.582	0.425	0.538	0.244	1	0.105
QA_ALL	0.317	-0.072	0.000	0.271	-0.018	0.191	0.102	0.105	1

Red: values not significant at 5%

The correlation between each indicator with the corresponding pillar has the expected sign and is in most of the cases significant with the exception of QA8: *Rule for illegal advertisement* and QA13: *Rule for advertising*

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[12] The only significant correlation in the whole sample for QA18 is with QA8 and for QA25 is with QA7.

prices (air tickets) witch seem to be a random noise for the pillar *Awareness* (Table 15 for the correlation at the national level) reflecting different behaviour in different countries. These two questions (together with QA11: *Rule for gifts received by post*) constitute the sub-pillar *Unfair practices* which therefore results non-correlated with *Awareness*. Questions QA18: *Actual behaviour in comparing products* and QA41: *Actual behaviour in obtaining info on consumer rights* are randomly related to the pillar *Engagement* (Table 13), though they belong to different sub-pillars so the rest of the indicators compensate the poor correlation improving the association to the corresponding pillars (Table 14).

Overall the CEI seems to be determined by the pillars Skills and Awareness with a correlation above 0.9 and 0.8 respectively, while the pillar Engagement contributes much less with a correlation of 0.6 (due to negligible contribution of indicators QA18, Qa14-15 and QA25).

Table 13. Correlation (country level) between indicators, pillars and the CEI scores.

Pillar	Sub-pillar	Indicator	Correlation with Index	Correlation with Pillar
Consumer Skills	Basic skills	QA42: Recognize cheaper product	0.78	0.81
		QA43: Find the best interest rate	0.60	0.68
		QA44: Calculate the interest on a loan	0.82	0.89
	Capacity to read logos /labels	QA45: Correct interpretation of "grams of fat"	0.69	0.78
		QA46: find expiring date for a product	0.61	0.62
		QA47(b): Recognize correctly logos	0.86	0.91
Awareness of consumer legislation	Unfair commercial practices	QA8: Rule for illegal advertisement	-0.08	0.13
		QA11: Rule for gifts received by post	0.59	0.44
		QA13: Rule for advertising prices (air tickets)	0.02	0.05
	Cooling-off period after purchase	QA6: Rule for money back guarantee	0.66	0.78
		QA9: Rule for the purchase of car insurance	0.67	0.70
		QA10: Rule for door-to-door sales	0.65	0.76
	Guaranteed period	QA7: Rule for commercial guarantees	0.55	0.73
Consumer Engagement	Comparing products	QA17: Comparisons when purchasing a good	0.66	0.63
		QA18: Actual behavior in comparing products	0.18	0.30
	Reading terms and conditions	QA14-15: Reading terms and conditions	-0.25	0.38
	Interest in consumer Information	QA16: Knowledge of consumer organizations	0.64	0.48
		QA40: Knowledge of programs related to consumer rights	0.57	0.39
		QA41: Actual behavior in obtaining info on consumer rights	0.58	0.13
	Tendency to talk	QA25: Tendency to communicate negative experiences	-0.10	0.41
		QA26: Tendency to communicate positive experiences	0.56	0.58
	Detriment and redress	Combination of the questions QA27, QA28, QA31, QA36, and QA37: actual behavior when experimenting problems for which there is a legitimate cause for complaint	0.50	0.66

Red: values not significant at 5%

Table 14. Correlation (country level) between sub-pillar, pillars and CEI scores

	Consumer skills	Awareness of consumer legislation	Consumer engagement	ICE
ICE	0.93	0.84	0.60	
Consumer skills		0.67	0.46	
Awareness of consumer legislation	0.67		0.26	
Consumer engagement	0.46	0.26		
Basic skills	0.92	0.63	0.36	0.85
Logos and labels	0.94	0.62	0.48	0.88
Unfair practices	0.25	0.30	0.04	0.27
Cooling off	0.60	0.81	0.21	0.71
Guaranteed period	0.36	0.73	0.21	0.55
Comparing products	0.35	0.34	0.55	0.46
Reading terms and conditions	-0.35	-0.38	0.38	-0.25
Interest in information	0.74	0.62	0.47	0.78
Tendency to talk	0.16	-0.07	0.60	0.21
Detriment and redress	0.41	0.29	0.66	0.50

Red: values not significant at 5%

At the individual level we expect much higher correlations. Table 21 and Table 22 at the end of the document reports Spearman rank correlations at the individual level. In Table 21 all correlation are all significant but higher for the first pillar than for the other two. Rank correlation between indicators and its pillar is below 0.4 for QA9, QA16 and especially QA41. At the individual level the rank correlation between pillars and the composite is more balanced than at the national level. Correlation between pillars is relatively low signalling the fact that the pillars describe different aspects of consumer empowerment. The comparison between the correlations calculated on the individual scores and that calculated on the country scores suggests the existence of country specific patterns for certain indicators (e.g. QA8, QA13, QA16, QA18, and QA25).

Figure 7 plots the pillar values against the Index. It seems that the relatively low correlation between Engagement and CEI is mostly due to the performance of Norway (this country has very good score in every indicator and a score much higher than the EU27 average for the sub-pillar *Interest in information*), Romania and Bulgaria (due to the low values of *Detriment and redress* for both countries). Without these countries the correlation would be above 0.7. Country profiles in appendix provide additional insights.

Figure 7. Pillar values versus the ICE
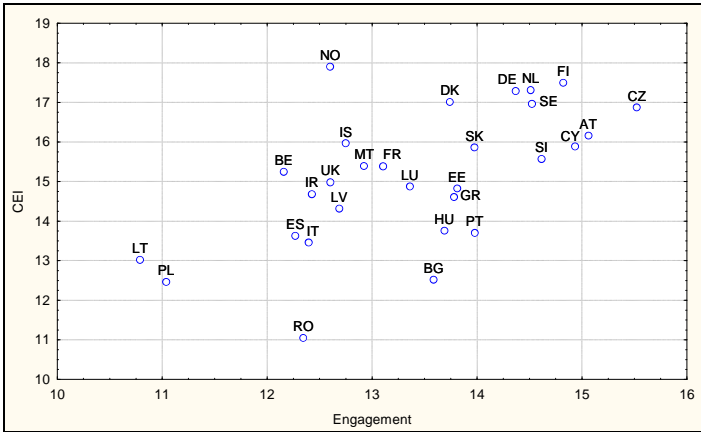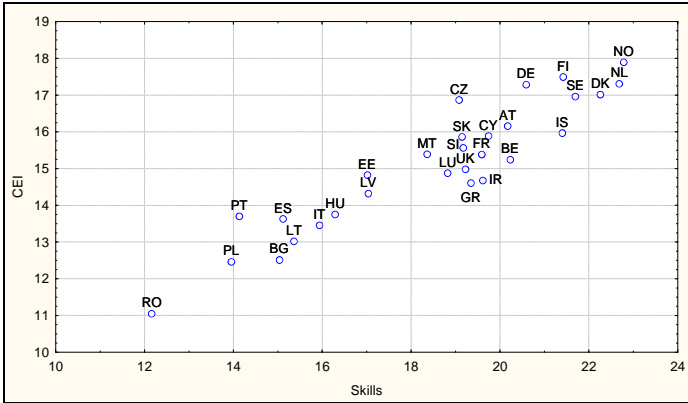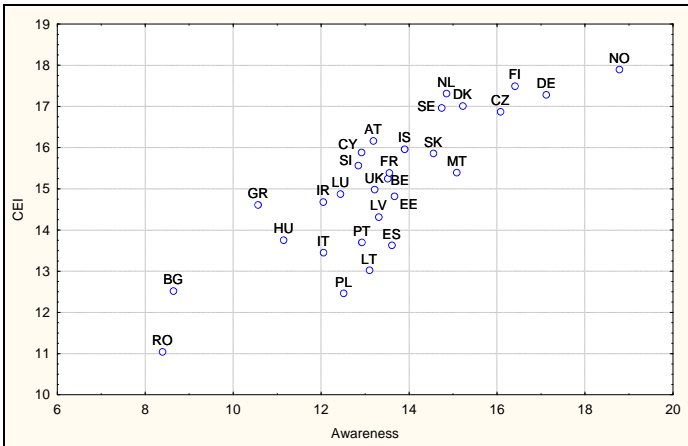
6. Robustness of the results

The construction of composite indicators involves stages where judgments have to be made: the selection of individual indicators, the choice of a conceptual framework, the weighting of indicators, the treatment of missing values etc. All these sources of subjective judgments affect the message brought by the composite indicators in a way that deserve analysis and corroboration. A combination of uncertainty and sensitivity analysis (respectively UA and SA) can help to gauge the robustness of the composite indicator, to increase its transparency and to help framing a debate around it. In fact, UA focuses on how the sources of uncertainty propagate through the structure of the CI and affect its values. SA studies how much each individual source of uncertainty contributes to the CI value/ranking variance. Despite that a synergistic use of UA and SA has proven to be powerful (Saisana et al., 2005), UA is more often adopted than SA and the two types of analysis are almost always treated separately. Rather than broadly investigating the framework, the robustness analysis conducted for the Consumer Empowerment Index, is concentrated on the set of weights obtained through experts' elicitation and on the importance of each pillar. The framework, in fact, has been treated as given since it largely inspires the Eurobarometer survey, thus questioning the framework would have jeopardised the questionnaire itself given that data have been gathered with precisely that framework in mind.

6.1 Robustness of the weighting based on experts' elicitation

As mentioned above, for the construction of the CEI (henceforth the "baseline" CEI) we used the median of experts' votes for the three main pillars, Skills, Awareness and Engagement. To gauge the impact of this variability in country scores and ranks we calculated for each expert's set of votes scores and ranks and we computed the difference with respect to the baseline CEI.

Figure 8 displays the differences in scores for the CEI, where the baseline corresponds to the median of the experts' elicitations. The difference in experts' voting produces the largest effect for Norway followed by Iceland, Greece and Denmark.

Figure 8. Box plot of CEI scores calculated with each set of weights obtained from Budget Allocation
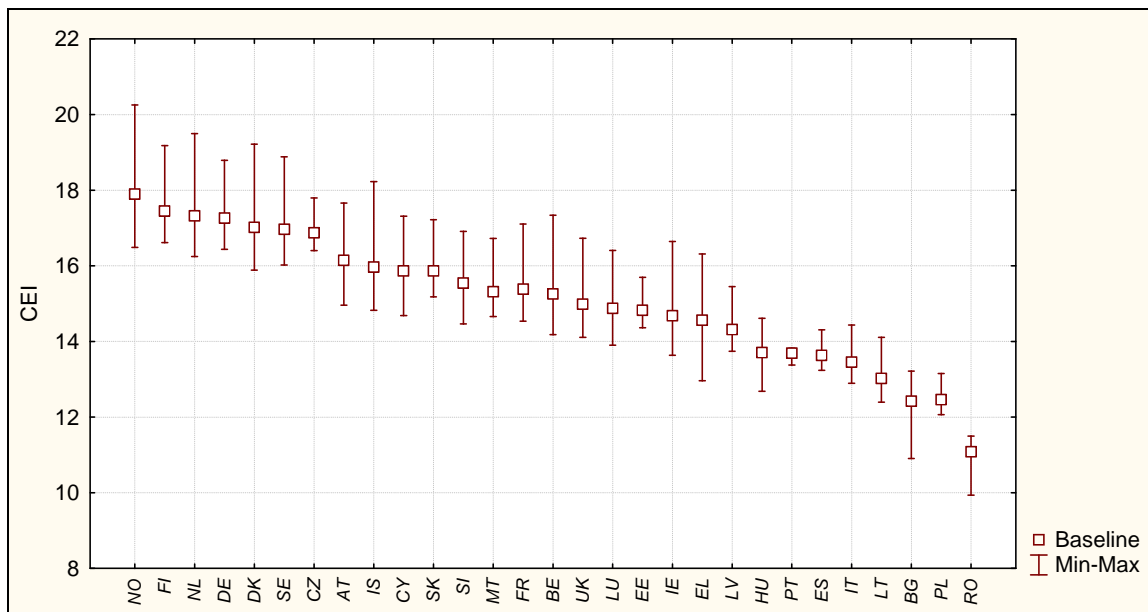
Table 15. CEI ranks, maximum and minimum gain in ranks using all the Budget Allocation weights

	CEI	max gain	max loss		CEI	max gain	max loss
BE	15	5	1				
BG	27	1	1	HU	22	0	4
CZ	7	3	1	MT	13	4	3
DK	5	2	2	NL	3	1	2
DE	4	2	2	AT	8	0	3
EE	18	3	2	PL	28	1	0
IE	19	2	2	PT	23	1	3
EL	20	3	4	RO	29	0	0
ES	24	4	1	SI	12	1	3
FR	14	1	0	SK	11	3	1
IT	25	2	0	FI	2	1	2
CY	10	1	2	SE	6	1	1
LV	21	3	0	UK	16	1	3
LT	26	3	1	IS	9	2	3
LU	17	1	2	NO	1	0	2

At the lowest end Portugal, Spain and Poland with a reduced volatility in scores. The volatility of ranks is less pronounced (Table 15), the highest shift in rank is for Belgium with 5 positions, followed by Greece, Hungary, Malta and Spain (4 positions). Overall, the CEI results quite robust with respect to the change in

weights for its pillars: the volatility of scores is no higher than 13% of the baseline and the rank volatility is at most 5 out of 29 positions.

6.2 Importance of each pillar

The importance of each pillar in determining the CEI is evaluated by removing it from the analysis, rescaling the weights and calculating the shift in ranks produced. The rationale for eliminating one pillar at a time is to understand which is the "crucial" pillar for the overall CEI and for each country, i.e. the pillar with the highest impact on the Index overall and for each country.

Consumer skills, with a correlation 0.93 with the CEI, it is the pillar shaping the results of the Index. On average its removal produces a shift in rank of 2.5 positions (Table 16 and Figure 9). The most affected countries are Portugal with a change of 9 positions, followed by Iceland (7 positions), Belgium and the Czech Republic (both with 6 positions). The absence of the pillar Awareness produces at most a shift of 7 position for Greece and 6 positions for Malta. The loss of the pillar Engagement would mostly affect Belgium (by 6 positions), but has little effect for the other countries. The countries substantially unaffected by dropping one pillar at a time are Finland, France, Italy, Luxembourg, Poland and Romania where at most the shift in rank is of 1 position. Table 17 lists the most influential pillar(s) for each country with the corresponding shift in rank.

Table 16. Eliminating one pillar at a time: average (absolute) shift in ranks with respect to the baseline CEI.

Consumer skills		*Awareness of consumer legislation*		*Consumer behavior*	
average	**2.48**	average	**1.93**	average	**1.59**
PT	9	EL	7	BE	6
IS	-7	MT	-6	CY	-4
CZ	6	NO	-5	SI	-4
BE	-6				
ES	5				
EE	5				
IE	-5				

Figure 9. Eliminating one pillar at the time: box plot of the difference with the baseline
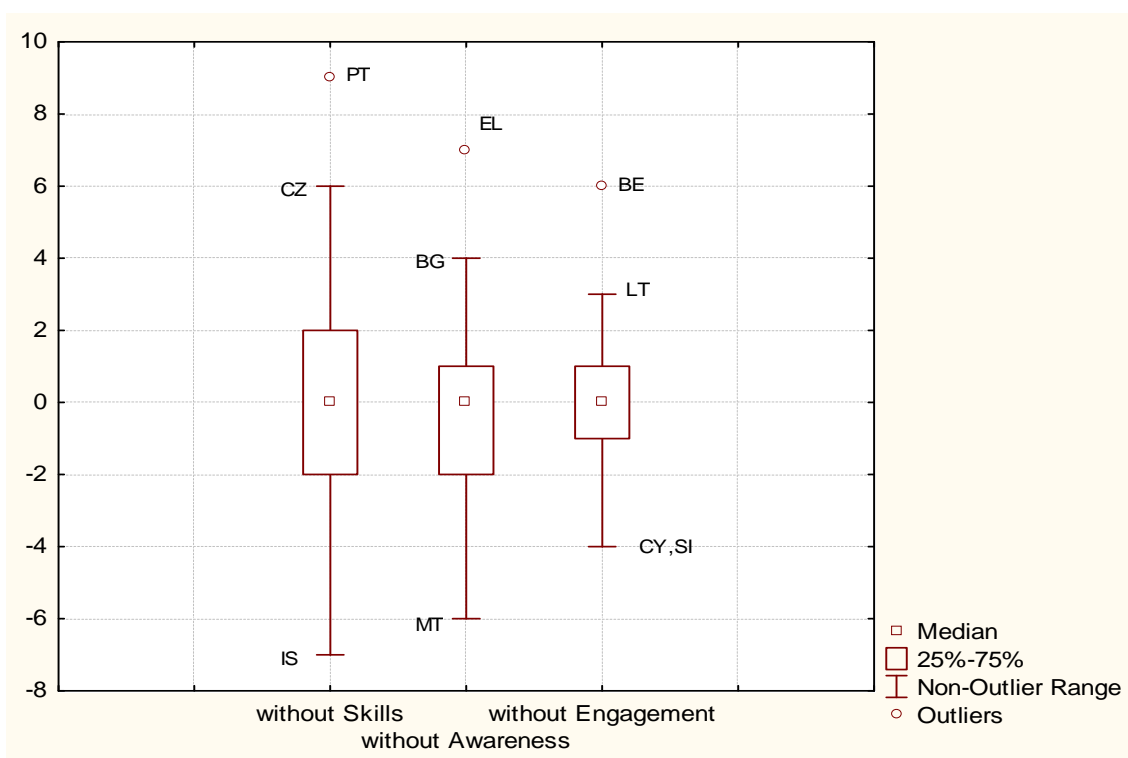
Table 17. List of the most influential pillar for each country

BE	Skills (-6), Engagement (+6)	HU	Engagement (-3)
BG	Awareness (+4)	MT	Awareness (-6)
CZ	Skills (+6)	NL	Skills (-2), Awareness (+2)
DK	Awareness (-2)	AT	Awareness (+3), Engagement (-3)
DE	Awareness (-3)	PL	-
EE	Skills (+5)	PT	Skills (+9)
IE	Skills (-5)	RO	-
EL	Awareness (+7)	SI	Engagement (-4)
ES	Skills (+5)	SK	Skills (+3)
FR	-	FI	-
IT	-	SE	Awareness (+3)
CY	Engagement (-4)	UK	Skills (-4)
LV	Skills (+4)	IS	Skills (-7)
LT	Engagement (+3)	NO	Awareness (-5)
LU	-		

(-) deterioration in the ranking with respect to the baseline

(+) improvement in the ranking with respect to the baseline

7. Socio-economic aspects of consumer empowerment

The questionnaire on consumer empowerment contained a number of questions related to the socio-economic status of the respondents: age, gender, education, income, occupation, language spoken at home (if different from country-language), use of internet, etc. It would be interesting to explore the relationship between consumer empowerment and these socio-economic variables in order to identify the most vulnerable consumers and their features. Such an analysis would require the specification and estimation of an econometric model. Leaving this model for future analysis a faster way to relate consumer empowerment (as measured by the CEI) and the socio economic characteristics of the sample is to extract sub-samples, each of them possessing the desired socio-economic feature and calculate the Index value (including pillars and sub-pillars values). In order to make the sub-samples comparable between them and with the full sample we used the maximum and the minimum of the full sample when rescaling each sub-sample with the max-min approach. With this comparison we would like to offer a first hint of the most vulnerable consumers in Europe. We check the statistical difference between the full sample and the sample of respondents possessing a given socio-economic characteristic using the Wilkoxon Test.[13] Below, for each socio-economic characteristic we present the results as differences with respect to the EU27 average of the full sample. All the scores and ranks are in Appendix 4.

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[13] The Wilcoxon Matched Pairs Test is a nonparametric test that compares the medians of two paired groups. If the P value of the test is smaller that a threshold (usually 0.05), one can reject the idea that the difference in the two samples is a coincidence, and conclude instead that the populations have different medians.

7.1 Gender

On average male respondents score systematically better than female in all pillars and the CEI even if 31.7% of them have the lead in shopping decisions vis à vis the 68.4% of female respondents.[14] The result is statistically significant. Overall education and internet use have a similar distribution in the two samples. This happens in all countries but Norway where female score higher than male in all three dimensions (Skills, Awareness and Engagement).

Figure 10. EU-27 average scores for male (female) divided by the EU-27 average scores for the full sample
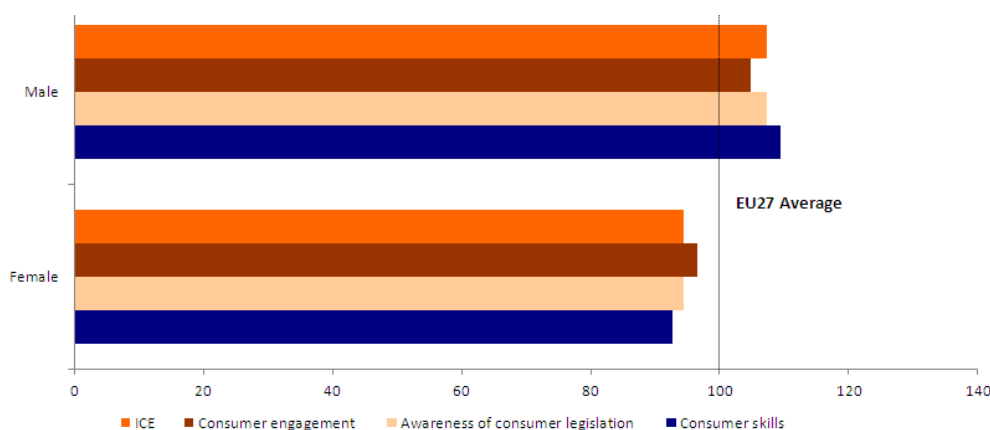
In Cyprus, Lithuania, and Sweden female score higher in awareness and engagement, while female engagement is higher in Latvia, Iceland, the Netherlands, and Romania. The highest gap belongs to Malta where female respondents score about 40% less than male, followed by Poland and Ireland. The most "egalitarian" countries seem to be the Netherlands for Skills, Latvia for Awareness and Belgium for engagement. Figure 10 shows how distant is the EU average of each sub-sample from the EU average of the full sample

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[14] The percentages come from the sub-sample of respondents to the questions qa57_1 (everyday shopping, answer "more you") and the question D7 category SINGLE. This sub-sample collects the respondents actually taking shopping decisions.

7.2 Age

The age of respondents plays an inverse role in their empowerment: younger generations seem to be more skilled, aware and engaged than older generations, with the notable exception of Italy where the age cohort over-54 is 16.4% more engaged than the age cohort 15-24, 11% more aware of their rights and 6% more skilled.[15]

The highest difference between age groups is found in Sweden, Finland and Poland where respondents aged over-54 are up to 68% less empowered than the youngest respondents. The lowest difference is in Cyprus and Iceland with 7% and 15% respectively. The higher gap between age cohorts is found in Skills followed by Engagement and Awareness.

Figure 11. EU-27 average scores for level of education divided by the EU-27 average scores for the full sample
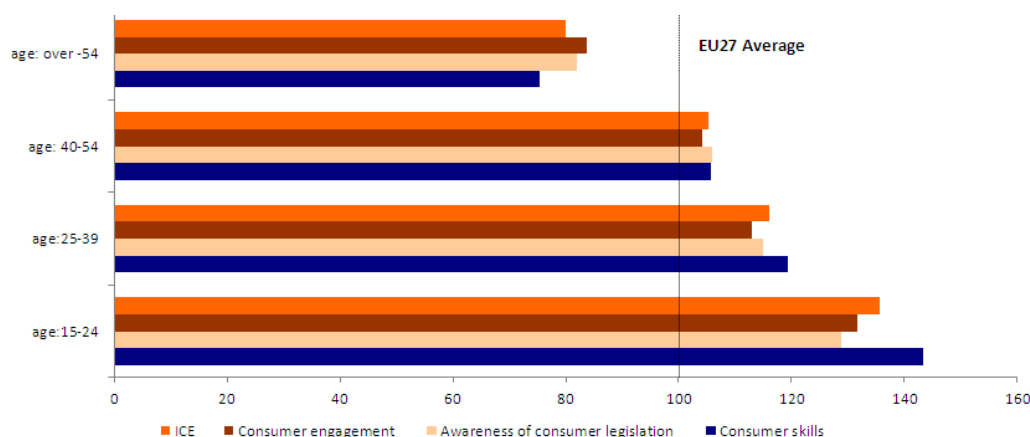
7.3 Occupation

Looking at the empowerment clustered according to the occupation of the respondents the most vulnerable consumers seem to be those retired or not working due to illness and those performing manual work (clearly age and education largely influence the result).[16] Overall the non active population is less empowered than active population, in 18 out of 29 countries the least empowered are retired consumers.[17] In 5 countries (the CZ, DE, EL, MT, AT) consumers not working (either unemployed or looking after the

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[15] According to the Wilcoxon Matched Pairs Test the age group 40-45 has a median equal to that of the baseline CEI. In the remaining cases the test rejects the hull hypothesis of equality of medians.
[16] According to the Wilcoxon Matched Pairs Test the sub-sample *unemployed or temporarily not working* and *Farmers* are statistically similar to the full sample (the null hypothesis of equality of medians is not rejected), while for all the rest of occupations the equality of medians is clearly rejected.
[17] These countries are: BE, BG, DK, EE, IE, ES, FR, LV, LT, HU, PL, PT, RO, SI, FI, SE, the UK, IS.

home), in IT, the NL, SK the least empowered are unskilled manual workers and in Cyprus are farmers.[18]
In all countries but Italy students are among the most empowered followed by white collars.

Figure 12. EU-27 average scores for occupation divided by the EU-27 average scores for the full sample

Non active population
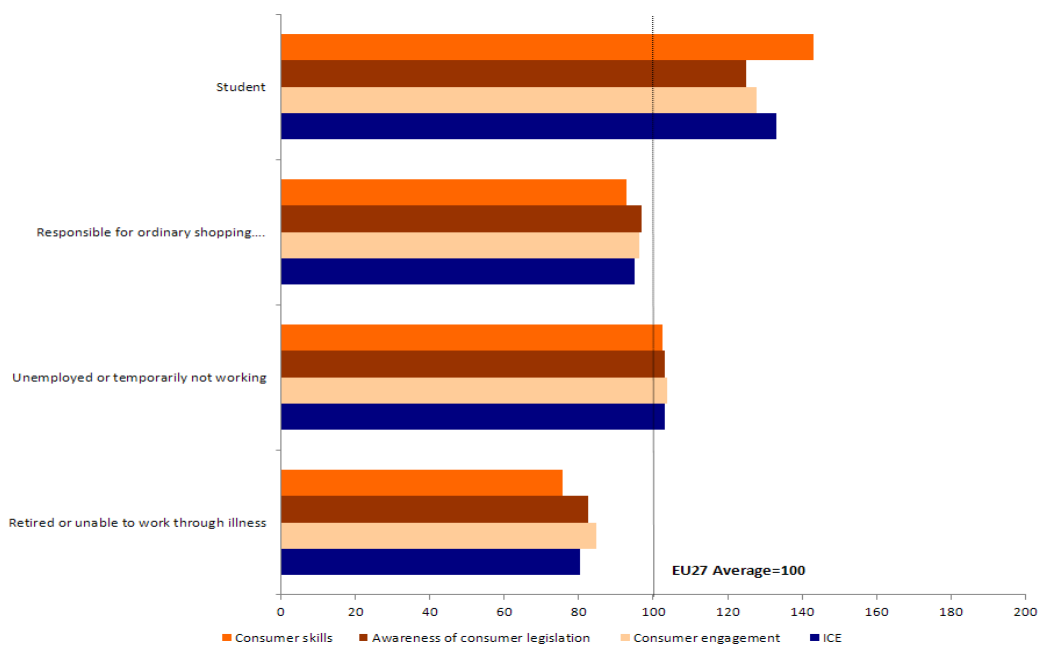
Self-employed population

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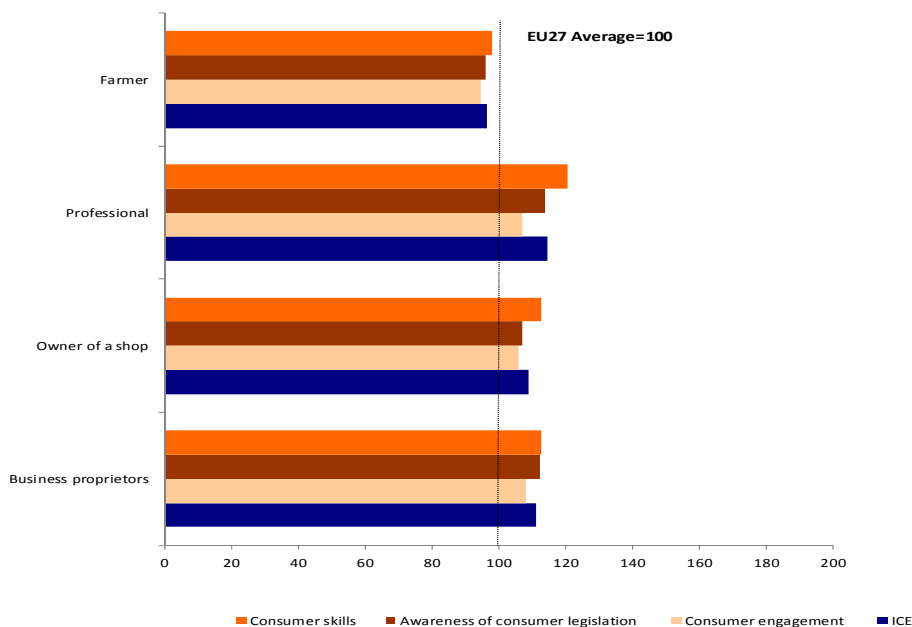
[18] Outliers are found for (a) Luxemburg where the least empowered is in the professional group of business proprietors but the sample size of this group is equal to 1 individual; (b) Norway where the least empowered is in the group of Supervisors (sample size of the group is 9).

50

Employed population

EU27 Average=100

Legend: Consumer skills | Awareness of consumer legislation | Consumer engagement | ICE

Categories (top to bottom):
- General management
- Supervisor
- Employed professional
- Employed position - travelling
- Middle management
- Employed position - service job
- Employed position - working at desk
- Skilled manual workers
- Other manual workers

X-axis: 0, 20, 40, 60, 80, 100, 120, 140, 160, 180, 200

7.4   Education

Education has probably an important role in explaining empowerment. Lower levels of empowerment are usually associated to low levels of education (ISCED 1-2). The highest gap is found for Malta, United Kingdom and the Czech Republic while the reverse is registered for Norway and Bulgaria where respondents with low education score respectively 19% and 10% more than higher educated respondent. In Norway this pattern holds for the three pillars while in Bulgaria only for Skills and Awareness. Notice that in Norway 56% of sample interviewed has high educational attainment and only 9% (183 cases) has low attainment, whereas in the full sample (29 countries) the proportion is 22% higher educated and 30% with low educational attainment. The reason probably lies in the Norwegian welfare system that trains low-medium educated citizens to look for their rights (both legal rights and rights as consumers).[19]

Figure 13. EU-27 average scores for education level divided by the EU-27 average scores for the full sample
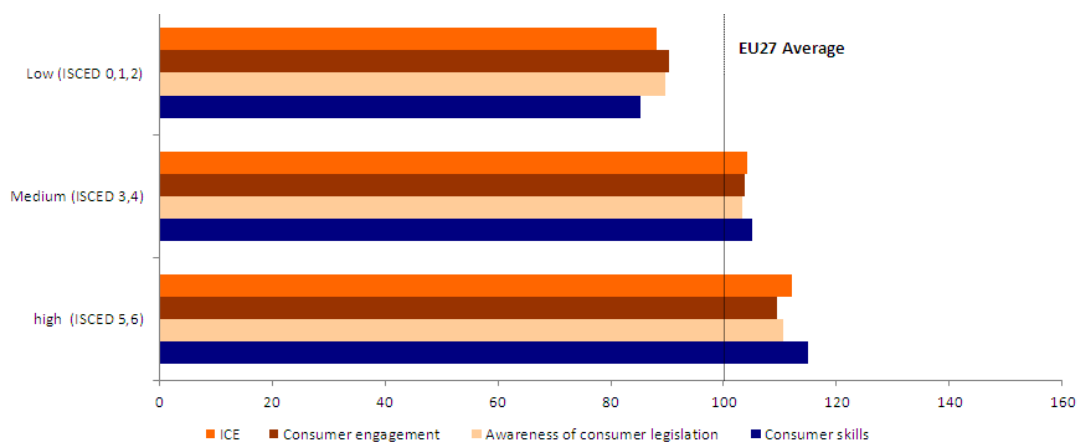
7.5   Income

The question chosen to represent the income of the respondent is *QA51: A household may have different sources of income and more than one household member may contribute to it. Thinking of your household's total income, is your household able to make ends meet (namely, to pay for its usual necessary expenses)…?* The possible answers were 8: *with great difficulty, with difficulty, with some difficulty, quite easily, easily, very easily, refusal to answer* and *don't know.* We disregarded the last two (about 1.300 observations), and grouped together *with great difficulty* & *with difficulty*, and *easily* & *very easily*, keeping separate the two remaining intermediate categories.

In Finland, the UK, Ireland, Norway and Denmark income seems to have an inverse relationship with empowerment: high income respondents (26% of the sample analyzed) result to be less engaged than respondents experiencing income shortages.[20] The reverse holds for the rest of countries, especially Bulgaria, Germany, Poland, Portugal, and Romania where respondents facing income shortages are 26-28% less empowered than wealthier respondents. Income is not decisive in Cyprus, France, Iceland, Malta, and Spain.

Figure 14. EU-27 average scores for income level divided by the EU-27 average scores for the full sample

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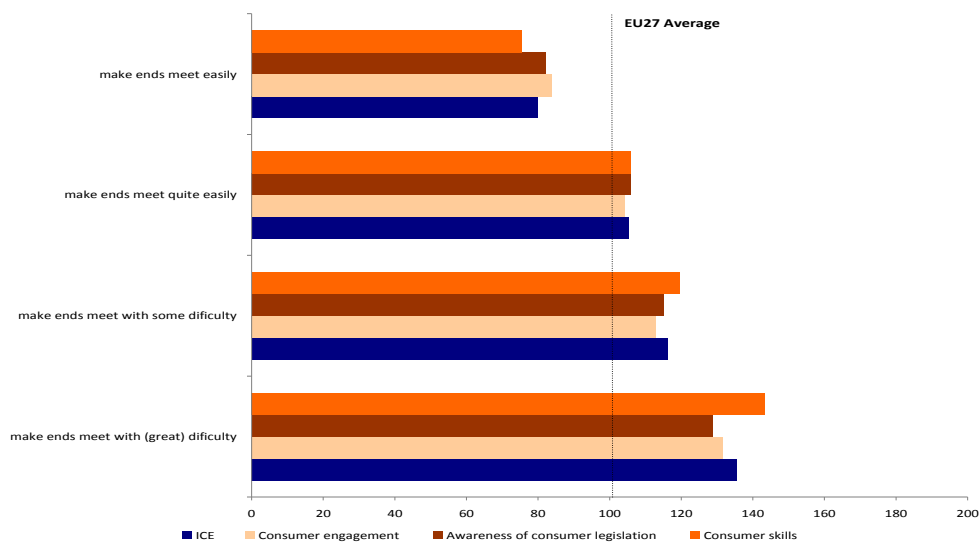
[19] The Wilcoxon Matched Pairs Test always rejects the equality of medians for all subsets considered.
[20] The Wilcoxon Matched Pairs Test always rejects the equality of medians for all subsets considered except for the sub-sample *quite easily.*

7.6 Language spoken

The question chosen to represent the intra-EU migration is QA49: *Is your mother tongue different from the official language(s) spoken in (OUR COUNTRY)?*

We are aware that this question does not fully account for the migrant status, as (i) only EU citizens are interviewed, and (ii) there are migrants whose mother tongue does not differ from the official language (such as e.g. French or Dutch migrants in Belgium).

On average the language spoken is not decisive for defining consumer engagement, with the exceptions of Greece, Hungary and Italy where consumers speaking the official language are 30% more empowered than those using a different language (statistical tests confirm). The opposite holds for Malta and the UK. As expected the pillar Skills is driving the results in both directions (the only exception is the UK where consumers with a foreign language perform well above the native speakers in all dimensions).

Figure 15. EU-27 average scores for language spoken divided by the EU-27 average scores for the full sample
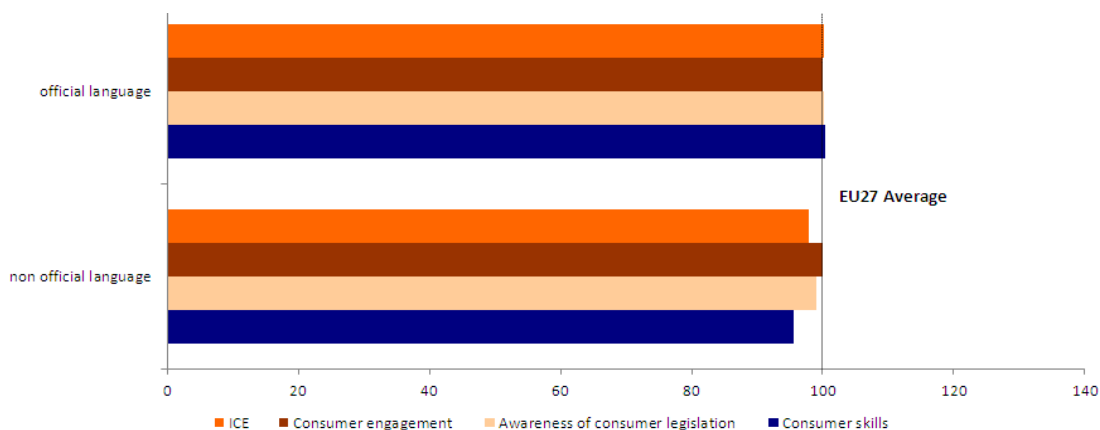
7.7 Internet use

Internet use seems to be related to empowerment: consumers with some experience in using internet have higher scores in skills, awareness and engagement (with the exception of Norway). The difference[21] is large especially in Finland, where consumers not using internet are 50% less empowered, and in Malta, Poland and the UK where the gap is around 40%. The pillar Skills displays the largest gap (Finland with 60%). Internet does not play a role only in Norway for the pillar Skills and in Cyprus for the other two pillars. The use of internet is highly correlated with education and age.

Figure 16. EU-27 average scores for internet use divided by the EU-27 average scores for the full sample
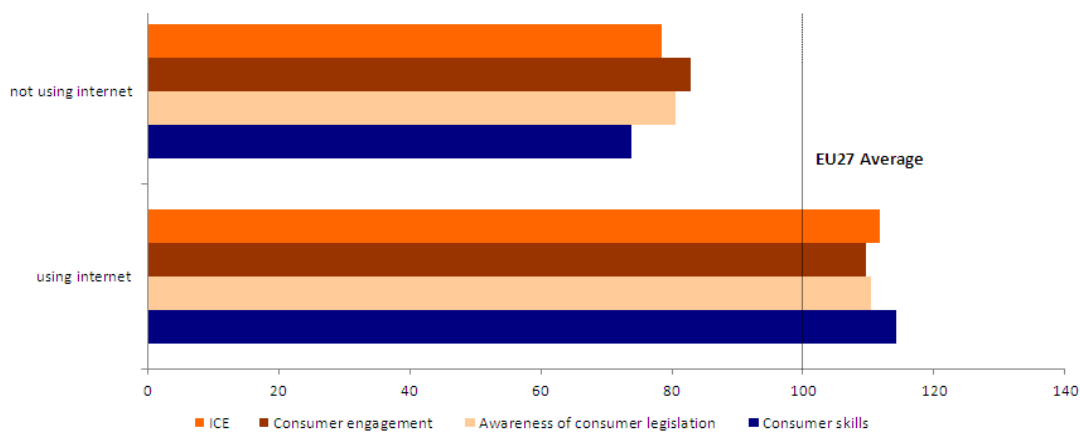
7.8 Perception of empowerment

The question used is QA48: *In general, when choosing and buying goods and services, how (1) Confident do you feel as a consumer?; (2) Knowledgeable do you feel as a consumer?; (3) Well protected by consumer law do you feel?* We chose to represent the extremes of the sample distribution and only extracted the sample of respondents answering they feel *very* or *quite* confident, knowledgeable and protected (the "optimists") and those who feel they are *not very* or *not at all* confident, knowledgeable and protected (the "pessimists").

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[21] The Wilcoxon Matched Pairs Test confirms the significance of the differences.

The idea was to compare personal feelings with actual behavior, so we calculated the Index score for the sample of "pessimists" and optimists" to see whether consumers feeling confident, knowledgeable and protected are indeed those performing better in the index. The results seem to confirm it, with some caveats.[22] Danish and Italian consumers misperceive their skills (consumers feeling knowledgeable perform as good as those who does not feel the same); pessimist and optimist in Denmark and Spain score almost equally in Awareness, and pessimists in Iceland and Malta score slightly better than optimists in this pillar. The Engagement of Icelandic and Norwegians consumers seems to be unrelated to their personal feelings (Table 18, and Appendix 4). Overall, UK, Sweden, Poland and Germany display the highest match between actual performance and the individual feeling of confidence, knowledge and protection, whereas Iceland, Italy, and Spain have the poorest match.

Figure 17. EU-27 average scores for empowerment perception divided by the EU-27 average scores for the full sample

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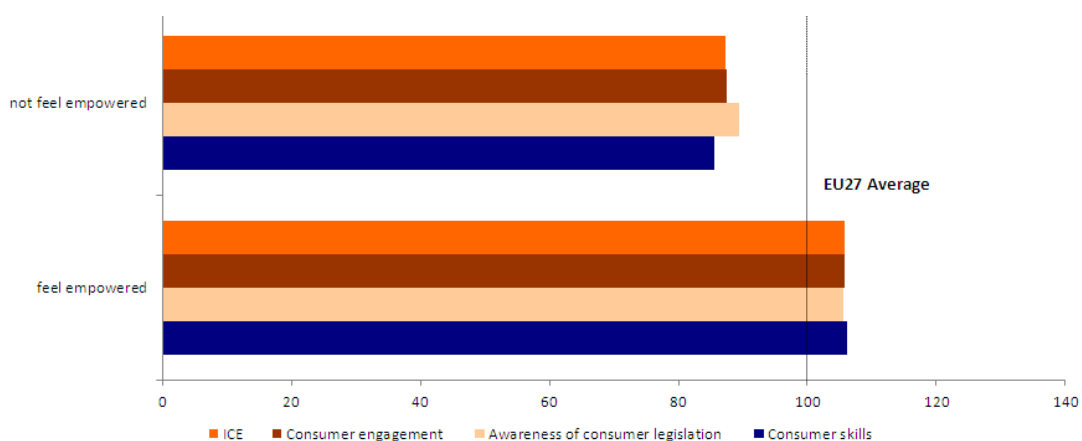
[22] Results are statistically significant

Table 18. CEI scores according to perceptions: difference with respect to respondents who fell to be confident, knowledgeable, and protected.

not feel confident, knowledgeable, protected	Consumer skills	Awareness of consumer legislation	Consumer engagement	ICE
BE	-8.0	-5.2	-6.0	-6.64
BG	-16.0	-28.3	-17.3	-19.5
CZ	-7.5	-9.4	-8.0	-8.2
DK	-0.8	-1.6	-24.5	-8.0
DE	-27.8	-32.3	-27.6	-29.1
EE	-31.6	-17.6	-17.8	-23.2
IE	-24.9	-17.6	-25.5	-23.2
EL	-12.0	-5.3	-8.5	-9.3
ES	-7.1	-1.5	-4.6	-4.6
FR	-13.0	-7.7	-8.9	-10.3
IT	-0.5	-6.6	-6.2	-4.1
CY	-11.6	-3.3	-15.3	-10.8
LV	-16.6	-15.1	-18.9	-16.9
LT	-20.6	-6.3	-16.9	-15.2
LU	-6.7	-6.2	-9.3	-7.4
HU	-15.2	-12.3	-18.7	-15.7
MT	-11.8	**3.1**	-6.5	-5.8
NL	-26.9	-28.1	-11.7	-22.7
AT	-19.1	-18.0	-15.9	-17.8
PL	-35.5	-31.0	-37.9	-34.9
PT	-33.5	-21.8	-22.6	-26.2
RO	-9.0	-11.4	-10.4	-10.1
SI	-29.6	-25.2	-24.4	-26.7
SK	-14.8	-12.3	-14.0	-13.8
FI	-30.8	-23.4	-20.3	-25.5
SE	-42.9	-33.4	-24.9	-34.8
UK	-37.5	-23.9	-41.3	-34.9
IS	-8.4	**4.4**	-0.1	-2.6
NO	-25.6	-11.3	0.2	-14.4

8. Conclusions

The 2007-2013 EU Consumer Policy Strategy emphasizes the importance of a better understanding of how consumers behave and sets as a main objective "to empower EU consumers". It is to answer to these political needs that DG Health & Consumers and DG ESTAT lunched in 2010 a Eurobarometer survey on consumer empowerment aiming at collecting internationally comparable data on (i) consumers' basic numerical and financial skills, (ii) consumers' level of information on rights and prices, and (iii) consumers complaint and reporting behaviour, as well as consumers' experience with misleading or fraudulent offers. The dataset resulting from this initiative covers 29 countries (EU27 plus Iceland and Norway), 56,470 consumers and contains 70 questions on empowerment and on the socio economic characteristics of each respondent. The DG Health & Consumers together with the DG Joint Research Center synthesized part of these data into a unique measure of consumer empowerment. The resulting Consumer Empowerment Index describes consumer empowerment along three main dimensions: *Consumer skills*, *Awareness of consumer legislation* and *Consumer engagement*.

According to the Consumer Empowerment Index Norway results to be the leading country followed by Finland, the Netherlands and Germany and Denmark. The middle of the ranking is dominated by western countries such as Belgium, France, and the UK, with an average score 13% lower than the top five. At the bottom of the Index are some Eastern and Baltic countries like Bulgaria, Lithuania, Poland, and Romania with a score 31% lower on average. The gap reaches 40% and 38% in *Awareness of consumer legislation* and *Consumer skills*, but drops to 28% in *Consumer engagement*. A group of southern countries, Italy, Portugal, and Spain score poorly in the Index, especially in the pillar *Consumer skills* where the gap with top performers reaches 30%.

This report (and its appendices) describes the steps followed in the construction of the Index and discusses the results. Particular attention is given to the definition of the theoretical framework, the quantification of categorical survey questions, the univariate and multivariate analysis of the dataset, and the set of weight used for calculating the scores and ranks of the Index. The report also discusses the robustness of the results and the relationship between the Index and the socio-economic characteristics of the respondents. We find that empowerment is directly associated to education, age, gender and internet use. Income is crucial only in some countries while the language spoken (if different from the official one) is on average not related to empowerment. Occupation is also important, on average the non active population is less empowered than active population.

The Consumer Empowerment Index is a pilot exercise, aimed at obtaining a first snapshot of the state of consumer empowerment as measured by the Eurobarometer survey. It is neither a final answer on empowerment nor a comprehensive study on all the different facets of consumer empowerment, but instead it is meant to foster the debate on the determinants of empowerment and their importance for protecting consumers.

9. Final tables

Table 19. Consumer Empowerment Index. Distance from EU-27 average. Scores and ranks of the Index and its pillars

	Consumer skills	*Awareness of consumer legislation*	*Consumer engagement*	*ICE*
EU27=100				
BE	111	102	90	102
BG	82	65	101	84
CZ	104	121	115	113
DK	122	115	102	114
DE	113	129	107	115
EE	93	103	103	99
IE	107	91	92	98
EL	106	80	102	98
ES	83	103	91	91
FR	107	102	97	103
IT	87	91	92	90
CY	108	97	111	106
LV	93	100	94	96
LT	84	99	80	87
LU	103	94	99	99
HU	89	84	102	92
MT	101	114	96	103
NL	124	112	108	116
AT	110	100	112	108
PL	76	94	82	83
PT	77	98	104	91
RO	67	63	92	74
SI	105	97	109	104
SK	105	110	104	106
FI	117	124	110	117
SE	119	111	108	113
UK	105	100	94	100
IS	117	105	95	107
NO	125	142	94	120

Table 20: Scores for the 22 questions of the CEI divided by pillar.

Pillar Consumer skills

	Consumer skills					
	QA42	QA43	QA44	QA45	QA46	QA47
EU27	**22.91**	**22.76**	**15.93**	**16.87**	**23.45**	**12.80**
BE	24.48	23.45	19.52	19.29	22.41	15.89
BG	19.40	22.82	15.48	12.87	20.90	5.12
CZ	23.99	23.37	18.22	16.26	25.77	11.94
DK	25.45	26.09	20.67	21.56	25.94	17.85
DE	25.43	24.78	20.13	21.22	24.73	13.33
EE	22.20	17.22	13.34	17.83	23.33	13.49
IE	22.44	24.52	16.20	21.20	25.94	13.90
EL	22.22	23.90	16.97	17.22	24.88	14.84
ES	20.71	21.41	10.46	7.26	22.90	11.20
FR	24.14	23.86	15.46	18.92	25.53	15.18
IT	19.67	18.01	15.28	10.95	24.31	10.39
CY	23.68	26.24	18.76	14.08	25.23	13.73
LV	24.41	22.07	12.44	18.33	21.97	10.98
LT	21.85	21.89	14.39	12.29	18.98	8.15
LU	24.85	22.16	15.65	12.32	25.62	15.19
HU	21.74	21.41	14.58	18.37	21.29	8.21
MT	20.88	25.24	12.64	14.64	24.94	15.65
NL	26.92	24.72	23.84	22.00	25.20	17.06
AT	23.67	20.72	19.89	22.15	24.47	14.99
PL	23.89	23.88	13.38	9.40	9.22	8.19
PT	20.35	20.12	7.87	10.13	22.95	9.37
RO	17.50	17.79	6.07	14.81	22.02	4.62
SI	23.07	23.25	15.05	18.59	24.62	15.46
SK	20.32	23.76	17.53	18.73	25.83	13.39
FI	25.52	24.45	19.49	20.37	23.54	18.46
SE	26.22	23.26	21.85	23.56	26.32	14.85
UK	23.65	24.15	14.90	21.11	24.32	14.14
IS	26.52	25.13	19.44	19.22	24.39	17.45
NO	26.39	25.45	22.12	20.31	26.10	18.97

Table 20 (cont.)

Pillar Awareness of consumer legislation

	Awareness of consumer legislation						
	QA8	QA11	QA13	QA6	QA9	QA10	QA7
EU27	**21.05**	**11.54**	**17.06**	**16.79**	**6.01**	**9.76**	**11.42**
BE	17.56	14.50	16.53	17.15	7.74	10.69	11.46
BG	21.70	11.23	13.83	7.94	1.12	1.68	4.86
CZ	19.87	9.00	16.97	20.91	6.34	12.53	23.30
DK	22.77	16.18	10.73	21.49	10.09	5.71	18.12
DE	21.06	14.39	14.59	22.80	13.20	19.45	15.28
EE	23.75	12.40	19.89	15.67	3.30	9.22	12.18
IE	15.01	11.18	17.84	18.41	7.13	8.02	8.51
EL	22.98	9.40	23.14	9.37	3.10	2.82	5.61
ES	21.73	5.18	19.05	17.45	6.21	10.24	14.80
FR	19.69	13.06	14.11	18.81	10.70	16.64	5.75
IT	21.17	7.35	16.02	14.40	4.93	7.54	12.64
CY	22.79	16.71	24.71	10.98	1.89	4.56	10.14
LV	22.66	12.34	19.59	18.95	2.28	7.10	11.26
LT	24.26	13.62	22.12	17.38	2.29	7.07	7.66
LU	20.60	9.95	16.93	16.08	4.91	5.95	12.59
HU	21.35	8.16	15.08	14.29	4.85	7.31	8.38
MT	25.02	11.03	24.91	14.25	3.98	9.00	16.63
NL	18.83	12.42	18.89	20.70	8.38	14.98	11.46
AT	19.15	12.34	13.44	19.09	8.55	12.67	9.10
PL	22.05	10.84	15.76	17.05	5.25	10.34	8.37
PT	22.83	6.17	16.93	12.77	6.43	9.61	14.80
RO	20.39	8.44	10.97	8.56	1.82	2.27	6.99
SI	21.84	13.61	19.02	18.16	3.26	9.89	7.05
SK	20.46	11.09	14.04	18.46	5.64	9.93	19.67
FI	23.63	15.40	19.84	21.88	10.38	14.07	11.89
SE	19.13	13.35	10.65	20.14	8.37	20.28	12.44
UK	16.17	12.26	15.12	20.21	10.09	14.00	7.51
IS	19.25	15.88	21.41	9.91	4.63	6.76	17.62
NO	23.38	14.89	15.12	22.76	11.93	20.13	21.78

Table 20 (cont.)

Pillar Consumer engagement

	Consumer engagement								
	QA17	QA18	QA14_15	QA16	QA40	QA41	QA25	QA26	QA_ALL
EU27	**10.16**	**18.72**	**12.39**	**9.61**	**17.08**	**3.37**	**14.63**	**15.73**	**15.86**
BE	9.82	15.28	10.56	10.79	13.98	3.61	14.88	14.73	14.01
BG	8.46	18.69	14.89	8.97	18.89	1.87	16.49	16.71	13.77
CZ	10.92	18.86	16.10	11.17	21.72	2.67	15.42	16.06	19.96
DK	10.89	20.25	10.47	11.38	24.82	3.38	14.20	15.90	15.41
DE	11.90	20.20	12.19	12.11	18.44	3.24	12.48	14.85	19.48
EE	9.02	22.33	14.21	9.27	20.78	3.43	15.31	16.90	12.68
IE	8.63	14.58	11.12	9.82	17.40	2.53	13.18	14.81	16.24
EL	10.10	20.38	13.73	8.74	14.57	1.98	12.77	14.23	18.65
ES	8.44	19.15	9.94	6.09	10.47	2.83	14.22	14.31	17.24
FR	9.19	17.87	8.87	9.45	15.73	4.77	17.94	16.79	16.30
IT	9.67	18.47	13.00	10.55	16.04	2.39	9.75	11.02	15.59
CY	10.70	20.09	14.88	9.04	19.03	3.43	12.91	16.31	20.00
LV	9.12	20.76	13.87	6.34	18.87	2.39	15.92	15.80	10.25
LT	9.48	19.59	11.44	5.47	17.00	2.95	12.95	14.03	6.57
LU	10.27	14.51	11.02	8.50	14.90	5.04	15.04	15.83	18.92
HU	9.99	20.07	14.97	9.93	14.05	1.89	15.11	15.24	15.32
MT	9.67	16.32	13.32	7.96	13.49	4.14	13.03	13.75	16.82
NL	11.25	18.05	9.94	15.04	21.28	5.44	16.42	21.71	15.84
AT	13.83	17.62	14.46	11.90	15.62	4.77	17.70	16.95	17.64
PL	8.48	17.57	11.10	6.18	15.42	1.90	9.58	10.08	14.00
PT	8.82	18.82	12.48	9.09	13.39	3.73	15.58	16.51	19.31
RO	9.47	19.32	12.72	10.97	13.41	3.15	15.70	15.52	10.42
SI	13.34	19.80	14.21	10.73	14.84	2.39	17.13	16.65	16.79
SK	11.53	17.81	14.95	10.07	21.30	3.02	13.88	19.25	13.08
FI	11.27	21.60	10.63	11.58	19.49	4.14	16.36	18.13	18.81
SE	12.46	21.85	9.04	11.36	20.20	5.18	15.08	17.21	18.75
UK	7.72	15.48	10.53	7.08	16.06	4.68	15.87	15.40	16.43
IS	10.98	21.00	11.85	12.71	12.84	5.87	4.55	17.91	14.66
NO	11.43	19.92	7.50	15.65	22.24	6.64	4.18	17.50	14.96

Table 21. Spearman rank correlation (individual level) between indicators, pillars and CEI ranks (in red values not significant at the 0.5% level).

Pillar	Sub-pillar	Indicator	Correlation with Index	Correlation with Pillar
Consumer Skills	Basic skills	QA42: Recognize cheaper product	0.66	0.69
		QA43: Find the best interest rate	0.65	0.68
		QA44: Calculate the interest on a loan	0.59	0.74
	Capacity to read logos	QA45: Correct interpretation of "grams of fat"	0.56	0.63
		QA46: find expiring date for a product	0.67	0.69
		QA47(b): Recognize correctly logos	0.64	0.72
Awareness of consumer legislation	Unfair commercial practices	QA8: Rule for illegal advertisement	0.47	0.49
		QA11: Rule for gifts received by post	0.30	0.41
		QA13: Rule for advertising prices (air tickets)	0.42	0.46
	Cooling-off period after purchase	QA6: Rule for money back guarantee	0.54	0.63
		QA9: Rule for the purchase of car insurance	0.23	0.38
		QA10: Rule for door-to-door sales	0.36	0.50
	Guaranteed period	QA7: Rule for commercial guarantees	0.38	0.59
Consumer Engagement	Comparing products	QA17: Comparisons when purchasing a good	0.48	0.47
		QA18: Actual behavior in comparing products	0.46	0.51
	Reading terms and	QA14-15: Reading terms and conditions	0.36	0.57
	Interest in consumer Information	QA16: Knowledge of consumer organizations	0.44	0.37
		QA40: Knowledge of programs related to consumer rights	0.37	0.41
		QA41: Actual behavior in obtaining info on consumer rights	0.19	0.22
	Tendency to talk	QA25: Tendency to communicate negative experiences	0.39	0.48
		QA26: Tendency to communicate positive experiences	0.45	0.53
	Detriment and redress	Combination of the questions QA27, QA28, QA31, QA36, and QA37: actual behavior when experimenting problems for which there is a legitimate cause for complaint	0.47	0.63

Table 22. Spearman rank correlation (individual level) between sub-pillar, pillars and CEI ranks

	Consumer skills	Awareness of consumer legislation	Consumer engagement	ICE
ICE	0.86	0.75	0.76	
Consumer skills		0.48	0.51	
Awareness of consumer legislation	0.48		0.40	
Consumer engagement	0.51	0.40		
Basic skills	0.90	0.41	0.43	0.75
Logos and labels	0.86	0.44	0.48	0.77
Unfair practices	0.39	0.68	0.34	0.57
Cooling off	0.37	0.75	0.29	0.56
Guaranteed period	0.20	0.59	0.18	0.38
Comparing products	0.44	0.35	0.59	0.56
Reading terms and conditions	0.19	0.15	0.57	0.36
Interest in information	0.38	0.32	0.51	0.49
Tendency to talk	0.36	0.25	0.57	0.48
Detriment and redress	0.31	0.25	0.63	0.47
Red: values not significant at 5%				

References

Benchmarking the performance of the UK framework supporting consumer empowerment through comparison against relevant international comparator countries - Report prepared for BERR - UK government department for Business, Enterprise and Regulatory Reform - by the ESRC Centre for Competition Policy University of East Anglia – Norwich (2008).

Brennan, C.,Ritters, K.(2004). *Consumer Education in the UK: New Developments in Policy, Strategy, and Implementation.* International Journal of Consumer Studies, 28 (March), 97-107.

Brennan, T. (2005). *Consumer Prefernce Not to Choose – Methodological and Policy Implications.* Discussion Paper, RFF DP 05-51.

Cherchye, L., Moesen W. and Van Puyenbroeck T. (2004), Legitimately Diverse, Yet Comparable: on Synthesising Social Inclusion Performance in the EU, *Journal of Common Market Studies*, 42: 919-955.

Communication from the Commission to the European Parliament, the Council, the Economic and Social Committee and the Committee of the Regions *'Consumer Policy Strategy 2007-2013: Empowering consumers, enhancing their welfare, effectively protecting them'* COM(2007) 99 final.

Conger, J., Kanungo, R. (1988). *The empowerment process: Integrating theory and practice.* Academy of Management Review, 13(3), 471–482

Dhar, R.. (1997).*Consumer Preference for a No-Choice Option.* Journal of Consumer Research 24, 215-231.

Denegri-Knott, J. (2004). *Sinking the online music pirates: foucault, power and deviance on the web.* Journal of Computer Mediated Communication, Vol. 9 No. 4.

Denegri-Knott, J., Zwick, D., Schroeder, J.E. (2006). *Mapping consumer power: an integrative framework for marketing and consumer research.* European Journal of Marketing, 40 (9/10), 950-971.

Friedman, M. (1996). *A positive approach to organized consumer action: the buycott as an alternative to the boycott.* Journal Consumer Policy, Vol. 19 No. 4, pp. 439-51

Garrett, G. (1987). *The effectiveness of marketing policy boycotts: environmental opposition to marketing.* Journal of Marketing, Vol. 51, pp. 46-57

Goldsmith, E. (2005). *Consumer Empowerment: Public Policy and Insurance Regulation.* International Journal of Consumer Studies, 29 (January), 86-92.

Gueterbock, R. (2004).*Greenpeace campaign case study-Stop Esso.* Journal of Consumer Behaviour, Vol. 3 No. 3, pp. 265-71.

Henry, P. (2005). *Social Class, Market Situation, and Consumers' Metaphors of (Dis)Empowerment.* Journal of Consumer Research, 31 (4), 766-778.

Hodgson, D.M. (2000). *Discourse, Discipline and the Subject, a Foucauldian Analysis of the UK Financial Services Industry.* Ashgate, Hampshire.

Holt, D. (2002). *Why do brands cause trouble? a dialectical theory of consumer culture and branding.* Journal of Consumer Research, Vol. 29 No. 1, pp. 70-90.

Hunter, G.L., Garnefeld, I. (2008). *When does Consumer Empowerment Lead to Satisfied Custormers? Some Mediating and Moderating Effects of the Empowerment-Satisfaction Link.* Journal of Research for Consumers. 15.

Hunter, G.L., Harrison, T., Waite, K. (2006). *The dimensions of consumer empowerment.* In Enhancing Knowledge Development in Marketing. AMA Educators' Proceedings, 17, 2007-2008.

Jacobs R., Smith P. and Goddard M. (2004), Measuring performance: an examination of composite performance indicators, Centre for Health Economics, *Technical Paper Series* 29.

Kozinets, R. (2002). *Can consumers escape the market? Emancipatory illuminations from burning man.* Journal of Consumer Research, 29 (June), 20-38.

Kozinets, R. V. and J. M. Handelman (2004). *Adversaries of Consumption: Consumer Movements, Activism, and Ideology.* Journal of Consumer Research, 31 (3), 691-704.

MacStavic, S. (2000). *The downside of patient empowerment.* Health Forum Journal, Jen/Feb, 30.

Melyn W. and Moesen W.W. (1991), Towards a synthetic indicator of macroeconomic performance: unequal weighting when limited information is available, *Public Economic research Paper* 17, CES, KU Leuven.

Nelson, W. (2002). *All power to the consumer? Complexity and choice in consumers' lives.* Journal of Consumer Behaviour, Vol. 2 No. 2, pp. 185-95.

Nicoletti G., Scarpetta S. and Boylaud O. (2000), Summary indicators of product market regulation with an extension to employment protection legislation, *OECD, Economics department working papers* No. 226, ECO/WKP(99)18. http://www.oecd.org/eco/eco

OECD-JRC, (2008). *Handbook on Constructing Composite Indicators. Methodology and user Guide.* Paris: OECD Publishing.

Pires, G.D., Stanton, J., Rita, P. (2006). *The internet, consumer empowerment and marketing strategies.* European Journal of Marketing, 40 (9/10), 936-949.

Pitt, L., Berthon, P., Watson, T., Zinkhan, G. (2002). *The internet and the birth of real consumer power.* Business Horizons, Vol. 45/6, pp. 7-14.

Rust, R., Oliver, R. (1994). *Video Dial Tone – The New World of Services Marketing.* Journal of Services Marketing, 8 (3), 5-16.

Saisana M., Tarantola S. and Saltelli A. (2005a), Uncertainty and sensitivity techniques as tools for the analysis and validation of composite indicators, *Journal of the Royal Statistical Society* A, 168(2), 307-323

Shaw, D., Brailsford, I. (2006). *You don't have to be paranoid to shop here but being sceptical helps: Empowered New Zealand consumers, pas and present?.*

Sirgy, J., Su, C. (2000). *The ethics of consumer sovereignty in an age of high tech.* Journal of Business Ethics, Vol. 28 No. 1, pp. 1-14.

Special Eurobarometer n°252 *'Consumer Protection in the Internal Market'.*

Wathieu, L., et al. (2002). *Consumer Control and Empowerment: A Primer.* Marketing. Letters, 13(3), 297-305.

Wilson, T., Lisle, D., Schooler, J., Hodges, S.,Klaaren, K., LaFleur, S. (1993). *Introspecting About Reasons Can Reduce Post-Choice Satisfaction.* Personality and Social Psychology Bulletin 19, 331-339.

Wright, L.T., Newman, A., Dennis C. (2006). *Enhancing consumer empowerment.* European Journal of Marketing, 40 (9/10), 925-935.

Appendix 1

1. Structure of the Consumer Empowerment Index

The Consumer Empowerment Index is a composite measure constructed from a set of more than 56,000 individual data gathered from the Special Eurobarometer n°342. The structure of the Index is reported in the main report (Figure 1). We consider 22 indicators grouped into 3 main dimension of empowerment: (1) *Consumer skills*, (2) *Awareness of legislation on consumer rights* and (3) *Consumer engagement*. The index has a pyramid structure: the Index is the weighted average of three pillars (Skills, Awareness and Engagement). Each pillar is the average of a variable number of sub-pillars and finally each sub-pillar is made by various indicators constructed from the survey questions.

Table A1.1: Disregarded questions because of missing data

Pillar	Disregarded question	Filtered by	Missing (%)		
			Average	Min	Max
Consumer skills	QA24	QA21	33.46	3.59(NOR)	60.32(BGR)
Awareness of consumer legislation	QA21	QA19	60.89	13.03(NOR)	92.02(BGR)
	QA22	QA19	77.75	36.4(NOR)	98.75(BGR)
Consumer engagement	QA32	QA27	79.86	55.09(NOR)	99.06(LVA)
	QA33	QA27	79.86	55.09(NOR)	99.06(LVA)
	QA34	QA33	82.85	59.93(NOR)	99.51(LVA)
	QA35	QA33	97.01	93.58(ESP)	99.56(LVA)

From the complete questionnaire we chose 27 questions to compile 22 indicators measuring different aspects of consumer empowerment. The remaining questions were discarded. The main reason for the exclusion is the high number of non-usable observations resulting from the nested structure of the questionnaire (Table A1.1). The statistic literature proposes different approaches for handling filtered data (Allison, 2002). A widely used method consists in the deletion from the sample of any non-usable

observations on any variable of interest (leastwise deletion). The application of this approach to the consumer empowerment survey, on average, would have implied the deletion of up to 97% of the observations from the dataset with a great loss of information.

Other methods imply some manipulation of the data introducing a dummy variable that, for each variable, signals the presence of a filtered observation (dummy variable adjustment) or substituting the non-usable values with some reasonable value (imputation approach). Unfortunately, these approaches are not suitable for the consumer empowerment survey because, given the strong nested structure of its questionnaire and the subsequent severe filtering problem, they may bias the data.

Therefore, the decision of discharging the questions listed in Table A1.1 is the result of a trade-off between the necessity to use the maximum amount of information that can be extracted from the data and to minimize the risk of distorting them. Furthermore, the information that is lost adopting this approach can be partially recovered stratifying the analysis between occupations, gender, levels of education, immigration statuses, and levels of internet familiarity. Concerning this point, as three out of the seven disregarded questions are filtered by items concerning the use of internet (namely QA24, QA21, and QA22 filtered by QA1 and QA19), the impact of the ICTs on consumer empowerment will be assessed comparing how this state differs between internet users and internet non-users.

Other reasons for exclusion are redundancy and the unclear link with the empowerment concept. The first motivation applies to questions QA32 and QA33 (filtered by QA27) that capture the same information as Q31; the latter one applies to questions QA12, QA39, and QA38 (not listed in Table A1.1).

2. Construction of indicators

Qualitative ordinal indicators cannot be used without the prior quantification of qualitative attributes. The strategy adopted for this quantification and, therefore, for the construction of the indicators used in the consumer empowerment index can be summarized as follows. The scores associated to the answer given to each selected question have been recoded so that their interval of variation is [0, 10]. According to the question, the value 0 has been attributed either to a wrong answer (see, for instance, the questions about consumer skills and awareness of consumer legislation - pillars Skills and Awareness), or to a "non-action" (e.g., the questions about consumer behaviour – pillar Engagement). On the other-hand, the value 10 has been attributed either to a correct answer (pillar Skills and Awareness) or to the behaviour that corresponds to a fully empowered consumer (pillar Engagement).

For all the questions (QA17 and QA18 are exceptions) the score of 0 point has also been assigned to the answer "don't know" (DK).

The recodification strategy of the questions covered by the *Interest in information* sub-pillar (namely QA16, QA40, and QA41) accounts for country specificities. The normalized scores assigned to these questions are based on the percentiles of the country-distribution of their answers. The cases where the consumer could not give an answer to a question because she/he lacked the specific experience (i.e. never bought this kind of good, never signed this kind of contract, never had a problem, and never had a god experience) have been considered as "non-applicable". These cases have been treated with a specific imputation strategy. For each indicator, the number of non-applicable answers has been eliminated from the original sample and randomly reallocated to the remaining categories.

After the application of this normalization strategy, while almost all the indicators covered by the pillars Skills and Awareness are dichotomous (the only exception is question QA47B that generates a categorical variable); pillar Engagement is composed of 8 multiple choice indicators (corresponding to the questions QA17, QA14-15, QA16, QA25, QA26, QA18, QA40, and QA27-28-31-36-37), and only one dichotomous indicator (associated to question QA41).

Details are reported below.

P1 – Consumer skills: *original questions*

- BASIC SKILLS
  - QA42: The same flat-screen TV is on sale in both shop A and B. Which one is cheaper?
  - QA43: Thinking now about savings or deposit accounts, which of the following would be the best interest rate?
  - QA44: A family is charged interest at 6% per year on a 50.000 euro home loan. How much is the interest for the first year?

- LOGOS AND LABELS
  - QA45: Looking at this picture, please could you tell me how many grams of fat there are in 100 grams of this product?
  - QA46: Still looking at the same picture, could you please tell me by which date is it suggested you can eat this product?
  - QA47: And could you select which of the statements you think is the right meaning for logo A (B, C, D, and E)?

P1 – Consumer skills: *recodification*

- BASIC SKILLS

    - QA42: Dichotomous, max score (10) to the correct answer (cat.2: shop B), min (0) to the others

    - QA43: Dichotomous, max score (10) to the correct answer (cat.2: cat.4: 4%), min (0) to the others

    - QA44: Dichotomous, max score (10) to the correct answer (cat.2: 3000), min (0) to the others

- LOGOS AND LABELS

    - QA45: Dichotomous, max score (10) to the correct answer (1,5g/100g), min (0) to the others

    - QA46: Dichotomous, max score (10) to the correct answer (June 2008), min (0) to the others

    - QA47: Categorical, max score (10) to the correct answer (b1: cat.3; b2: cat.6; b3: cat.1; b4: cat.4; b5: cat2), min (0) to the others. For each respondent average for [b1-b5]

The vertical lines in the graph on the right indicates the lower (red) or the upper (green) boundary used to detect peculiar distributions at the country level. These lines are showed only if necessary.

Distribution per country and total (non-weighted values)
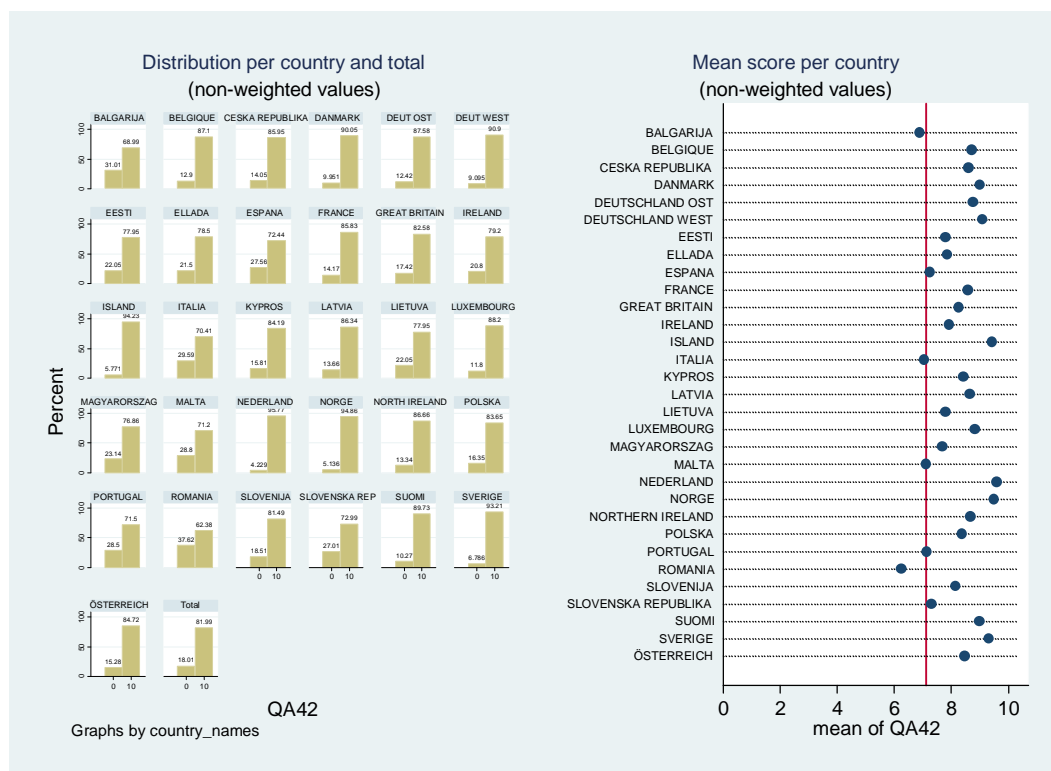
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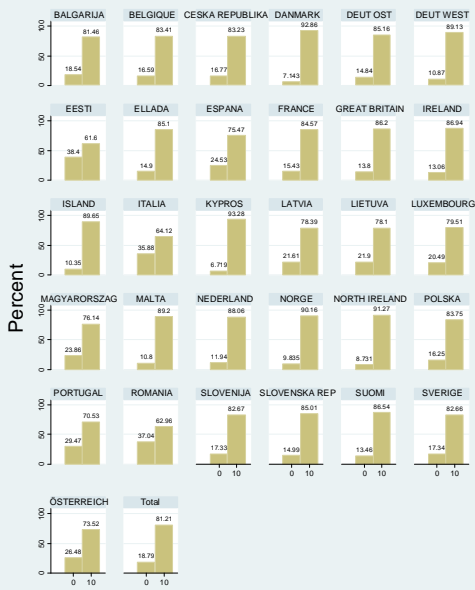
QA43

Graphs by country_names

Distribution per country and total (non-weighted values)
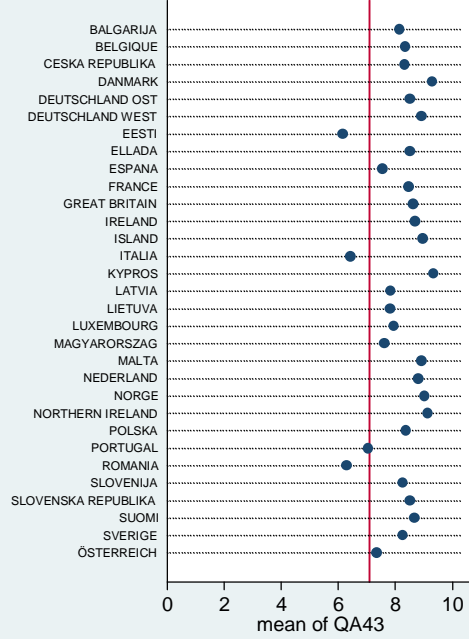
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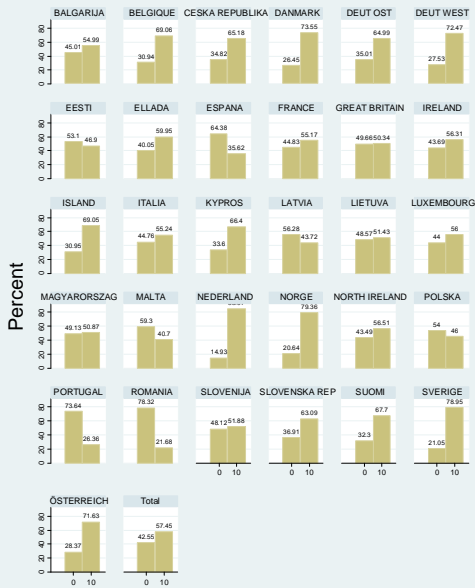
QA44

Graphs by country_names

75

Distribution per country and total
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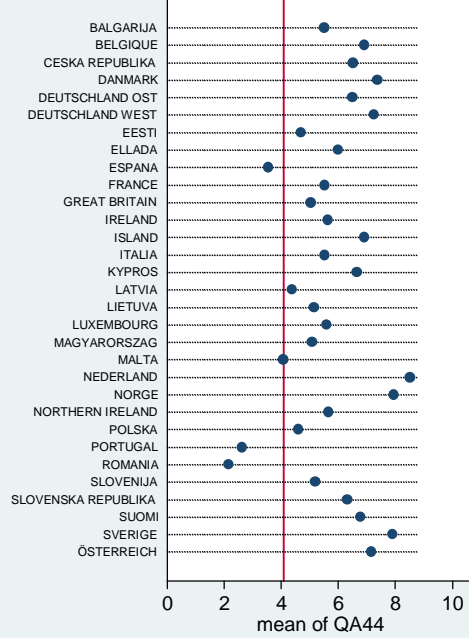
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(non-weighted values)
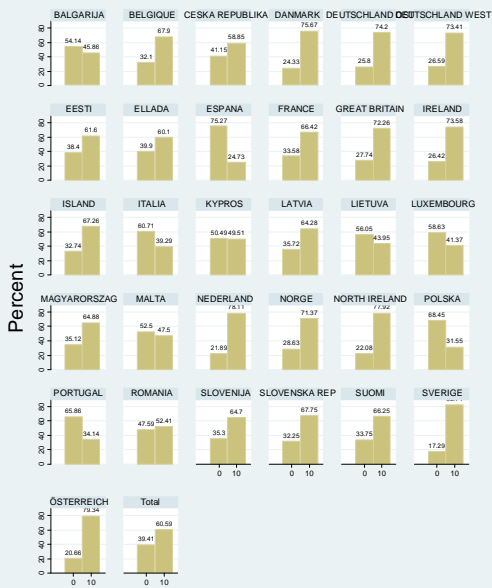
QA45

Graphs by country_names

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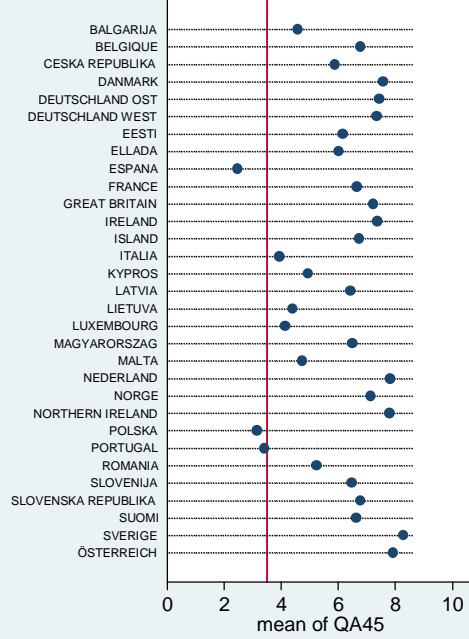
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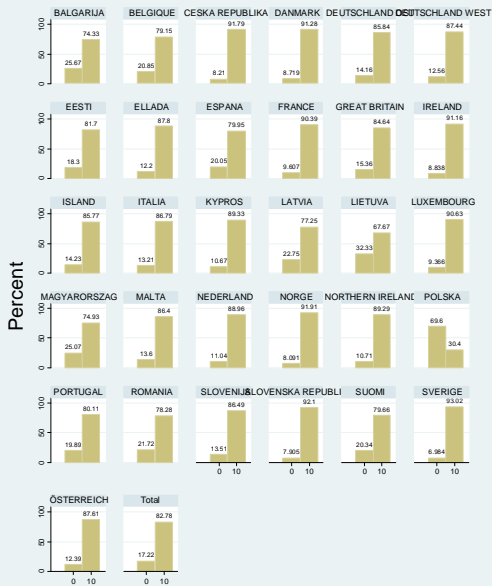
QA46

Graphs by country_names
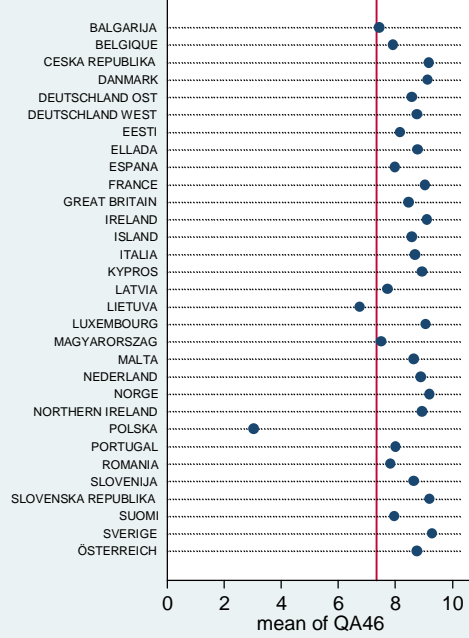
Distribution per country and total (non-weighted values)

Mean score per country (non-weighted values)

QA47B

Graphs by country_names

Distribution per country and total (non-weighted values)

Mean score per country (non-weighted values)

qa47b1_s
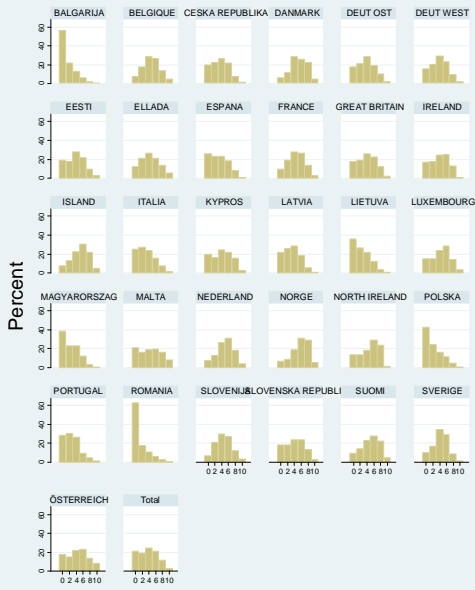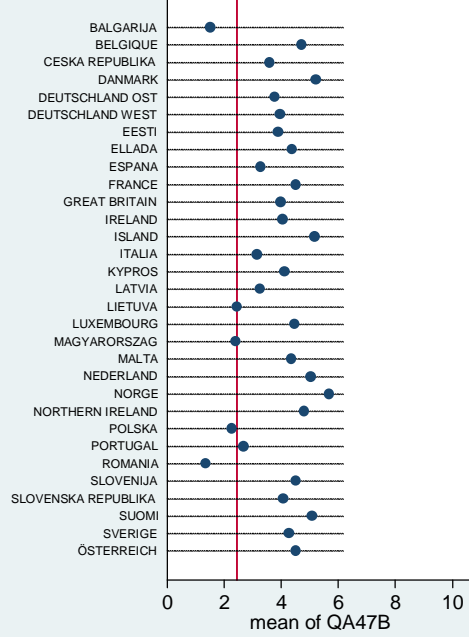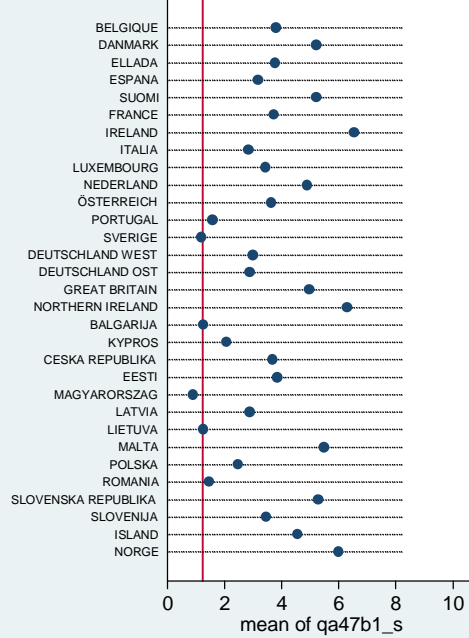
Graphs by B Country
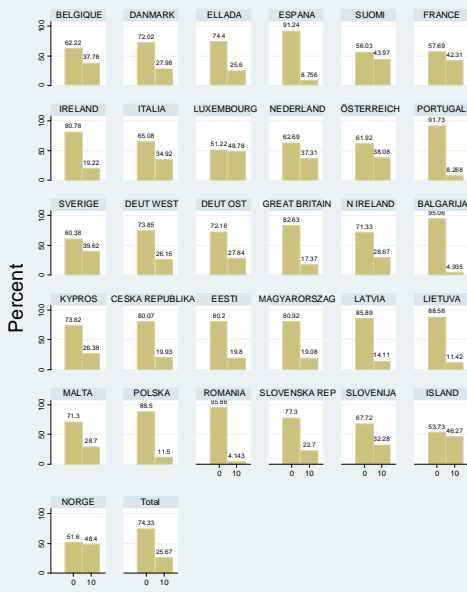
Distribution per country and total (non-weighted values) — qa47b2_s — Graphs by B Country

Mean score per country (non-weighted values) — mean of qa47b2_s
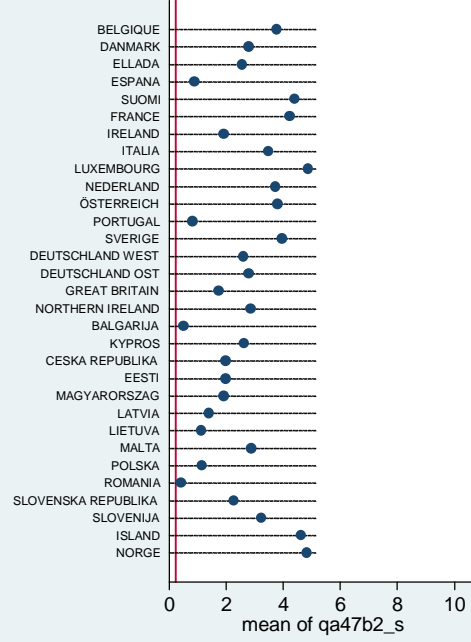
Distribution per country and total (non-weighted values) — qa47b3_s — Graphs by B Country

Mean score per country (non-weighted values) — mean of qa47b3_s

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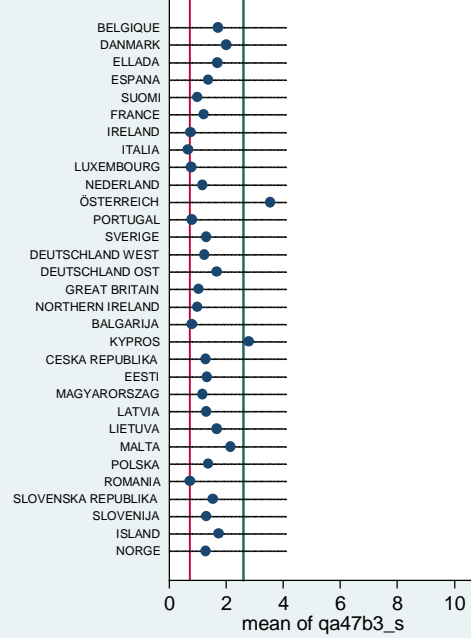
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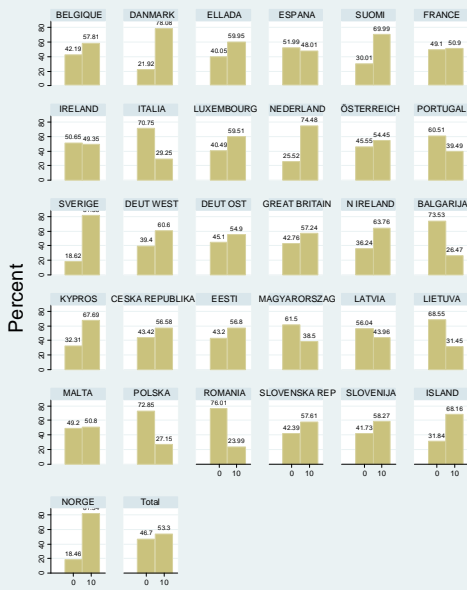
qa47b4_s

Graphs by B Country

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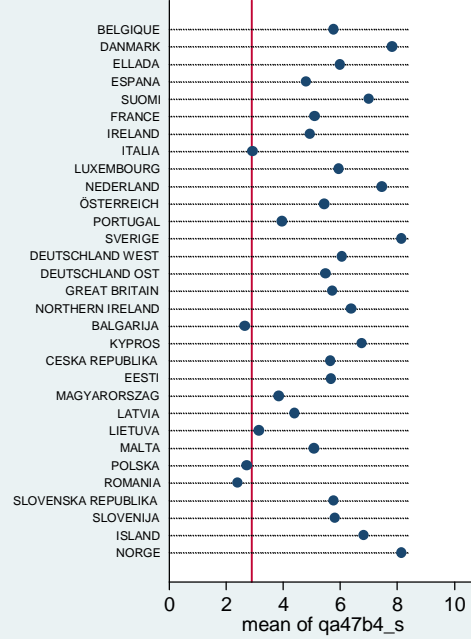
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(non-weighted values)
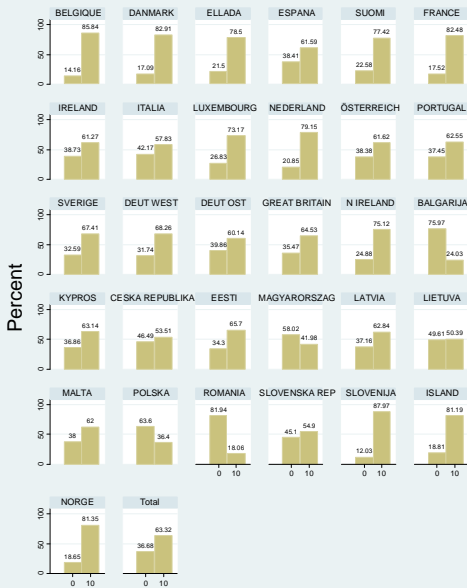
qa47b5_s

Graphs by B Country
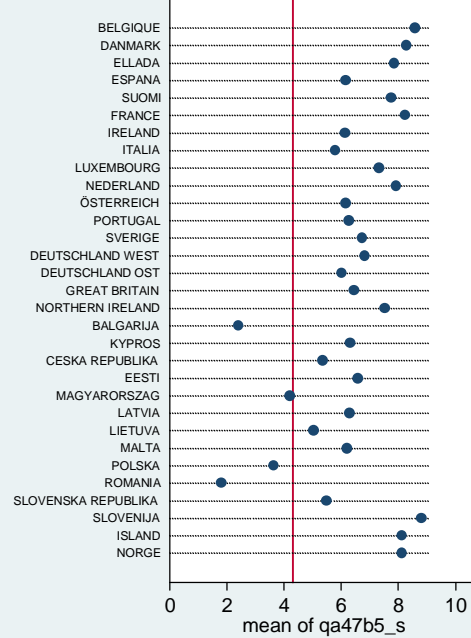
P2 – Awareness of consumer legislation: *original questions*

- UNFAIR PRACTICES
    - QA8: An advertisement in your newspaper says: "Free sunglasses, just call this number to collect them". You call the number and later you discover that it is a very costly premium rate telephone number. Was the advertisement legal or illegal?
    - QA11: Imagine you receive by post two educational DVDs that you have not ordered, together with a 50 Euros bill for the products. Are you obliged to pay the bill?
    - QA13: Which rule do you think applies about advertising the price of air tickets?

- COOLING OFF
    - QA6: Suppose you ordered a good by post, phone or the Internet, do you think you have the right to return the good you ordered 4 days after its delivery and get your money back, without giving any reason?
    - QA9: Imagine you purchase car insurance over the telephone, the internet or by post. Two days later you discover a better deal with another provider and you decide to cancel the original contract. Do you have the right to do that?
    - QA10: Imagine a salesman calls uninvited at your door demonstrating a vacuum cleaner. You buy the vacuum cleaner from him, but two days later you discover a better deal. Do you have the right to return the vacuum cleaner and get your money back without giving any reason?

- GUARANTEED PERIOD
    - QA7: Imagine that a new fridge you bought 18 months ago breaks down. You didn't buy any extended commercial guarantee. Do you have the right to have it repaired or replaced for free?

P2 – Awareness of consumer legislation: *recodification*

- UNFAIR PRACTICES
    - QA8: <u>Dichotomous</u>, max score (10) to the correct answer (cat.2), min score (0) cat.1, cat.3, and cat.4.
    - QA11: <u>Dichotomous</u>, max score (10) to the correct (cat.3), min score (0) to cat.1, cat.2, and cat.4.
    - QA13: <u>Dichotomous</u>, max score (10) to the correct (cat.1), min score (0) cat.2, cat.3, and cat.4.

- COOLING OFF
  - QA6: <u>Dichotomous</u>, max score (10) to the correct answer (cat.1), min score (0) to cat.2, and cat.3.
  - QA9: <u>Dichotomous</u>, max score (10) to the correct answer (cat.3), min score (0) to cat.1, cat.2, cat.4, and cat.5.
  - QA10: <u>Dichotomous</u>,
    - For all countries except DK and LU: max score (10) to the correct answer (cat.1), min score (0) to cat. 2, cat.4, and cat.5.
    - For LU and DK the correct answers are: max score (10) to the correct answer (cat.3 and cat. 4), min score (0) to cat.1, cat.2, and cat.5.

- GUARANTEED PERIOD
  - QA7: <u>Dichotomous</u>, max score (10) to the correct answer (cat.1), min score (0) to cat.2, cat.3, and cat, 4.

The vertical lines in the graph on the right indicates the lower (red) or the upper (green) boundary used to detect peculiar distributions at the country level. These lines are showed only if necessary.
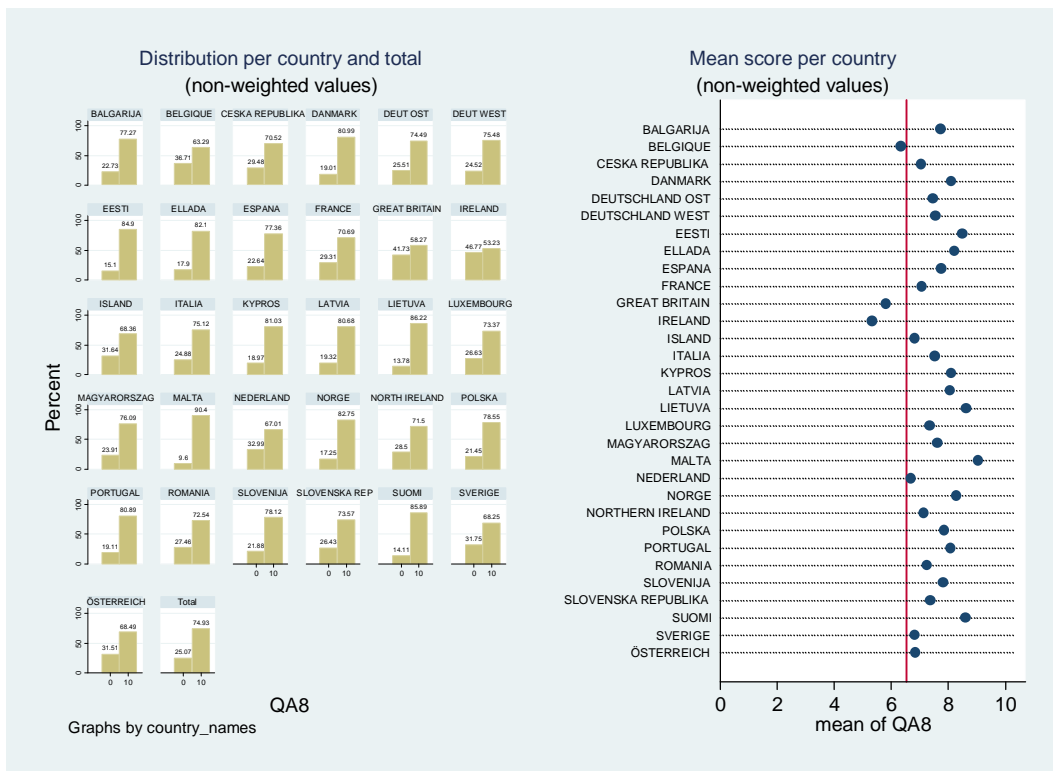
Distribution per country and total
(non-weighted values)
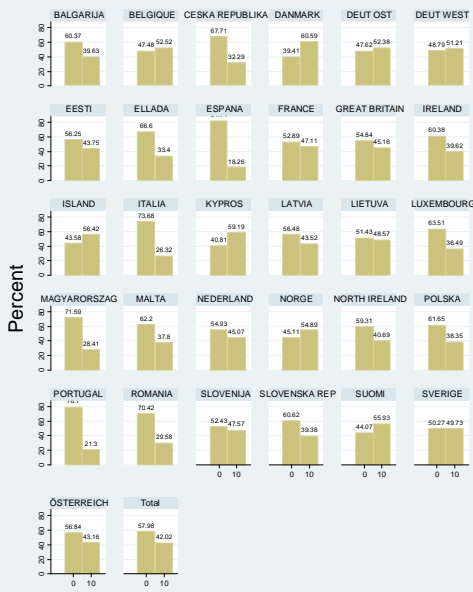
QA11

Graphs by country_names

Mean score per country
(non-weighted values)

mean of QA11
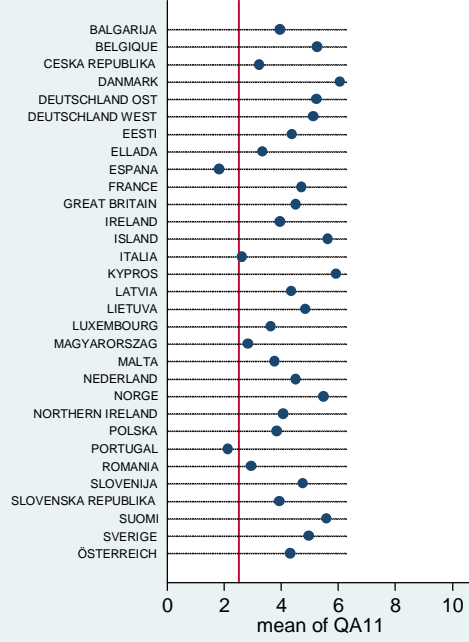
Distribution per country and total
(non-weighted values)
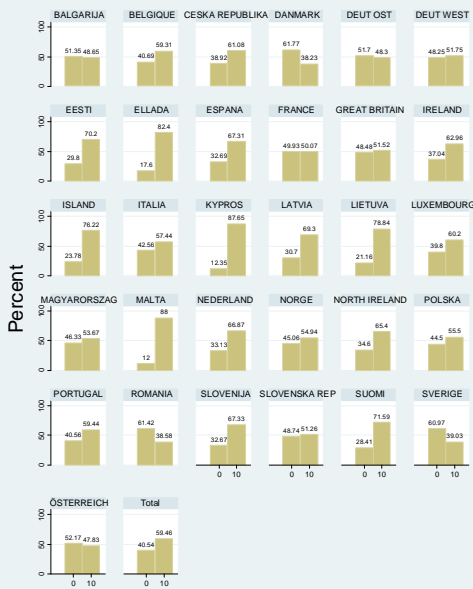
QA13

Graphs by country_names

Mean score per country
(non-weighted values)

mean of QA13

Distribution per country and total (non-weighted values)
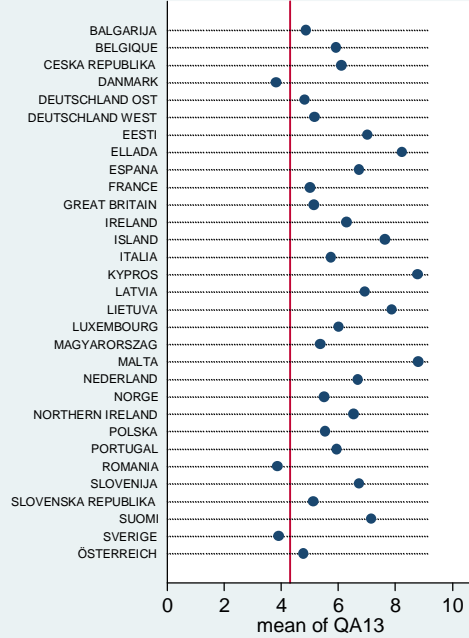
Mean score per country (non-weighted values)
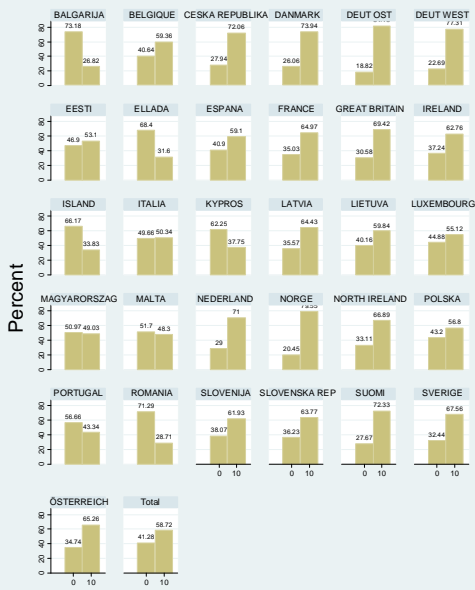
QA6

Graphs by country_names

Distribution per country and total (non-weighted values)
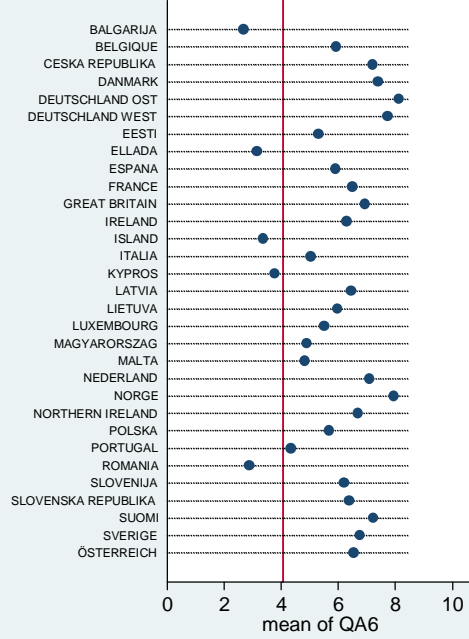
Mean score per country (non-weighted values)

QA9

Graphs by country_names

83
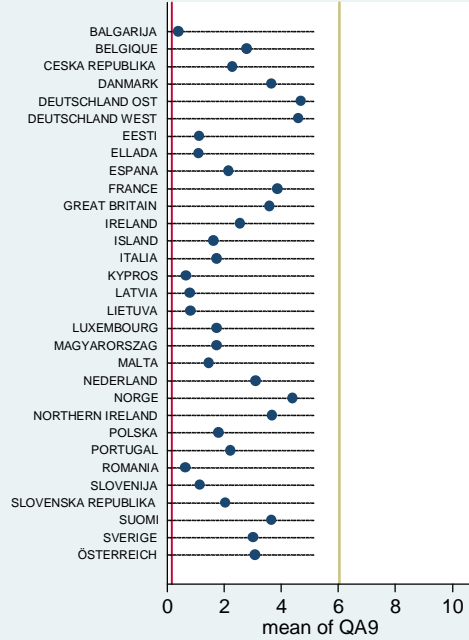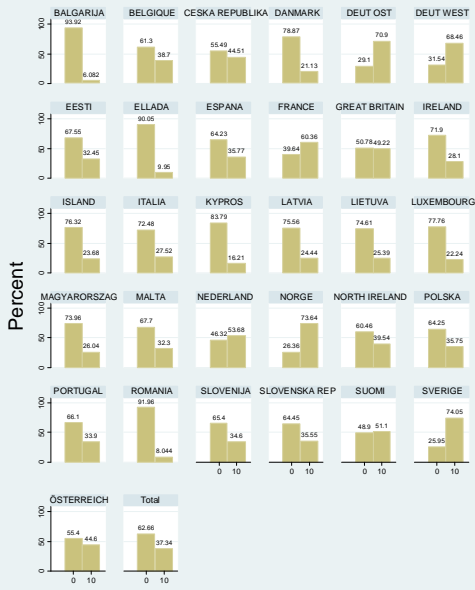
Distribution per country and total (non-weighted values) — Mean score per country (non-weighted values). QA10. Graphs by country_names.
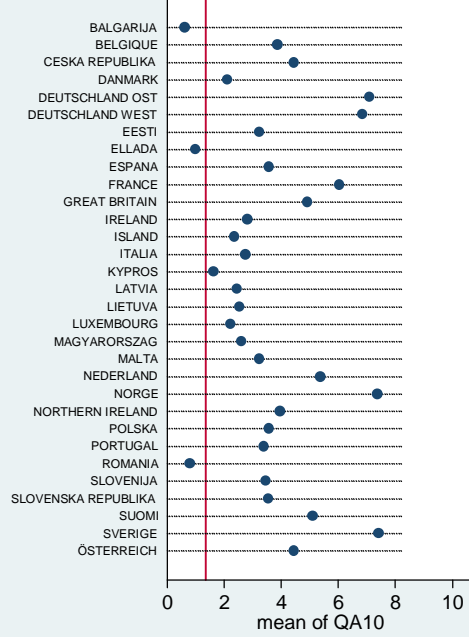
Distribution per country and total (non-weighted values) — Mean score per country (non-weighted values). QA7. Graphs by country_names.
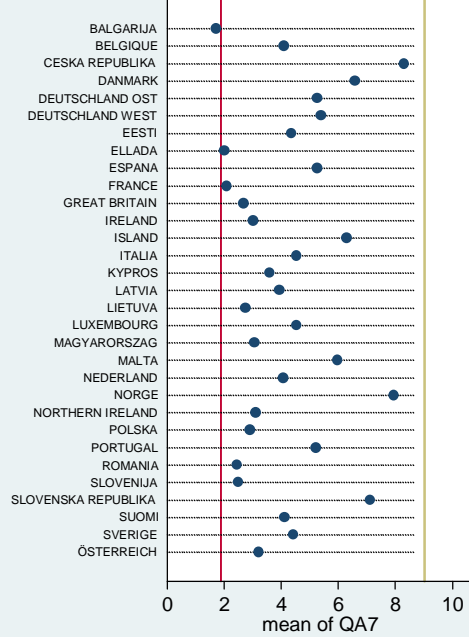
P3 – Consumer engagement: *original questions*

- **COMPARING PRODUCTS**
  - QA17: Thinking about the last time you purchased a good, such as a household appliance or electronic good, which of the following did you consult in order to make a comparison?
  - QA18: In the last 12 months, how often have you compared the price of goods by looking at the price per unit measure for example, price per kilo, per meter or per liter?

- **READING TERMS AND CONDITIONS**
  - QA14: Please think about the last time you signed a contract for a service, for example, gas, electricity, mobile phone, bank account or insurance. Did you read its terms and conditions?
  - QA15: Why did you not read it all?

- **INTEREST IN INFORMATION**
  - QA16: Thinking about (NATIONALITY) consumer organisations or public agencies/ authorities, can you please name any organisations representing and protecting consumers in (OUR COUNTRY) that you have heard of?
  - QA40: There are programmes on the TV (and radio), which show problems frequently encountered by consumers and provide advice on rights and actions to be pursued. How often have you watched or listened to such programmes during the last 12 months?
  - QA41: In the last 12 months, did you go looking for information on your rights as a consumer?

- **TENDENCY TO TALK**
  - QA25: I would now like you to think about the last problem you had as a consumer. This could be any problem, related to a good, a service, a retailer or a provider. How many people, apart from the employees of the business concerned, did you tell, in total, about the last problem you had as a consumer?
  - QA26: I would now like you to think about the last good experience you had with a good, a service, a retailer or a provider. How many people, apart from the employees of the business concerned, did you tell, in total, about the last good experience you had as a consumer?

- **DETRIMENT AND REDRESS**
  - QA27: In the past 12 months have you encountered any problems for which you had legitimate cause for complaint with a good, a service, a retailer or a provider?

- QA28: If you had experienced such a problem in the last 12 months, do you think that you would have made a complaint to the retailer, the provider or the manufacturer?
- QA31: As a consequence of the problem(s) you encountered, did you take any of the following actions?
- QA36: Thinking about the last time you encountered this kind of problem but didn't take the businesses concerned to Court, what were the main reasons for that?
- QA37: Thinking about the last time you encountered such a problem but didn't take the business concerned to an out-of-court dispute settlement body (ADR), what were the main reasons for that?

P3 – Consumer engagement: *recodification*

- COMPARING PRODUCTS
    - QA17: 10 points to cat.2; 8 points to cat.3, cat.4, and cat.5 (for each respondent the average of these cat.s has been calculated); 6 points to cat.6; 4 points to cat.1, cat.7, and cat.9; 0 points to cat.10; cat.8 and 11 are considered as not applicable and assigned proportionally to the rest of the sample. For each respondent, the average score has been rescaled between 0 and 10.
    - QA18: 10 points to cat.1 and cat.2; 5 points to cat.3 and cat.4; 0 points to cat.5; cat.6 is considered as not applicable and assigned proportionally to the rest of the sample.

- READING TERMS AND CONDITIONS

    - QA14-15: 10 points to cat.1 in QA14; cat.4 in QA14 treated as not applicable and reassigned proportionally; 0 points to cat.5 in QA14; cat.2 and cat.3 in QA14 go to QA15 and recoded as follow:
        - 2 points to cat.2 and cat.5 in QA15
        - 3 points to cat.6, cat.7 and cat.8 in QA15
        - 4 points to cat.1, cat.3, and cat.4 in QA15
        - 0 points to cat.9 and cat.10 in QA15.
    For each respondent, the average score has been computed.

- INTEREST IN INFORMATION

    - QA16: For each country, calculate the ratio between the answer (number of associations known by the respondent) and the "second-best" answer in terms of number of associations known for that country (we eliminate the answers indicating the highest number since in many countries it constitutes an

outlier). Rescale this ratio in the interval [3 10]. Assign the max score to the 95th percentile and beyond (to avoid rewarding too much high answers). DK scores 0.

- QA40: For each country the median of the answers is calculated. Ten points are assigned to the categories below or equal to the country median (corresponding to a higher frequency in encountering TV/radio programs). Categories above the median are scored linearly. Zero points are assigned to cat. 4, cat.5, and cat.6.
- QA41: <u>Dichotomous</u>, max score (10) to cat.1 and min score (0) to cat.2, and cat.3

- <u>TENDENCY TO TALK</u>

  - QA25: Lowest score (0) to cat. 99 and 00; cat.97 is considered equal to cat.1; cat.98 is considered as not applicable and assigned proportionally to the other categories. Linear scoring until the country median (starting at 1) and then 10 points.
  - QA26: same as in QA25.

- <u>DETRIMENT AND REDRESS</u>

  If QA27 is cat.2 and cat.3 go to QA28

  If in QA28 the answer is cat. 1: 8 points
     If in QA28 the answer is cat.2 and cat.3: 0 points.

  If QA27 is cat.1 then go to QA31
     If answers in QA31 belong to cat.1, cat.3, cat.4, cat.5,and cat.6 then go to QA36
        If the answer in QA36 is cat.1, cat.2, cat. 9, and cat.10, then 0 points
        If the answer in QA36 is cat.4, cat.6, and cat.7, then 5 points
        If the answer in QA36 is cat.3, cat.5, and cat.8 then 10 points
        Average for each respondent

  If answers in QA31 belong to cat.2 then go to QA37
        If the answer in QA37 is cat.1, cat.2, cat.10, and cat.11 then 0 points
        If the answer in QA37 is cat.4, cat.5, and cat.7, then 5 points
        If the answer in QA37 is cat.3, cat.6, cat.8, and cat.9 then 10 points
        Average for each respondent

The vertical lines in the graph on the right indicates the lower (red) or the upper (green) boundary used to detect peculiar distributions at the country level. These lines are showed only if necessary.

P3 – Consumer engagement: *Non Applicable cases distribution*

	QA17		QA18		QA14-15		QA25		QA26	
	ABS	REL	ABS	REL	ABS	REL	ABS	REL	ABS	REL
BALGARIJA	148	0.07	45	0.12	446	0.10	896	0.07	545	0.11
BELGIQUE	67	0.03	5	0.01	118	0.03	325	0.02	95	0.02
CESKA REPUBLIKA	36	0.02	13	0.03	100	0.02	396	0.03	61	0.01
DANMARK	10	0.00	1	0.00	55	0.01	352	0.03	86	0.02
DEUTSCHLAND OST	6	0.00	6	0.02	27	0.01	139	0.01	34	0.01
DEUTSCHLAND WEST	37	0.02	23	0.06	95	0.02	318	0.02	86	0.02
EESTI	119	0.06	15	0.04	116	0.03	635	0.05	353	0.07
ELLADA	66	0.03	2	0.01	296	0.07	373	0.03	97	0.02
ESPANA	95	0.04	6	0.02	116	0.03	471	0.03	180	0.04
FRANCE	41	0.02	4	0.01	74	0.02	778	0.06	264	0.05
GREAT BRITAIN	59	0.03	30	0.08	86	0.02	460	0.03	160	0.03
IRELAND	116	0.05	23	0.06	200	0.05	387	0.03	80	0.02
ISLAND	16	0.01	2	0.01	48	0.01	195	0.01	42	0.01
ITALIA	89	0.04	12	0.03	259	0.06	246	0.02	65	0.01
KYPROS	25	0.01	1	0.00	142	0.03	407	0.03	195	0.04
LATVIA	109	0.05	5	0.01	159	0.04	426	0.03	146	0.03
LIETUVA	170	0.08	7	0.02	130	0.03	466	0.03	279	0.06
LUXEMBOURG	25	0.01	9	0.02	56	0.01	206	0.02	30	0.01
MAGYARORSZAG	112	0.05	6	0.02	166	0.04	451	0.03	321	0.06
MALTA	43	0.02	5	0.01	167	0.04	292	0.02	65	0.01
NEDERLAND	17	0.01	5	0.01	42	0.01	385	0.03	39	0.01
NORGE	13	0.01	10	0.03	27	0.01	138	0.01	14	0.00
NORTHERN IRELAND	17	0.01	5	0.01	38	0.01	239	0.02	104	0.02
POLSKA	237	0.11	39	0.10	223	0.05	618	0.05	328	0.07
PORTUGAL	87	0.04	17	0.04	369	0.09	839	0.06	340	0.07
ROMANIA	209	0.10	66	0.17	295	0.07	593	0.04	186	0.04
SLOVENIJA	29	0.01	3	0.01	78	0.02	669	0.05	256	0.05
SLOVENSKA REPUBLIKA	33	0.02	5	0.01	88	0.02	462	0.03	95	0.02
SUOMI	26	0.01	2	0.01	110	0.03	474	0.04	227	0.05
SVERIGE	35	0.02	6	0.02	82	0.02	372	0.03	75	0.02
ÖSTERREICH	40	0.02	5	0.01	72	0.02	457	0.03	106	0.02
TOTAL	2132		383		4280		13465		4954	

Distribution per country and total (non-weighted values)

Mean score per country (non-weighted values)

QA17

Graphs by country_names

Distribution per country and total (non-weighted values)

Mean score per country (non-weighted values)

QA18

Graphs by country_names

Distribution per country and total (non-weighted values)
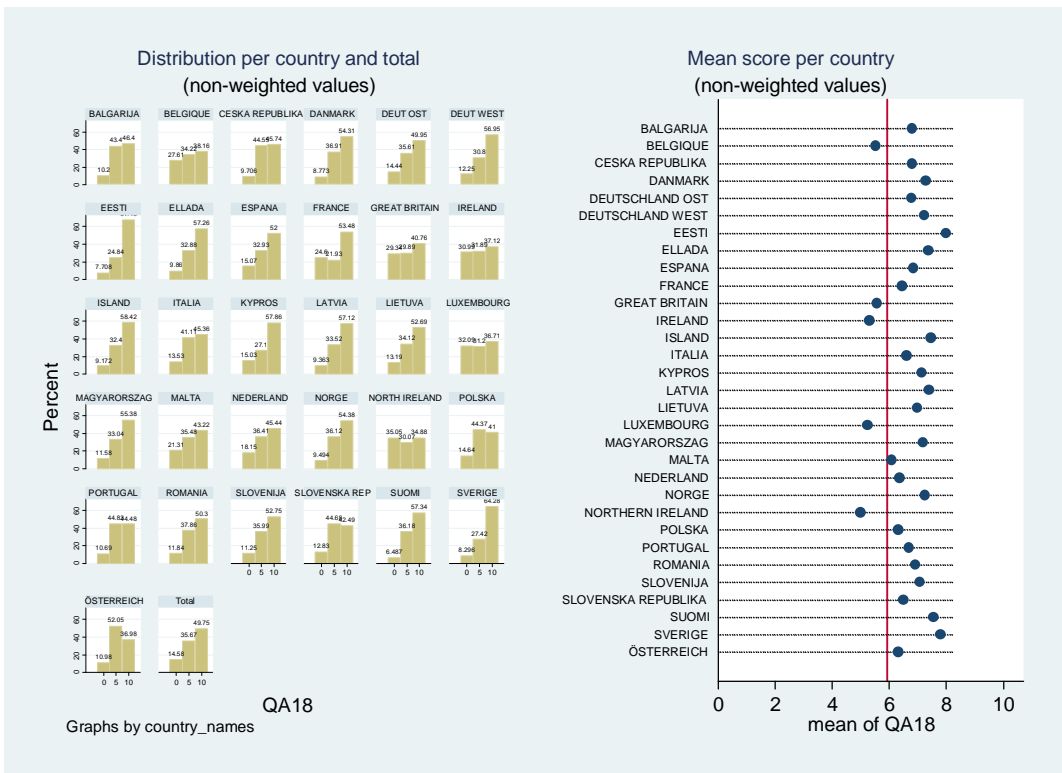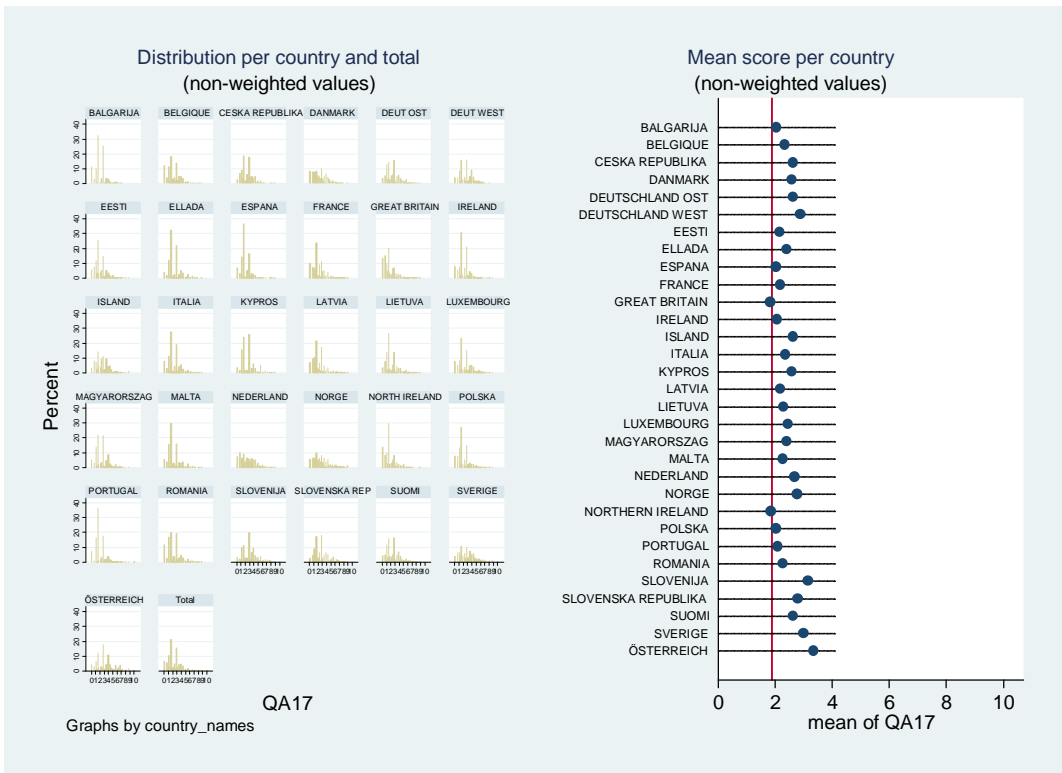
Mean score per country (non-weighted values)
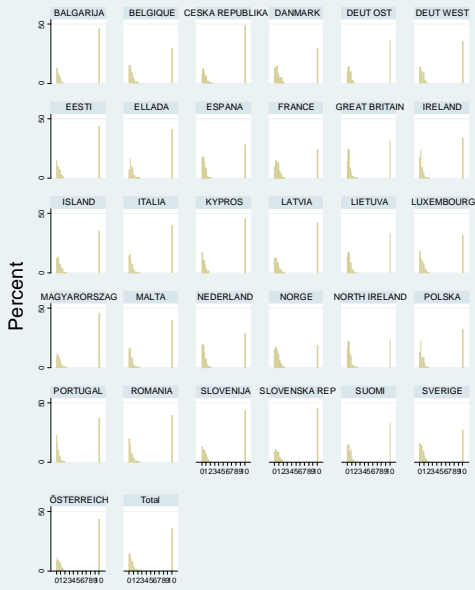
QA14_15

Graphs by country_names

mean of QA14_15

Distribution per country and total (non-weighted values)
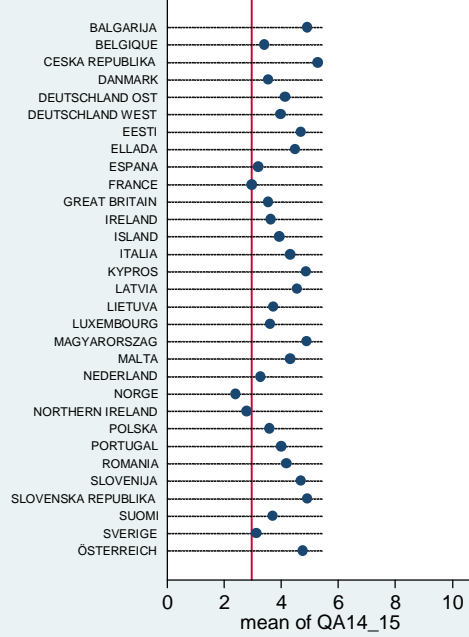
Mean score per country (non-weighted values)
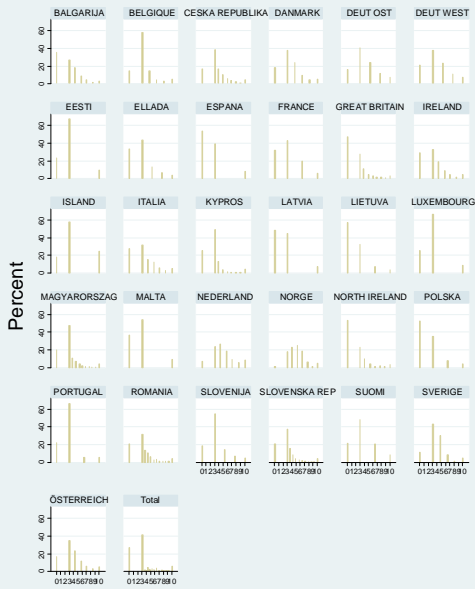
QA16

Graphs by country_names

mean of QA16

Distribution per country and total (non-weighted values)
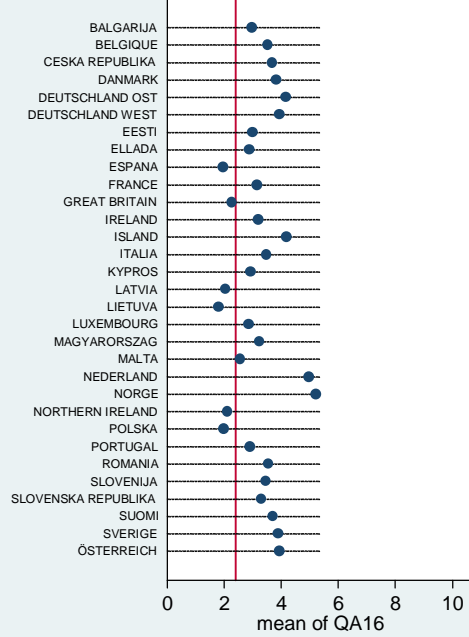
Mean score per country (non-weighted values)
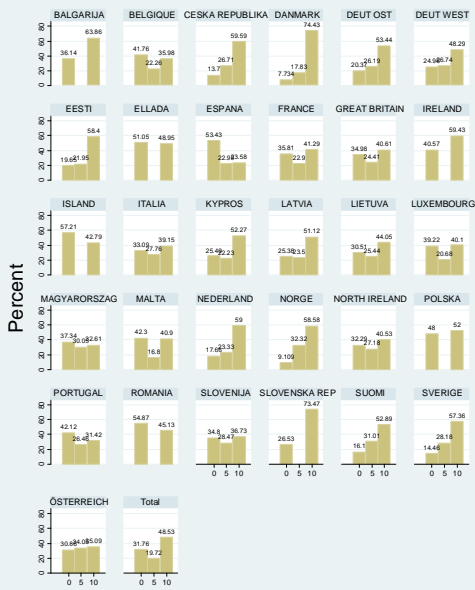
QA40

Graphs by country_names

Distribution per country and total (non-weighted values)
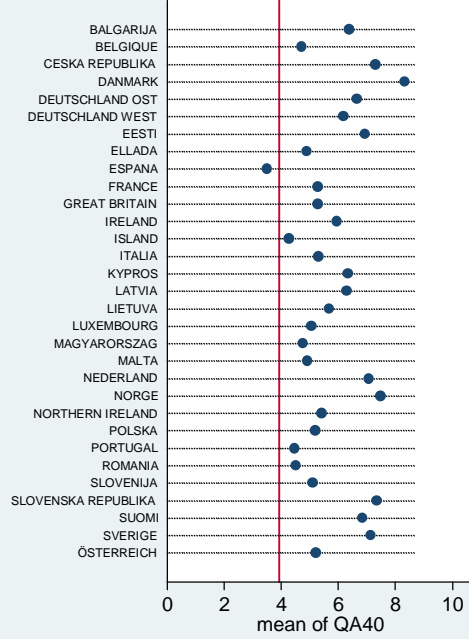
Mean score per country (non-weighted values)

QA41

Graphs by country_names

Distribution per country and total
(non-weighted values)

Mean score per country
(non-weighted values)

QA25

Graphs by country_names

Distribution per country and total
(non-weighted values)

Mean score per country
(non-weighted values)

QA26
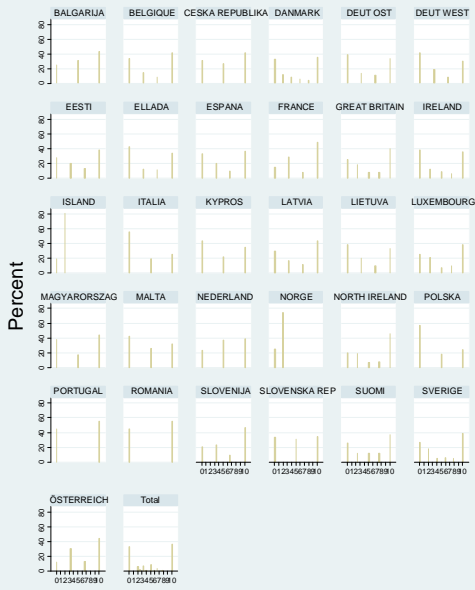
Graphs by country_names

Distribution per country and total
(non-weighted values)

Graphs by country_names
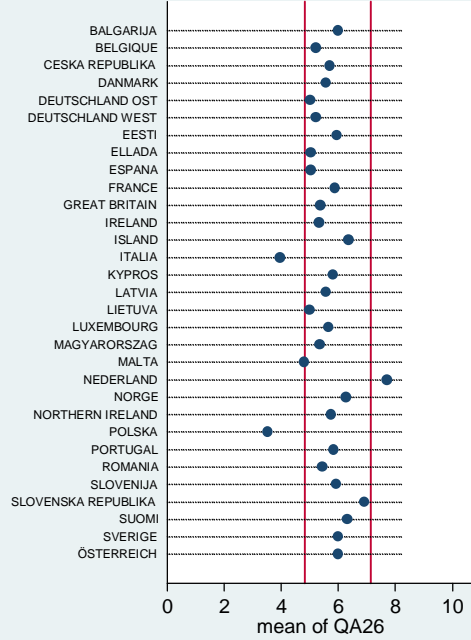
QA_27_ALL

Mean score per country
(non-weighted values)

mean of QA_27_ALL
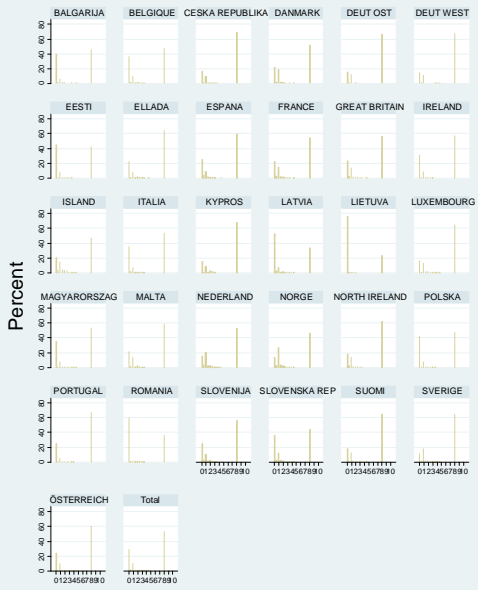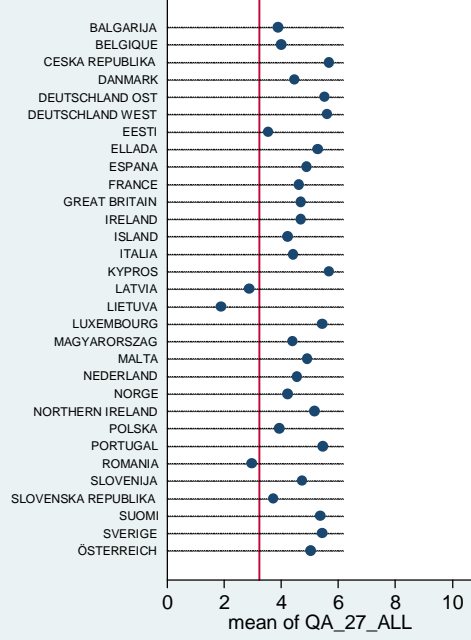
3. Univariate analysis

Appendix 2 presents the univariate analysis of the indicators covered by each pillar, which aims at identifying distributional characteristics (e.g. asymmetry, central tendency) as well as potential outliers requiring a variable transformation. It also contains a brief description of the Principal Component Analysis discussed in the main report. The data used for the univariate analysis are raw data (prior to the multiplication with design weights) where Great Britain is separated from Northern Ireland and West and East Germany are split. For the calculation of the Consumer Empowerment Index they have been pulled together in United Kingdom and Germany.

3.1 Descriptive statistics

3.1.1 Consumer skills

The distributional characteristics of the indicators covered by the *Consumer skills* pillar are presented in Table A2.1 and in Figure A2.1.

Table A2.1: *Consumer skills* - descriptive statistics

Sub-pillar	Question	mean	sd	cv
Basic skills	QA42	8.199076	3.842678	0.468672
	QA43	8.120982	3.906372	0.481022
	QA44	5.745427	4.944165	0.860539
Logos and labels	QA45	6.058508	4.886715	0.806587
	QA46	8.278231	3.775374	0.45606
	QA47B	3.818526	2.788159	0.730166

sd= standard deviation; cv=coefficient of variation

Given that almost all the indicators in pillar 1 are dichotomous (the categorical variable generated by question QA47B is the only exception) and assume values 0 or 10, this table shows a rather right-skewed distribution for the indicators generated by questions QA42, QA43, and QA46.

Figure A2.1: *Consumer skills* – Histograms
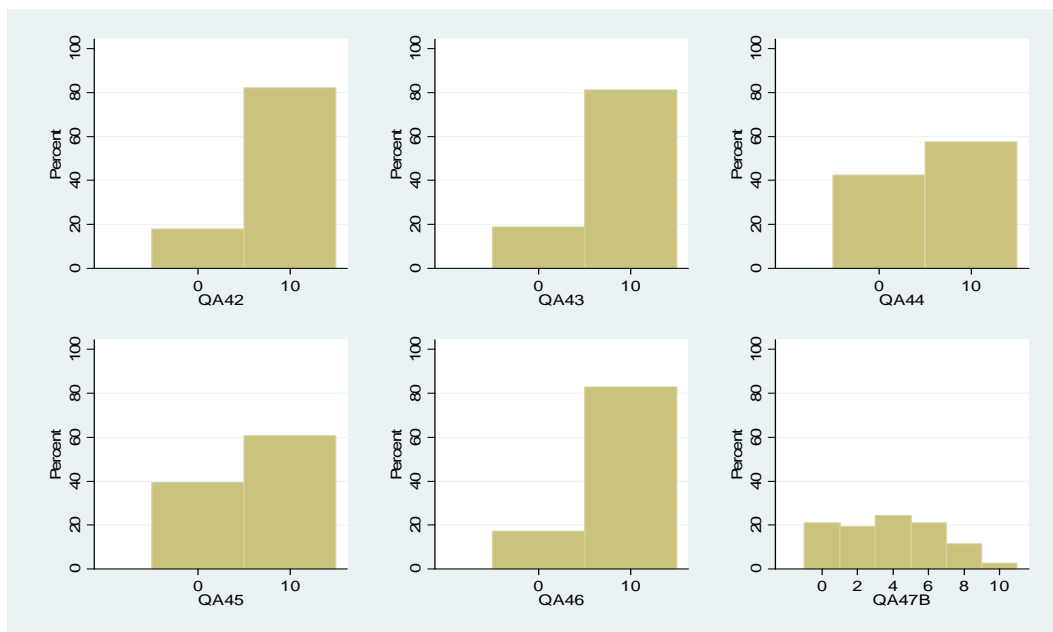
Indicators QA42, QA43, and QA46 assume value 10 (the maximum value) in more than 81% of the observations. This raises some issues on their informative power (the high concentration of the values is also reflected by the low standard deviation and coefficient of variation). The same table and figure show that questions QA44, QA45, and QA47B generate more informative indicators, with observations mostly equally distributed between the minimum and the maximum value (respectively 0 and 10).

The distribution of these indicators is of course non-homogenous across countries. Distributional peculiarities at the country level have been detected applying the technique generally used to isolate the outliers (see Tukey, 1977[23]). According to this method, outliers are the observations outside the following two boundaries:

- Lower: $$L = p75 - \frac{3}{2}(p75 - p25)$$

- Upper: $$U = p75 + \frac{3}{2}(p75 - p25)$$

where (p75 – p25) is the interquartile difference. In this specific context, a country is said to have a "peculiar distribution" for a certain variable if its country-mean is below or above the lower and upper boundary respectively defined by Tukey (1977). For each indicator, countries below the lower boundary are characterized by a more left-skewed distribution than the one estimated on the whole dataset (all the

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[23] We applied the technique proposed by Tukey because it is quite straightforward and because it is implemented by the most widely used statistical packages (i.e. STATA and SPSS).

countries together) and, similarly, countries above the upper boundary are characterized by a more right-skewed distribution than the one estimated on the whole dataset. Table A2.2 presents the results of this analysis and classifies the distributional peculiarities at the country level as negligible (marked with   ), mild (marked with   ), and strong (marked with   ). From this table it is possible to observe that Romania, Poland, Spain, Portugal, and Bulgaria[24] tend to behave differently than the other countries in the dataset in some of the indicators covered by the 1st pillar. Bulgaria scores especially low (on average 1.52 – the scores are between 0 and 10) as compared to the other countries (on average 4.05) in question QA47B . Peculiar behaviour is found in Poland (QA46: Poland scores 3.04 versus an average of 8.49 for the rest of countries), Portugal (QA44: Portugal's average scores is 2.64 when the other countries sore on average 5.99), Romania (Romania scores on average 2.19 for QA44 and 1.37 for QA47) and Spain (Spain's average scores in QA45 is 2.48 while the remaining countries score on average 6.09). This suggests the presence of country effects that need to be considered for the interpretation of the results of the consumer empowerment index. The same analysis has been repeated for pillars 2 and 3.

Table A2.2: *Consumer skills* **– peculiar distributions by country**

	QA42		QA43		QA44		QA45		QA46		QA47B	
	<L	>U	<L	>U	<L	>U	<L	>U	<L	>U	<L	>U
BALGARIJA	○										●	
BELGIQUE												
CESKA REPUBLIKA												
DANMARK												
DEUTSCHLAND OST												
DEUTSCHLAND WEST												
EESTI			◀									
ELLADA												
ESPANA					◀		●					
FRANCE												
GREAT BRITAIN												
IRELAND												
ISLAND												
ITALIA	○		◀									
KYPROS												
LATVIA												
LIETUVA									◀○			
LUXEMBOURG												
MAGYARORSZAG											○	
MALTA					○							
NEDERLAND												
NORGE												
NORTHERN IRELAND												
POLSKA							◀		●		◀	
PORTUGAL			○		●		○					
ROMANIA	◀		◀		●				●			
SLOVENIJA												
SLOVENSKA REPUBLIKA												
SUOMI												
SVERIGE												
ÖSTERREICH												

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[24] The countries are listed from the one with the higher number of indicators "peculiarly distributed" to the one with the lowest number of these indicators.

3.1.2 Awareness of consumer legislation

Table A2.3 presents some descriptive statistics for the indicators covered by the second pillar (*Awareness of consumer legislation*); Figure A2.2 complements this table. As already mentioned above, they are all dichotomous with minimum and maximum values respectively equal to 0 and 10.

Table A2.3: *Awareness of consumer legislation* **- descriptive statistics**

Sub-pillar	Question	mean	sd	cv
	QA8	7.49305	4.334171	0.578425
Unfair practices	QA11	4.201626	4.935892	1.174758
	QA13	5.945884	4.909759	0.825741
	QA6	5.872218	4.92338	0.838419
Cooling off	QA9	2.325973	4.224913	1.816407
	QA10	3.734129	4.837146	1.295388
Guaranteed period	QA7	4.229605	4.940336	1.168037

sd= standard deviation; cv=coefficient of variation

The observations are approximately equally distributed between the minimum and the maximum values for the indicators generated by questions QA11, QA13, QA6, QA10 and QA7. Therefore, these indicators seem to have a fairly good informative power.

The situation is different for the two remaining indicators. Question QA8 is equal to 10 in 75% of the cases and questions QA9 is equal to 0 in 76% of the cases.

Finally, the analysis conducted following the approach proposed by Tukey (1977) reveals that the indicators in this pillar have a quite homogenous distribution across countries. Strongly peculiar distributions have not been detected.

Figure A2.2: *Awareness of consumer legislation* – **Histograms**
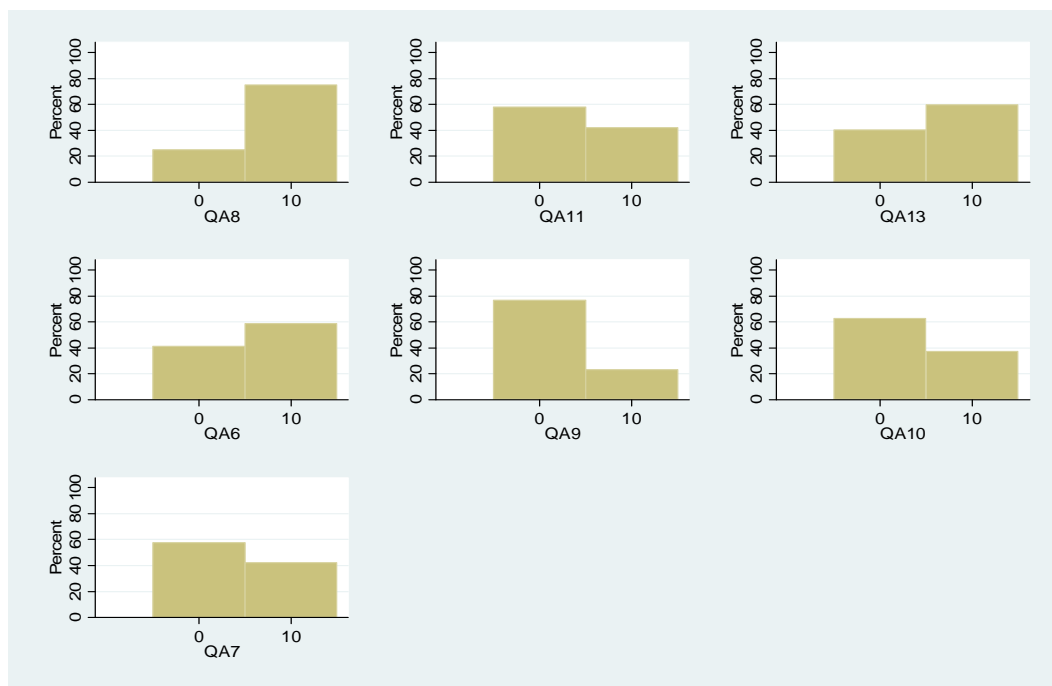
Table A2.4: Awareness of consumer legislation – peculiar distributions by country

	QA8		QA11		QA13		QA6		QA9		QA10		QA7	
	<L	>U	<L	>U	<L	>U	<L	>U	<L	>U	<L	>U	*<L*	*>U*
BALGARIJA							◖				◖			
BELGIQUE	○													
CESKA REPUBLIKA														
DANMARK					◖									
DEUTSCHLAND OST														
DEUTSCHLAND WEST														
EESTI														
ELLADA							◖				○			
ESPANA			◖											
FRANCE														
GREAT BRITAIN	◖													
IRELAND	◖													
ISLAND							◖							
ITALIA														
KYPROS							○							
LATVIA														
LIETUVA														
LUXEMBOURG														
MAGYARORSZAG														
MALTA														
NEDERLAND														
NORGE														
NORTHERN IRELAND														
POLSKA														
PORTUGAL			◖											
ROMANIA					◖		◖				◖			
SLOVENIJA														
SLOVENSKA REPUBLIKA														
SUOMI														
SVERIGE					◖									
ÖSTERREICH														

3.1.3 Consumer engagement

Table A2.5 shows some descriptive statistics for the indicators constructed for *Consumer engagement* .

Table A2.5: Consumer behaviour – descriptive statistics

Sub-pillar	Question	mean	sd	cv
Comparing products	QA17	2.446644	1.570271	0.641806
	QA18	6.756098	3.605021	0.533595
Reading terms&conditions	QA14-15	3.996799	4.341179	1.086164
Interest in information	QA16	3.269562	2.712057	0.829486
	QA40	5.838572	4.400916	0.753766
	QA41	1.204689	3.25512	2.702042
Tendency to talk	QA25	4.976101	3.77761	0.759151
	QA26	5.597343	4.1554	0.742388
Detriment and redress	QA27-28-31-36-37	4.493297	3.792752	0.844091

The two indicators constructed from QA25 and QA26 in the *Tendency to talk* sub-pillar have mean and median approximately identical as well as acceptable skewness and kurtosis values (respectively 0.46 and 1.65 for QA25, 0.21 and 1.42 for QA26).

Furthermore, while QA17, QA14-15 and QA16 have rather low mean and median values, only one of them – the indicator generated by the question QA17 – has skewness <u>and</u> kurtosis values above the Normal distribution threshold (i.e. skewness |1| and kurtosis 3)[25]. As expected, none of these indicators can be considered normally distributed in the interval 0-10 (Table A2.5 and Figure A2.3, see also Appendix 1).

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[25] The skewness of QA17 is equal to 1.11 and its kurtosis is equal to 4.76;

Figure A2.1: Consumer behaviour – Histogram of the QA17, QA14-15, QA16, QA25, Qa26.
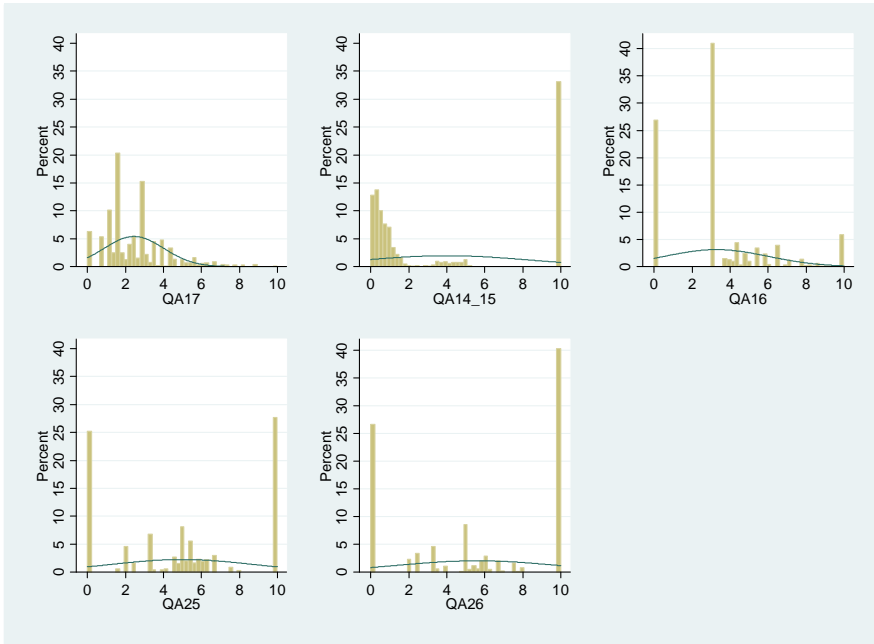
Figure A2.3: Consumer behaviour – Histogram of QA18, QA40, QA27-ALL, QA41
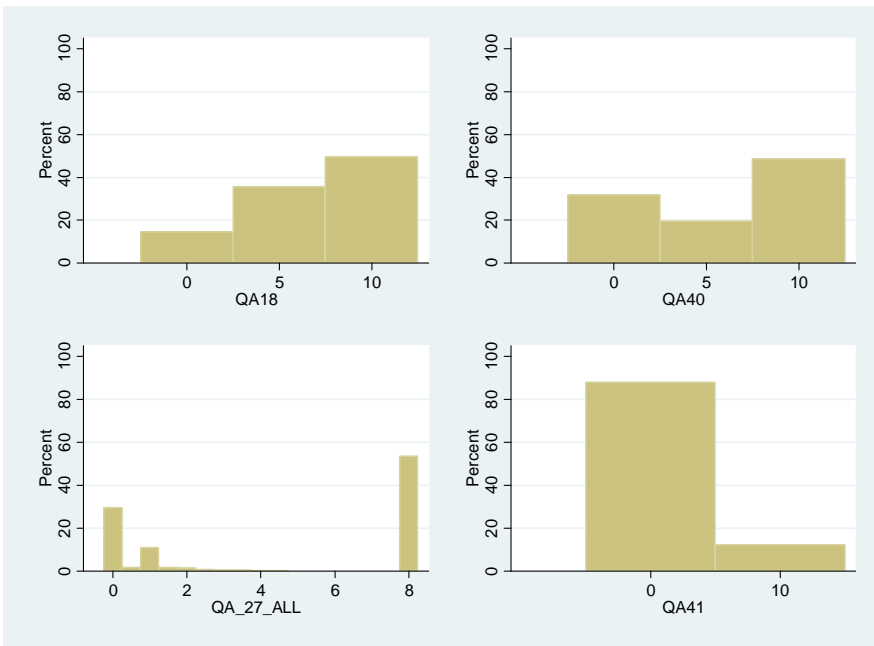
The indicator constructed from QA18 has a monotonically increasing distribution, while QA40 has a U-shaped distribution. The indicator constructed with QA27-28-31-36-37 (i.e. QA27-ALL) does never reach the maximum attainable (Table A2.5 and Figure A2.2).

Finally, question QA41 has a strong left-skewed distribution (it is equal to 0 in the 88% of the cases) rising some concerns about its informative power.

Table A2.6: Consumer behaviour – peculiar distributions by country

	QA17		QA18		QA14_15		QA16		QA40		QA41		QA25		QA26		QA_27_ALL	
	<L	>U	<L	>U	<L	>U	<L	>U	<L	>U	<L	>U	<L	>U	<L	>U	<L	>U
BALGARIJA																		
BELGIQUE			◀															
CESKA REPUBLIKA																		
DANMARK																		
DEUTSCHLAND OST																		
DEUTSCHLAND WEST																		
EESTI																		
ELLADA																		
ESPANA							◀		◀									
FRANCE					○													
GREAT BRITAIN	○		◀				○											
IRELAND			◀															
ISLAND													●					
ITALIA													◀		◀			
KYPROS																		
LATVIA							◀										◀	
LIETUVA							◀											
LUXEMBOURG			◀															
MAGYARORSZAG																		
MALTA															○			
NEDERLAND																		
NORGE					◀								●					
NORTHERN IRELAND	○		◀		○		◀									◀		
POLSKA							◀						◀		●			
PORTUGAL																		
ROMANIA																	◀	
SLOVENIJA																		
SLOVENSKA REPUBLIKA																		
SUOMI																		
SVERIGE																		
ÖSTERREICH																		

Regarding the country-level distribution of the indicators in the pillar, peculiar distributions – mild or serious – affect the indicators resulting from questions QA16, QA26, QA26, QA18, and QA27-28-31-36-37 without being concentrated on specific countries (Table A2.5). Iceland and Norway behave differently in question QA25 where they score exceptionally low (on average around 1.6) as compared with the rest of countries (on average 5.61). Poland is atypical in QA26 for the low value of its score (3.53 versus an average of 5.69 for the other countries).

4. References

Allison, P.D., (2002). *Missing Data*. Thousand Oaks, CA: SAGE Publications.

Tukey, J.W., (1977). *Explanatory Data Analysis*. Reading, MA: Addison-Wesley.

Appendix 2

1. Age distribution analysis histograms

The following section presents a comparative analysis of the sample population used for the Consumer Empowerment Index with the Eurostat population data by age group. The tables and figures display the deviation of the age distribution between the sampled consumers (raw data and data weighted with design weights) and the Eurostat population data as reference point. Only EU countries are considered here.

Belgium
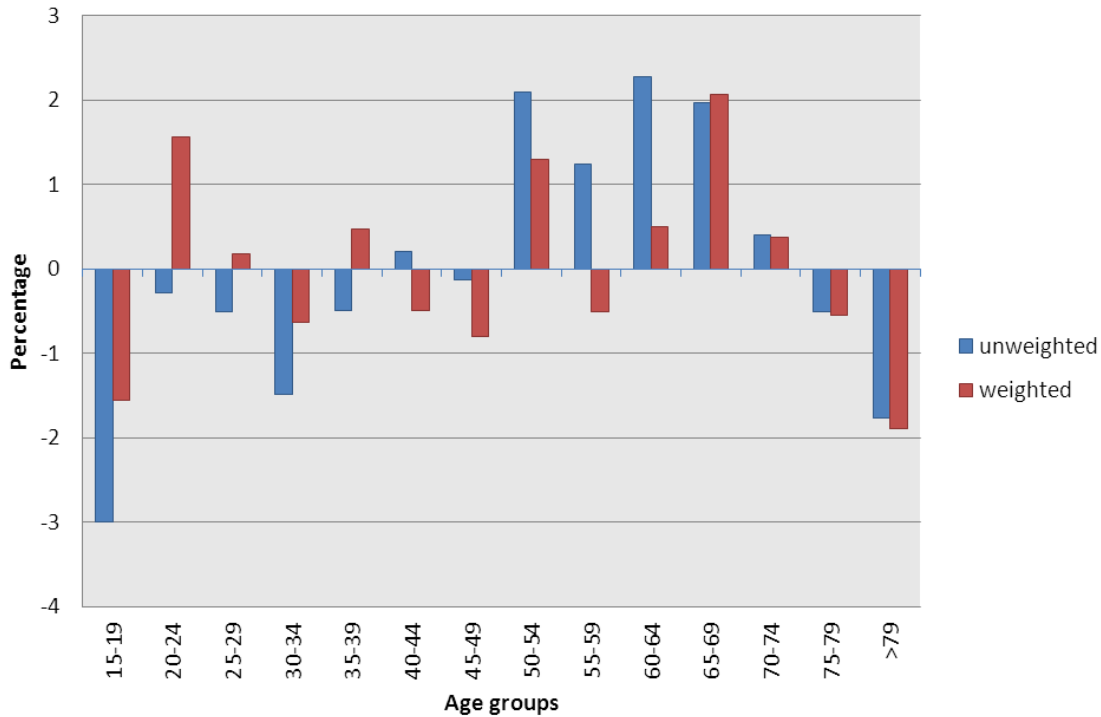
Age group	Consumer empowerment - CE			Δ = (CE-Eurostat)	
	unweighted (%)	Weighted (%)	EUROSTAT (%)	unweighted	weighted
15-19	4.36	5.8	7.36	-3.00	-1.56
20-24	6.94	8.78	7.22	-0.28	1.56
25-29	7.23	7.92	7.74	-0.51	0.18
30-34	6.26	7.11	7.74	-1.48	-0.63
35-39	8.1	9.06	8.59	-0.49	0.47
40-44	9.36	8.66	9.16	0.20	-0.50
45-49	8.92	8.25	9.05	-0.13	-0.80
50-54	10.43	9.63	8.34	2.09	1.29
55-59	8.87	7.13	7.64	1.23	-0.51
60-64	8.92	7.15	6.64	2.28	0.51
65-69	7.18	7.27	5.21	1.97	2.06
70-74	5.48	5.45	5.08	0.40	0.37
75-79	4.07	4.04	4.58	-0.51	-0.54
>79	3.88	3.76	5.65	-1.77	-1.89

Denmark
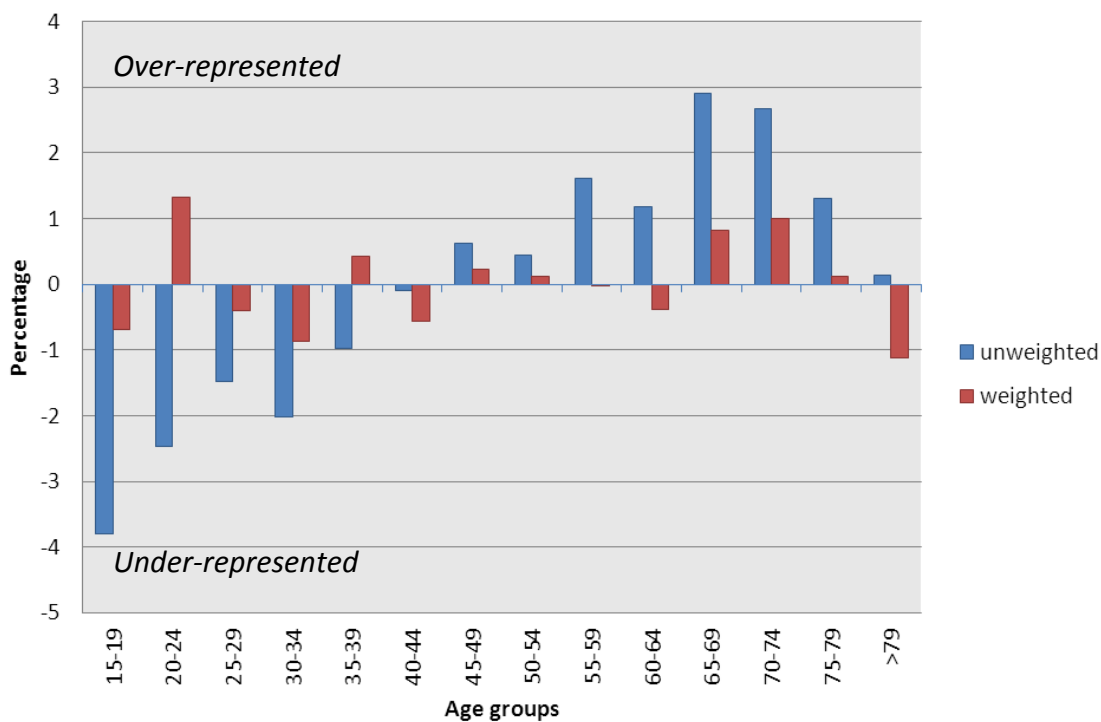
Age group	Consumer empowerment - CE			Δ = (CE-Eurostat)	
	unweighted (%)	Weighted (%)	EUROSTAT (%)	unweighted	weighted
15-19	3.69	6.8	7.48	-3.79	-0.68
20-24	4.33	8.13	6.80	-2.47	1.33
25-29	5.67	6.76	7.16	-1.49	-0.40
30-34	6.21	7.36	8.23	-2.02	-0.87
35-39	7.68	9.09	8.66	-0.98	0.43
40-44	9.51	9.04	9.60	-0.09	-0.56
45-49	9.11	8.72	8.49	0.62	0.23
50-54	8.57	8.24	8.12	0.45	0.12
55-59	9.56	7.95	7.95	1.61	0.00
60-64	9.56	8	8.38	1.18	-0.38
65-69	8.87	6.79	5.97	2.90	0.82
70-74	7.24	5.57	4.57	2.67	1.00
75-79	4.83	3.64	3.53	1.30	0.11
>79	5.17	3.92	5.04	0.13	-1.12

Greece
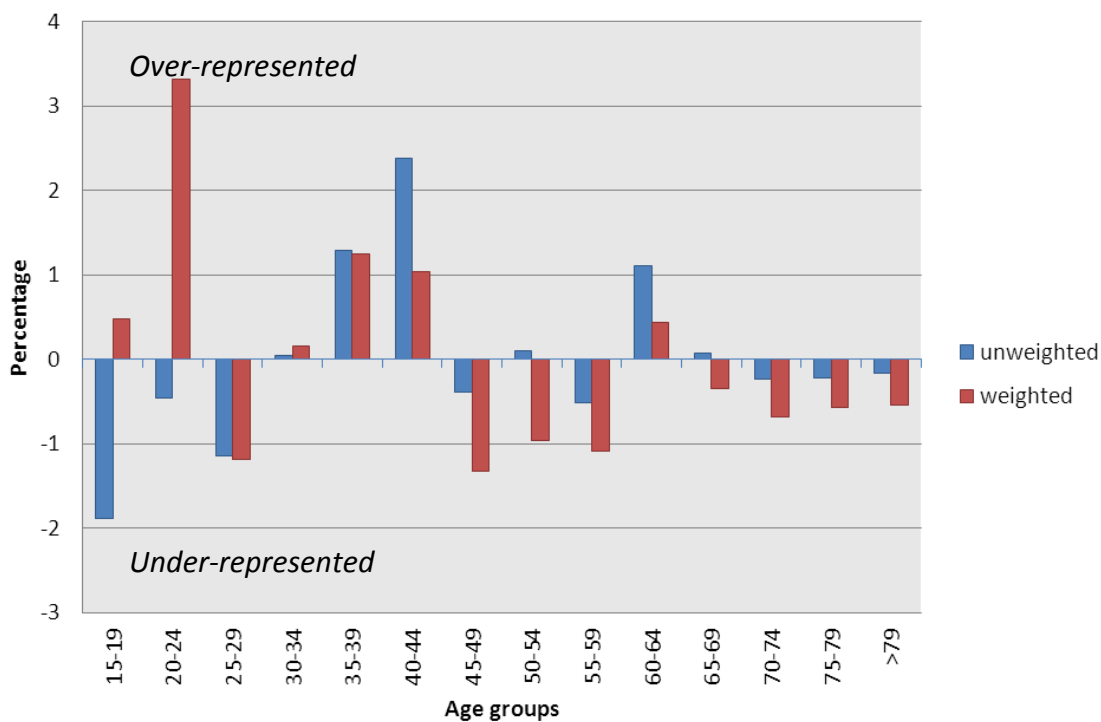
Age group	Consumer empowerment - CE			Δ = (CE-Eurostat)	
	unweighted (%)	Weighted (%)	EUROSTAT (%)	unweighted	weighted
15-19	4.2	6.56	6.08	-1.88	0.48
20-24	6.5	10.27	6.96	-0.46	3.31
25-29	7.4	7.36	8.54	-1.14	-1.18
30-34	9.1	9.2	9.05	0.05	0.15
35-39	10.45	10.41	9.17	1.28	1.24
40-44	11.15	9.81	8.77	2.38	1.04
45-49	7.9	6.97	8.29	-0.39	-1.32
50-54	7.85	6.79	7.75	0.10	-0.96
55-59	6.55	5.98	7.06	-0.51	-1.08
60-64	7.7	7.03	6.59	1.11	0.44
65-69	5.95	5.53	5.88	0.07	-0.35
70-74	5.85	5.39	6.08	-0.23	-0.69
75-79	4.8	4.45	5.02	-0.22	-0.57
>79	4.6	4.23	4.77	-0.17	-0.54

Spain
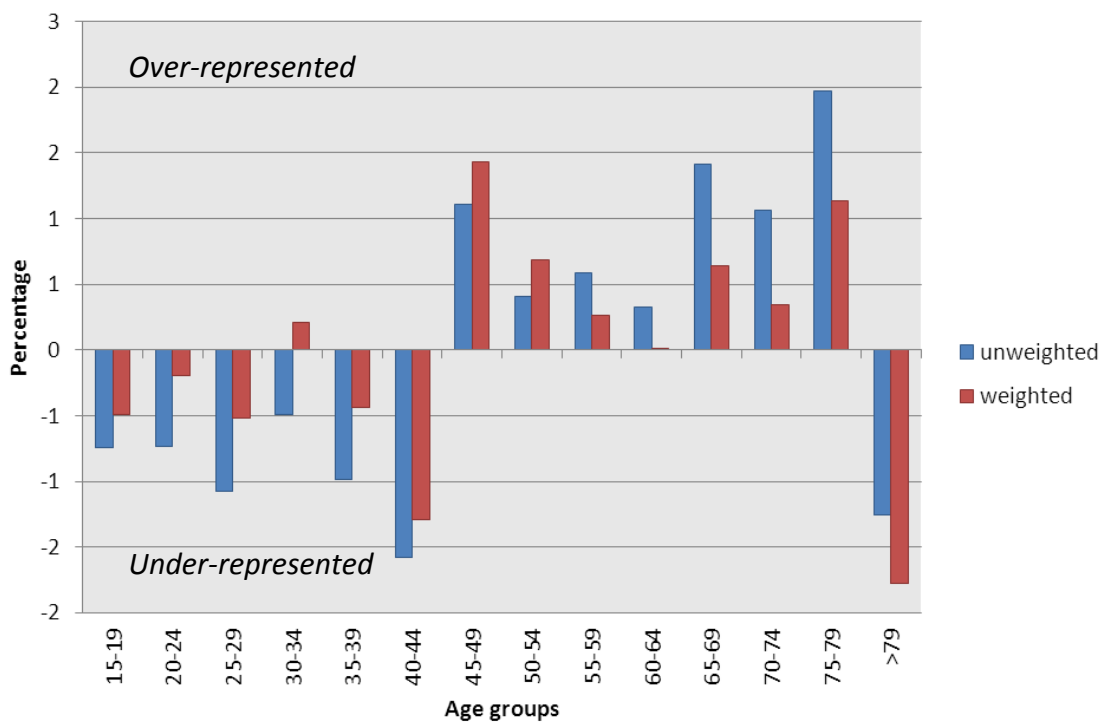
Age group	Consumer empowerment - CE			Δ = (CE-Eurostat)	
	unweighted (%)	Weighted (%)	EUROSTAT (%)	unweighted	weighted
15-19	5.17	5.42	5.91	-0.74	-0.49
20-24	6.47	7.01	7.20	-0.73	-0.19
25-29	8.36	8.92	9.44	-1.08	-0.52
30-34	9.95	10.66	10.45	-0.50	0.21
35-39	8.91	9.46	9.90	-0.99	-0.44
40-44	7.76	8.04	9.34	-1.58	-1.30
45-49	9.6	9.92	8.49	1.11	1.43
50-54	7.71	7.99	7.31	0.40	0.68
55-59	7.11	6.79	6.53	0.58	0.26
60-64	6.32	6.01	6.00	0.32	0.01
65-69	6.32	5.55	4.91	1.41	0.64
70-74	5.92	5.2	4.86	1.06	0.34
75-79	6.27	5.43	4.30	1.97	1.13
>79	4.13	3.61	5.38	-1.25	-1.77

Finland
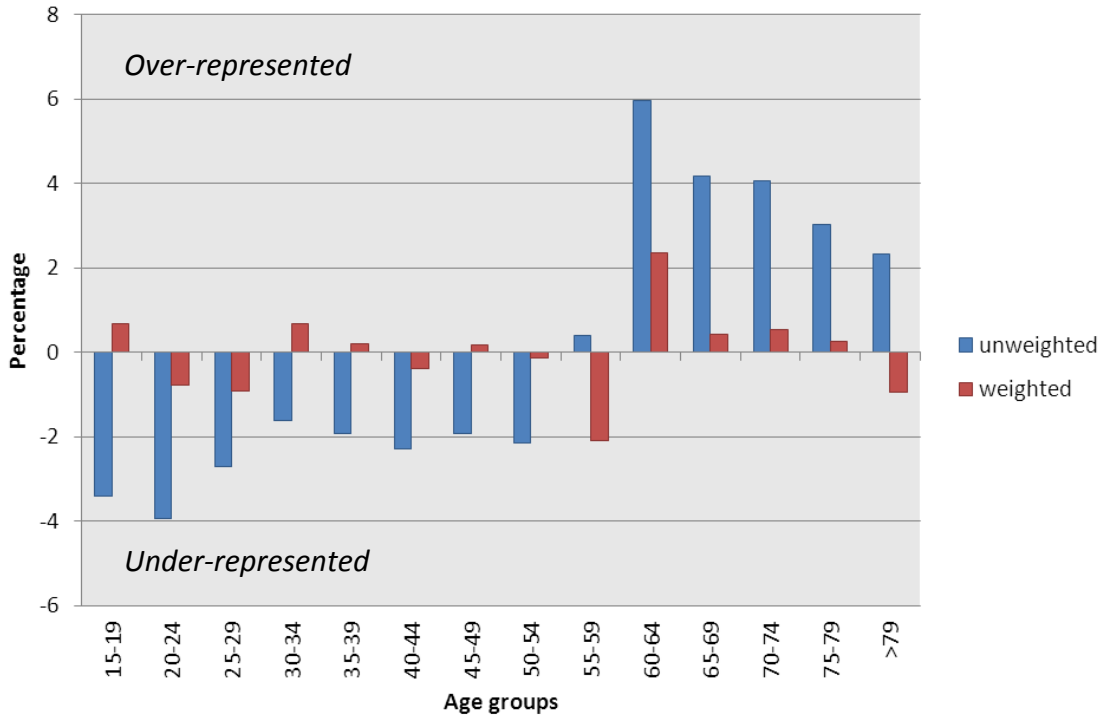
Age group	Consumer empowerment - CE			Δ = (CE-Eurostat)	
	unweighted (%)	Weighted (%)	EUROSTAT (%)	unweighted	weighted
15-19	4.14	8.2	7.53	-3.39	0.67
20-24	3.49	6.65	7.43	-3.94	-0.78
25-29	4.89	6.67	7.60	-2.71	-0.93
30-34	5.73	8.02	7.35	-1.62	0.67
35-39	5.43	7.56	7.36	-1.93	0.20
40-44	6.18	8.09	8.48	-2.30	-0.39
45-49	6.58	8.67	8.50	-1.92	0.17
50-54	6.63	8.66	8.79	-2.16	-0.13
55-59	9.57	7.07	9.16	0.41	-2.09
60-64	13.91	10.3	7.94	5.97	2.36
65-69	9.92	6.16	5.75	4.17	0.41
70-74	8.82	5.29	4.75	4.07	0.54
75-79	7.18	4.42	4.17	3.01	0.25
>79	7.53	4.24	5.20	2.33	-0.96

France
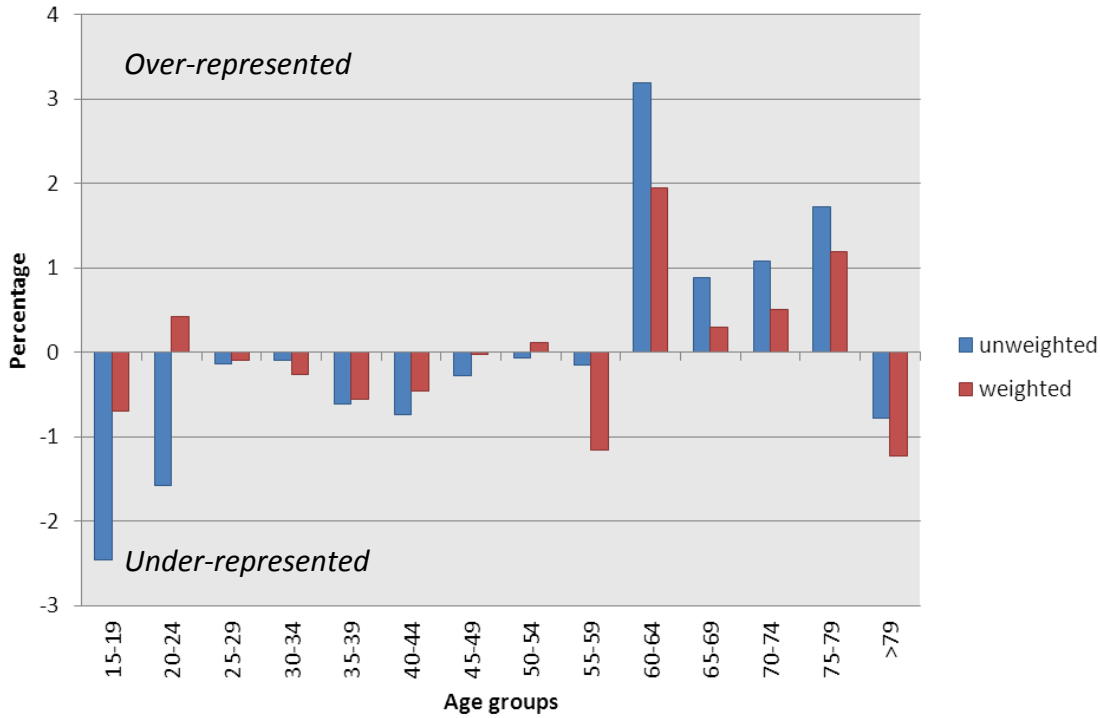
Age group	Consumer empowerment - CE			Δ = (CE-Eurostat)	
	unweighted (%)	Weighted (%)	EUROSTAT (%)	unweighted	weighted
15-19	5.43	7.2	7.89	-2.46	-0.69
20-24	6.16	8.17	7.74	-1.58	0.43
25-29	7.57	7.62	7.71	-0.14	-0.09
30-34	7.71	7.54	7.81	-0.10	-0.27
35-39	8.05	8.1	8.66	-0.61	-0.56
40-44	8.01	8.29	8.75	-0.74	-0.46
45-49	8.2	8.45	8.47	-0.27	-0.02
50-54	8.1	8.29	8.17	-0.07	0.12
55-59	8.01	7.01	8.17	-0.16	-1.16
60-64	9.7	8.46	6.51	3.19	1.95
65-69	5.77	5.18	4.88	0.89	0.30
70-74	5.87	5.29	4.79	1.08	0.50
75-79	6.11	5.57	4.38	1.73	1.19
>79	5.29	4.84	6.07	-0.78	-1.23

Ireland
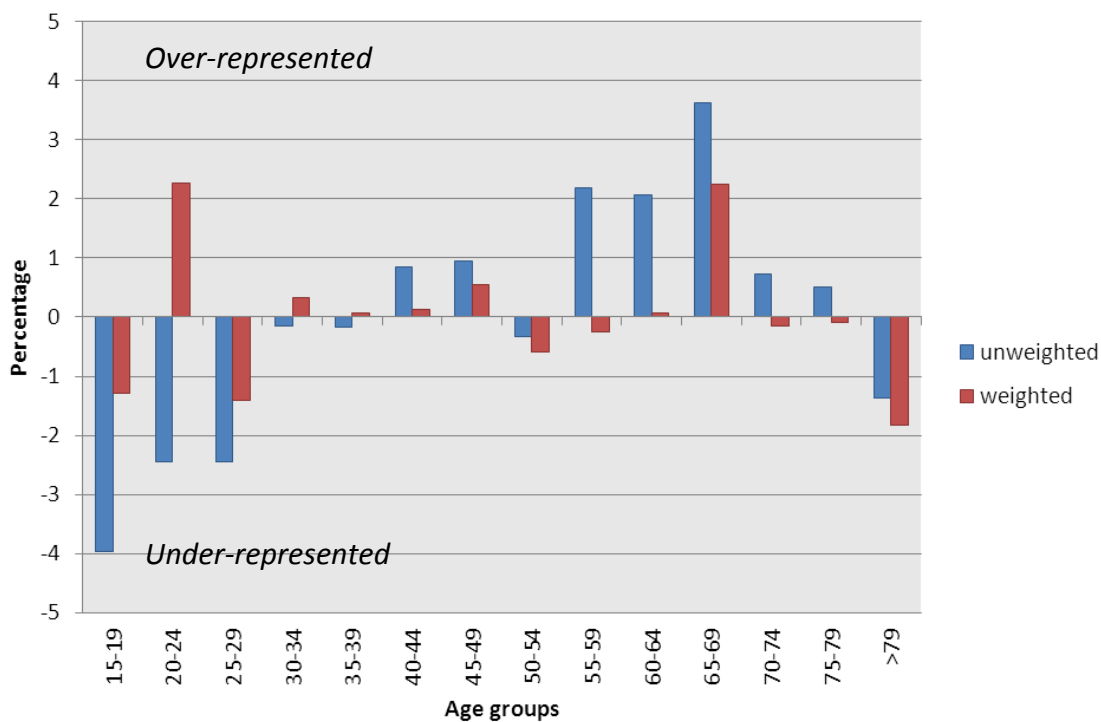
Age group	Consumer empowerment - CE			Δ = (CE-Eurostat)	
	unweighted (%)	Weighted (%)	EUROSTAT (%)	unweighted	weighted
15-19	4.17	6.84	8.13	-3.96	-1.29
20-24	7.20	11.91	9.65	-2.45	2.26
25-29	9.38	10.42	11.84	-2.46	-1.42
30-34	10.28	10.75	10.43	-0.15	0.32
35-39	9.53	9.77	9.71	-0.18	0.06
40-44	9.68	8.96	8.84	0.84	0.12
45-49	9.09	8.68	8.14	0.95	0.54
50-54	7.00	6.74	7.32	-0.32	-0.58
55-59	8.79	6.35	6.60	2.19	-0.25
60-64	7.70	5.71	5.64	2.06	0.07
65-69	7.85	6.46	4.22	3.63	2.24
70-74	4.17	3.29	3.44	0.73	-0.15
75-79	3.18	2.57	2.67	0.51	-0.10
>79	1.99	1.54	3.37	-1.38	-1.83

Italy
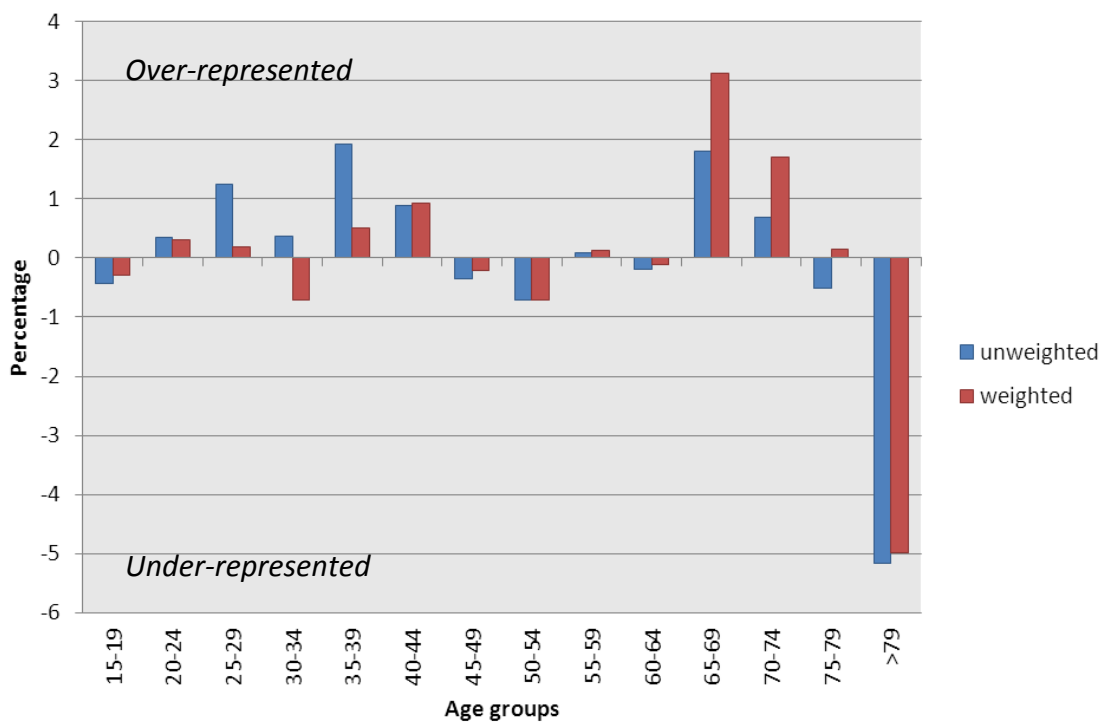
Age group	Consumer empowerment - CE			Δ = (CE-Eurostat)	
	unweighted (%)	Weighted (%)	EUROSTAT (%)	unweighted	weighted
15-19	5.38	5.52	5.82	-0.44	-0.30
20-24	6.39	6.35	6.04	0.35	0.31
25-29	8.31	7.24	7.05	1.26	0.19
30-34	9.08	8	8.70	0.38	-0.70
35-39	11.34	9.92	9.41	1.93	0.51
40-44	10.47	10.52	9.59	0.88	0.93
45-49	8.12	8.26	8.47	-0.35	-0.21
50-54	6.87	6.86	7.57	-0.70	-0.71
55-59	7.44	7.47	7.35	0.09	0.12
60-64	6.48	6.56	6.68	-0.20	-0.12
65-69	8.26	9.59	6.46	1.80	3.13
70-74	6.34	7.35	5.65	0.69	1.70
75-79	4.32	4.98	4.83	-0.51	0.15
>79	1.2	1.38	6.37	-5.17	-4.99

Luxembourg
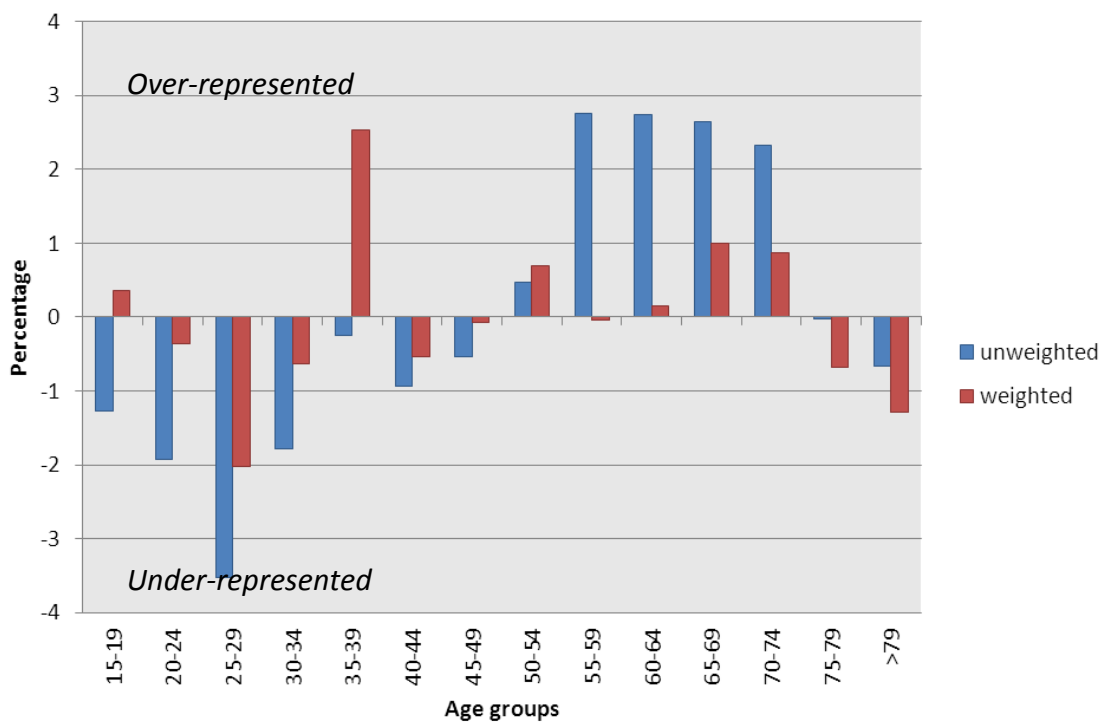
Age group	Consumer empowerment - CE			Δ = (CE-Eurostat)	
	unweighted (%)	Weighted (%)	EUROSTAT (%)	unweighted	weighted
15-19	5.95	7.58	7.23	-1.28	0.35
20-24	5.27	6.84	7.20	-1.93	-0.36
25-29	4.78	6.29	8.31	-3.53	-2.02
30-34	7.22	8.37	9.00	-1.78	-0.63
35-39	9.76	12.54	10.01	-0.25	2.53
40-44	9.56	9.95	10.49	-0.93	-0.54
45-49	8.98	9.44	9.51	-0.53	-0.07
50-54	8.78	9.01	8.31	0.47	0.70
55-59	9.85	7.06	7.10	2.75	-0.04
60-64	8.49	5.9	5.74	2.75	0.16
65-69	7.51	5.87	4.87	2.64	1.00
70-74	6.54	5.09	4.22	2.32	0.87
75-79	3.8	3.15	3.82	-0.02	-0.67
>79	3.51	2.9	4.18	-0.67	-1.28

Netherlands
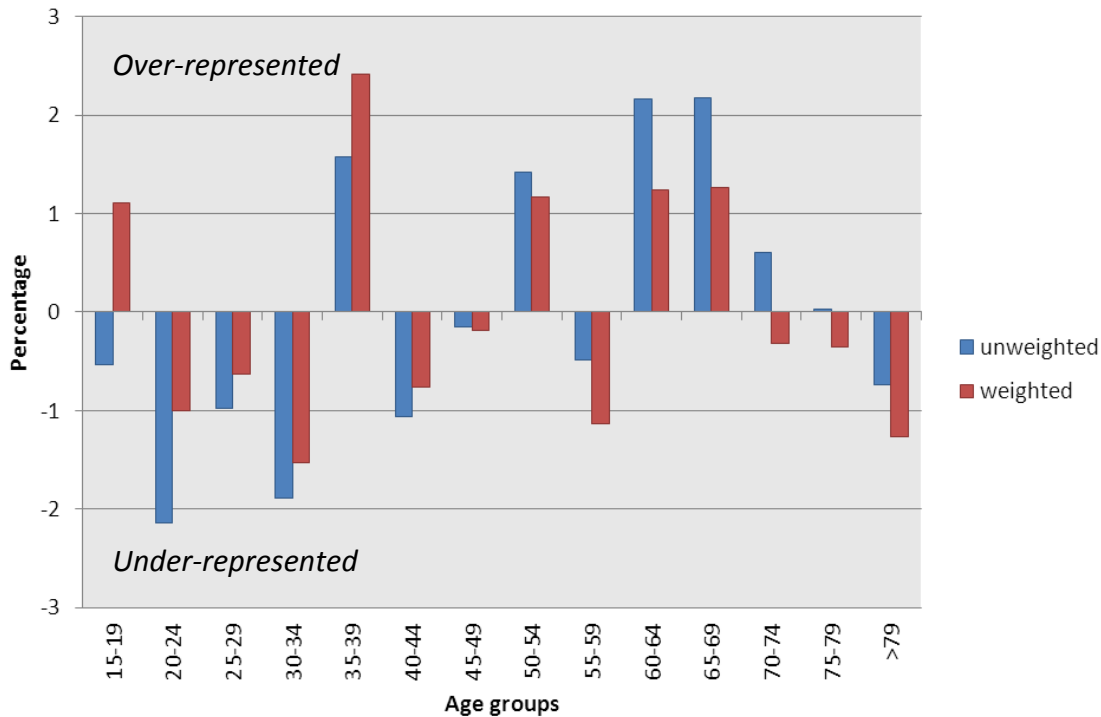
Age group	Consumer empowerment - CE			Δ = (CE-Eurostat)	
	unweighted (%)	Weighted (%)	EUROSTAT (%)	unweighted	weighted
15-19	6.92	8.57	7.46	-0.54	1.11
20-24	5.12	6.26	7.26	-2.14	-1.00
25-29	6.37	6.72	7.35	-0.98	-0.63
30-34	5.72	6.08	7.61	-1.89	-1.53
35-39	11.04	11.88	9.46	1.58	2.42
40-44	8.61	8.91	9.67	-1.06	-0.76
45-49	9.15	9.12	9.30	-0.15	-0.18
50-54	9.9	9.64	8.48	1.42	1.16
55-59	7.61	6.96	8.09	-0.48	-1.13
60-64	9.55	8.63	7.39	2.16	1.24
65-69	7.56	6.65	5.39	2.17	1.26
70-74	4.98	4.05	4.37	0.61	-0.32
75-79	3.63	3.24	3.60	0.03	-0.36
>79	3.83	3.3	4.57	-0.74	-1.27

Austria
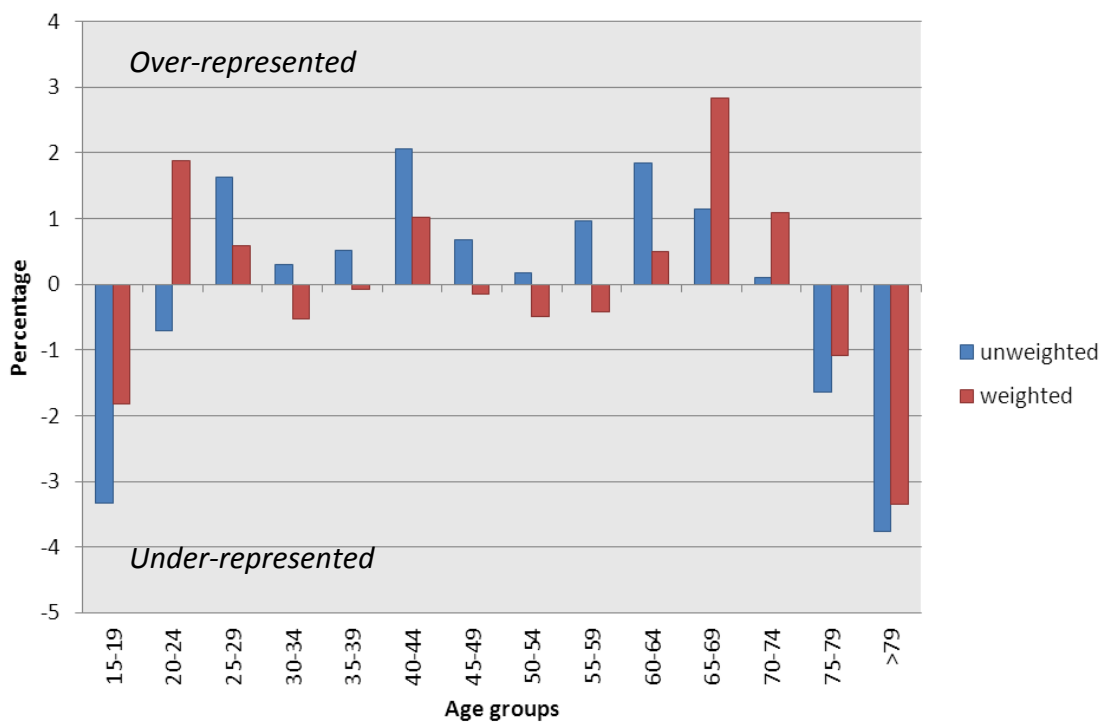
Age group	Consumer empowerment - CE			Δ = (CE-Eurostat)	
	unweighted (%)	Weighted (%)	EUROSTAT (%)	unweighted	weighted
15-19	3.78	5.29	7.11	-3.33	-1.82
20-24	6.67	9.25	7.37	-0.70	1.88
25-29	9.31	8.27	7.68	1.63	0.59
30-34	8.01	7.19	7.72	0.29	-0.53
35-39	9.81	9.22	9.29	0.52	-0.07
40-44	12.24	11.19	10.17	2.07	1.02
45-49	10.05	9.21	9.37	0.68	-0.16
50-54	8.01	7.33	7.83	0.18	-0.50
55-59	7.96	6.59	7.00	0.96	-0.41
60-64	8.06	6.72	6.22	1.84	0.50
65-69	7.81	9.5	6.66	1.15	2.84
70-74	4.33	5.32	4.23	0.10	1.09
75-79	2.29	2.86	3.94	-1.65	-1.08
>79	1.64	2.06	5.41	-3.77	-3.35

Portugal
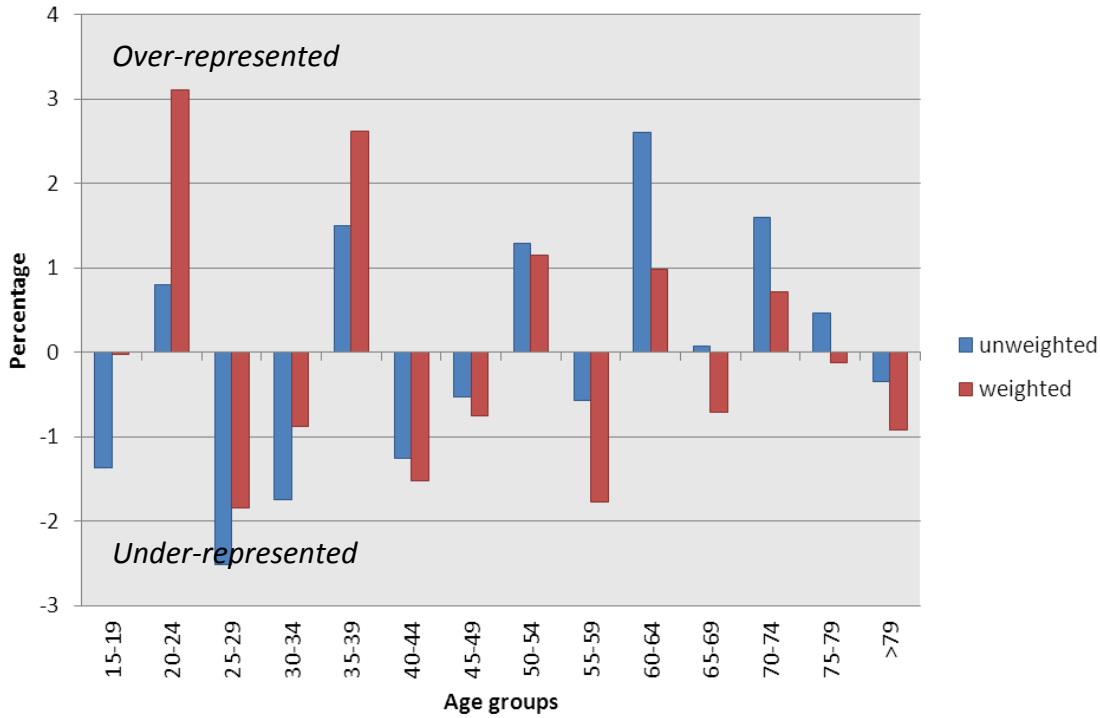
Age group	Consumer empowerment - CE			Δ = (CE-Eurostat)	
	unweighted (%)	Weighted (%)	EUROSTAT (%)	unweighted	weighted
15-19	5.11	6.46	6.48	-1.37	-0.02
20-24	8.07	10.37	7.27	0.80	3.10
25-29	6.13	6.79	8.64	-2.51	-1.85
30-34	7.73	8.6	9.48	-1.75	-0.88
35-39	10.41	11.52	8.91	1.50	2.61
40-44	7.49	7.23	8.75	-1.26	-1.52
45-49	7.88	7.66	8.41	-0.53	-0.75
50-54	9	8.85	7.70	1.30	1.15
55-59	6.76	5.56	7.33	-0.57	-1.77
60-64	9.05	7.43	6.45	2.60	0.98
65-69	5.79	5	5.71	0.08	-0.71
70-74	7.05	6.17	5.46	1.59	0.71
75-79	4.91	4.32	4.44	0.47	-0.12
>79	4.62	4.04	4.97	-0.35	-0.93

Sweden
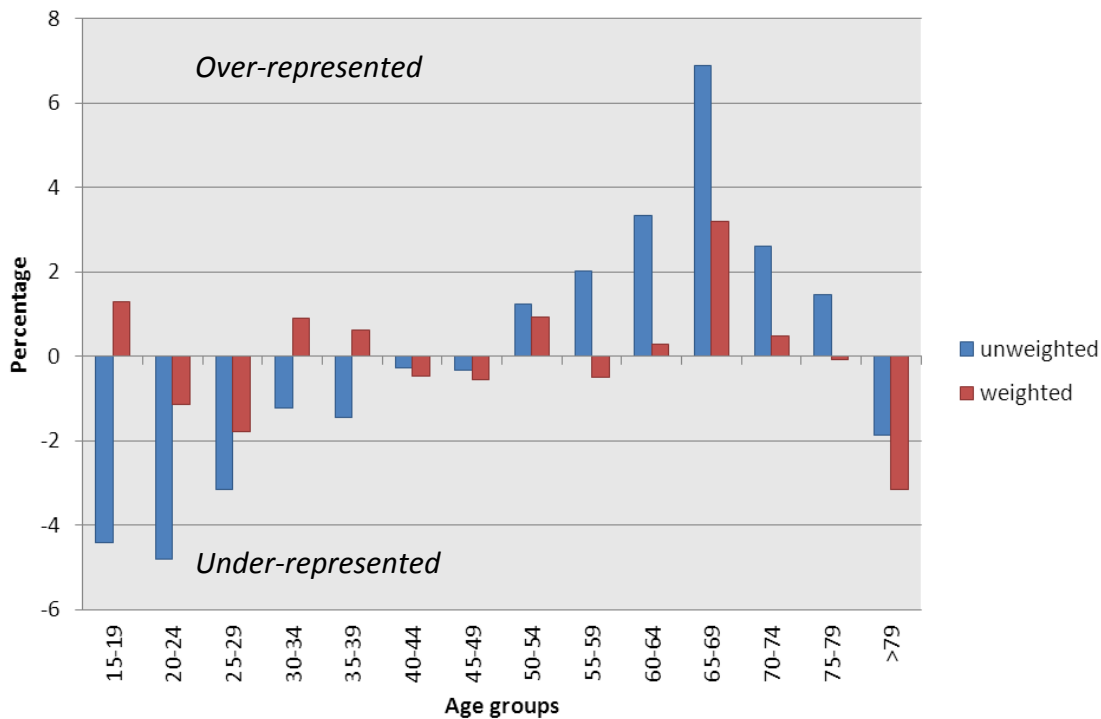
Age group	Consumer empowerment - CE			Δ = (CE-Eurostat)	
	unweighted (%)	Weighted (%)	EUROSTAT (%)	unweighted	weighted
15-19	3.91	9.63	8.34	-4.43	1.29
20-24	2.48	6.16	7.30	-4.82	-1.14
25-29	4.11	5.46	7.26	-3.15	-1.80
30-34	6.54	8.67	7.76	-1.22	0.91
35-39	6.74	8.83	8.20	-1.46	0.63
40-44	8.52	8.33	8.79	-0.27	-0.46
45-49	7.38	7.14	7.70	-0.32	-0.56
50-54	8.87	8.56	7.63	1.24	0.93
55-59	9.86	7.33	7.83	2.03	-0.50
60-64	11.49	8.43	8.15	3.34	0.28
65-69	12.83	9.13	5.95	6.88	3.18
70-74	7.23	5.11	4.63	2.60	0.48
75-79	5.5	3.97	4.05	1.45	-0.08
>79	4.56	3.26	6.43	-1.87	-3.17

Germany
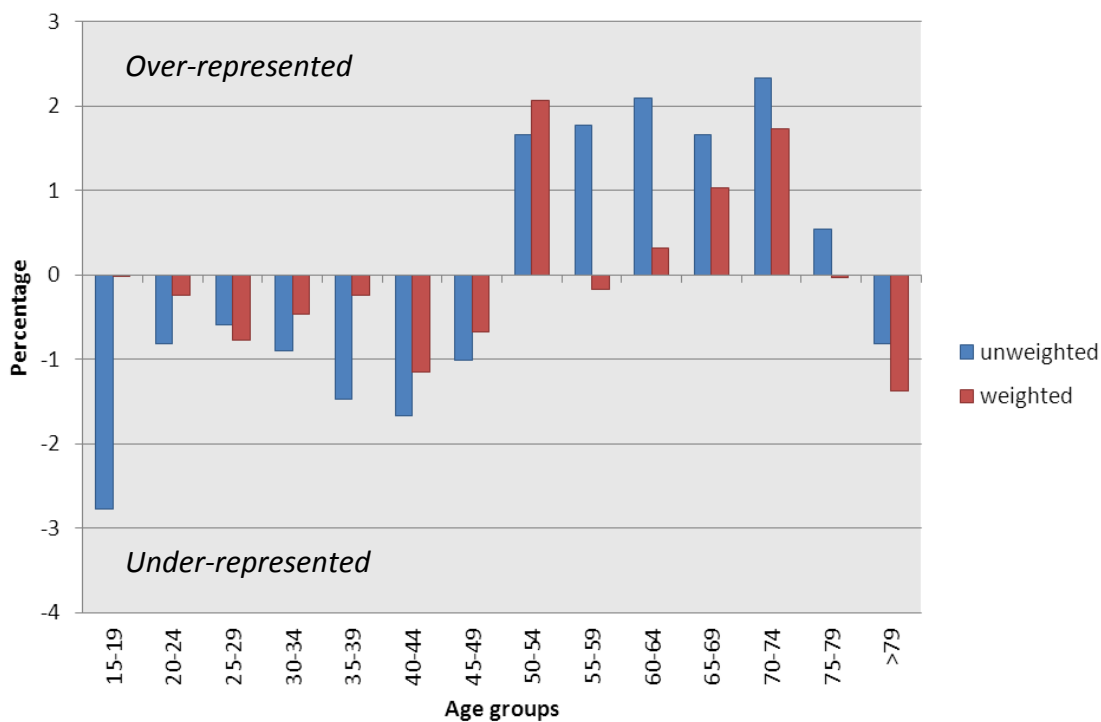
Age group	Consumer empowerment - CE			Δ = (CE-Eurostat)	
	unweighted (%)	Weighted (%)	EUROSTAT (%)	unweighted	weighted
15-19	3.77	6.54	6.55	-2.78	-0.01
20-24	6.02	6.6	6.84	-0.82	-0.24
25-29	6.42	6.24	7.02	-0.60	-0.78
30-34	5.73	6.16	6.63	-0.90	-0.47
35-39	7.04	8.27	8.51	-1.47	-0.24
40-44	8.45	8.97	10.12	-1.67	-1.15
45-49	8.45	8.78	9.46	-1.01	-0.68
50-54	9.82	10.23	8.17	1.66	2.06
55-59	9.20	7.26	7.43	1.77	-0.17
60-64	8.09	6.31	5.99	2.10	0.32
65-69	9.17	8.53	7.51	1.66	1.02
70-74	8.28	7.68	5.95	2.34	1.73
75-79	4.85	4.27	4.30	0.55	-0.03
>79	4.72	4.16	5.54	-0.82	-1.38

United Kingdom
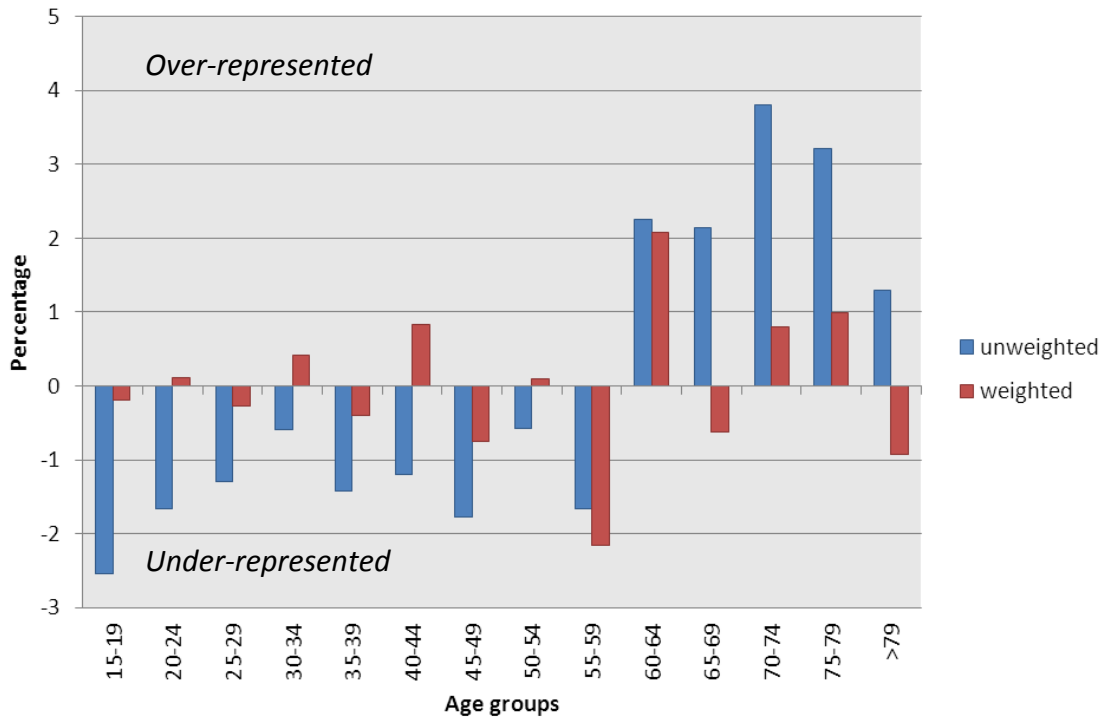
Age group	Consumer empowerment - CE			Δ = (CE-Eurostat)	
	unweighted (%)	Weighted (%)	EUROSTAT (%)	unweighted	weighted
15-19	5.39	7.74	7.93	-2.54	-0.19
20-24	6.64	8.41	8.29	-1.66	0.12
25-29	6.68	7.7	7.97	-1.29	-0.27
30-34	7.05	8.06	7.65	-0.60	0.41
35-39	7.47	8.49	8.89	-1.42	-0.40
40-44	8.15	10.18	9.34	-1.20	0.84
45-49	6.75	7.77	8.53	-1.78	-0.76
50-54	6.90	7.56	7.47	-0.57	0.09
55-59	5.66	5.16	7.32	-1.66	-2.16
60-64	9.32	9.14	7.06	2.26	2.08
65-69	7.54	4.79	5.41	2.14	-0.62
70-74	8.53	5.52	4.72	3.81	0.80
75-79	7.13	4.91	3.92	3.21	0.99
>79	6.79	4.57	5.49	1.30	-0.92

Bulgaria
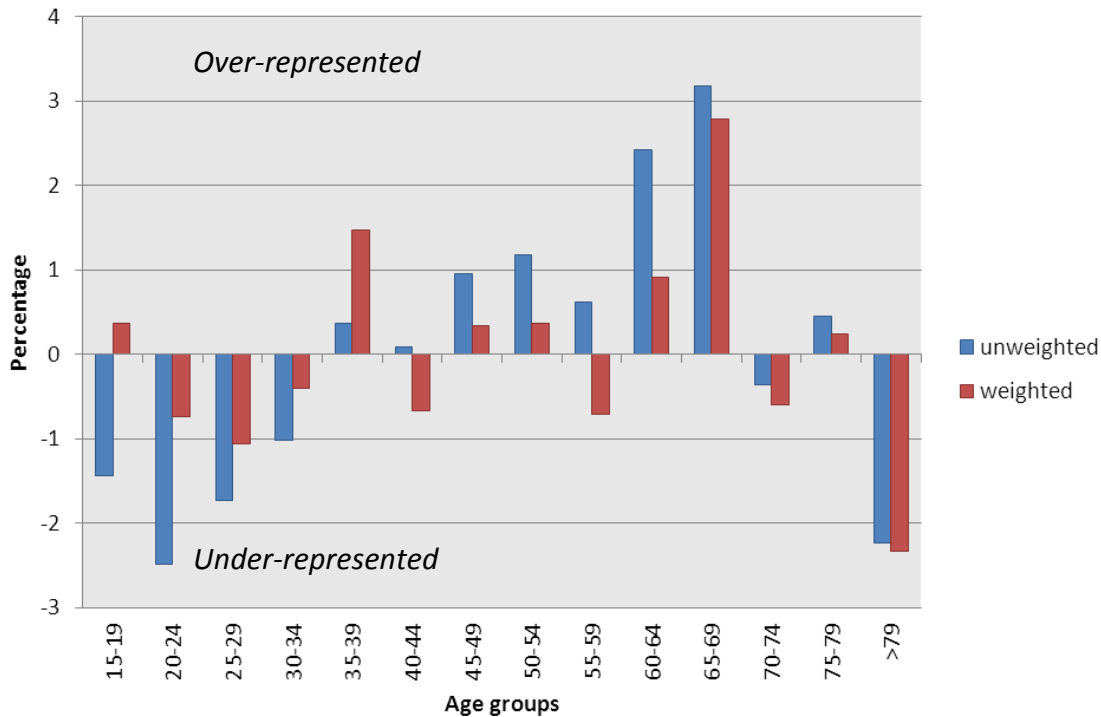
Age group	Consumer empowerment - CE			Δ = (CE-Eurostat)	
	unweighted (%)	Weighted (%)	EUROSTAT (%)	unweighted	weighted
15-19	5.68	7.49	7.12	-1.44	0.37
20-24	5.48	7.23	7.97	-2.49	-0.74
25-29	6.68	7.35	8.41	-1.73	-1.06
30-34	7.83	8.44	8.84	-1.01	-0.40
35-39	8.72	9.83	8.36	0.36	1.47
40-44	7.68	6.92	7.59	0.09	-0.67
45-49	8.97	8.36	8.02	0.95	0.34
50-54	9.37	8.56	8.19	1.18	0.37
55-59	8.92	7.59	8.30	0.62	-0.71
60-64	9.62	8.12	7.20	2.42	0.92
65-69	9.02	8.63	5.85	3.17	2.78
70-74	5.23	5	5.59	-0.36	-0.59
75-79	4.89	4.68	4.43	0.46	0.25
>79	1.89	1.79	4.12	-2.23	-2.33

Cyprus

Age group	Consumer empowerment - CE			Δ = (CE-Eurostat)	
	unweighted (%)	Weighted (%)	EUROSTAT (%)	unweighted	weighted
15-19	11.56	11.47	8.70	2.86	2.77
20-24	7.11	7.21	9.97	-2.86	-2.76
25-29	9.19	9.3	10.36	-1.17	-1.06
30-34	5.93	6.13	9.10	-3.17	-2.97
35-39	12.15	12.53	8.50	3.65	4.03
40-44	3.36	3.49	8.60	-5.24	-5.11
45-49	7.71	7.76	8.74	-1.03	-0.98
50-54	13.74	13.9	7.80	5.94	6.10
55-59	5.34	5.21	7.19	-1.85	-1.98
60-64	8.1	7.9	5.93	2.17	1.97
65-69	7.51	7.24	4.97	2.54	2.27
70-74	5.14	4.84	3.87	1.27	0.97
75-79	1.98	1.88	2.87	-0.89	-0.99
>79	1.19	1.13	3.41	-2.22	-2.28

Czech Republic
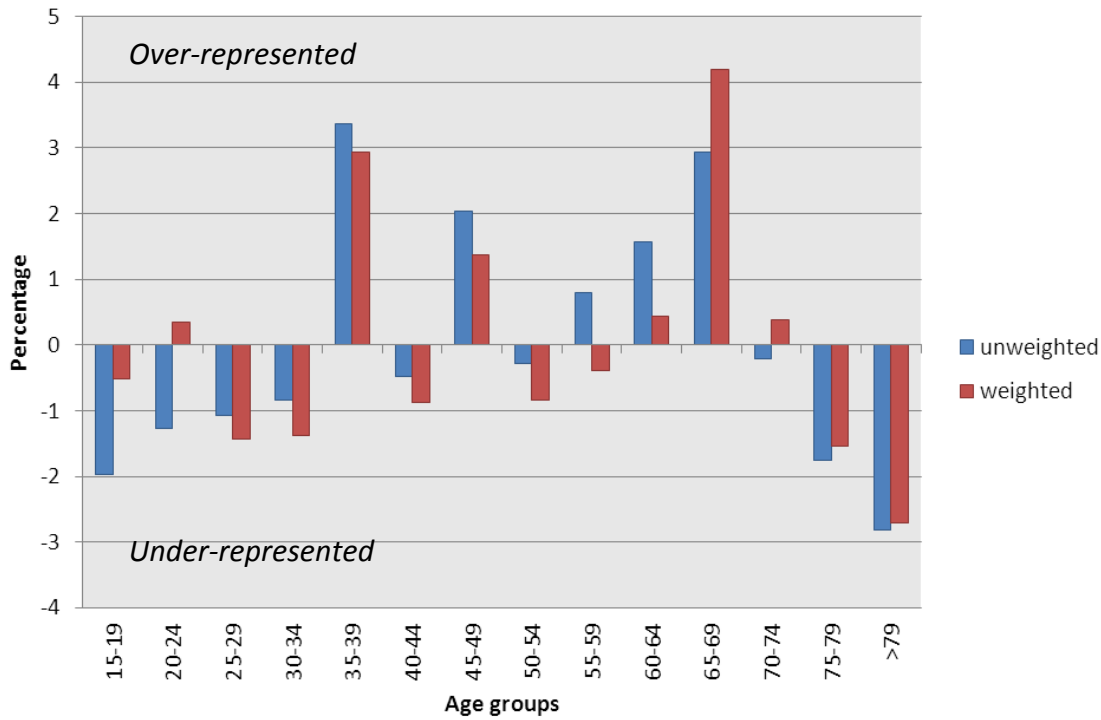
Age group	Consumer empowerment - CE			Δ = (CE-Eurostat)	
	unweighted (%)	Weighted (%)	EUROSTAT (%)	unweighted	weighted
15-19	5.29	6.75	7.26	-1.97	-0.51
20-24	6.58	8.21	7.86	-1.28	0.35
25-29	8.01	7.65	9.08	-1.07	-1.43
30-34	9.64	9.1	10.48	-0.84	-1.38
35-39	11.72	11.29	8.35	3.37	2.94
40-44	7.52	7.13	8.01	-0.49	-0.88
45-49	9.25	8.58	7.21	2.04	1.37
50-54	8.16	7.59	8.44	-0.28	-0.85
55-59	9.45	8.26	8.65	0.80	-0.39
60-64	9.25	8.12	7.68	1.57	0.44
65-69	8.26	9.51	5.32	2.94	4.19
70-74	3.86	4.46	4.08	-0.22	0.38
75-79	1.93	2.14	3.68	-1.75	-1.54
>79	1.09	1.2	3.91	-2.82	-2.71

Estonia
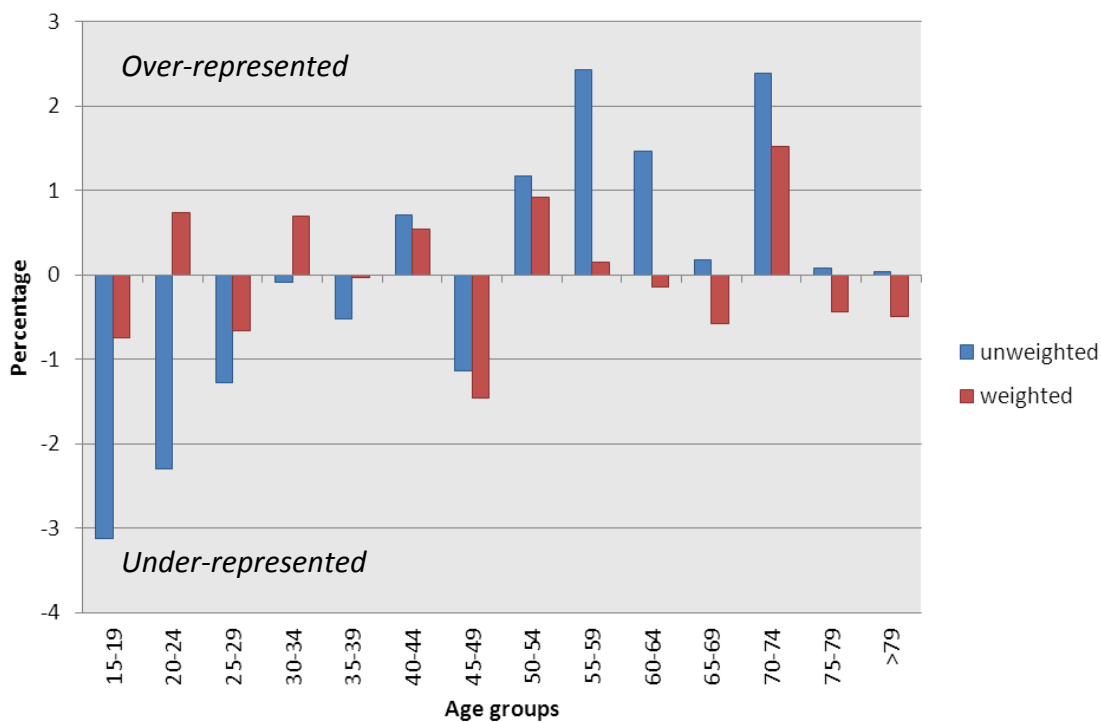
Age group	Consumer empowerment - CE			Δ = (CE-Eurostat)	
	unweighted (%)	Weighted (%)	EUROSTAT (%)	unweighted	weighted
15-19	5.4	7.78	8.52	-3.12	-0.74
20-24	7	10.03	9.30	-2.30	0.73
25-29	7.25	7.86	8.53	-1.28	-0.67
30-34	8	8.78	8.08	-0.08	0.70
35-39	7.6	8.1	8.13	-0.53	-0.03
40-44	8.35	8.18	7.64	0.71	0.54
45-49	7.3	6.98	8.44	-1.14	-1.46
50-54	9.2	8.95	8.03	1.17	0.92
55-59	9.95	7.67	7.52	2.43	0.15
60-64	7.1	5.49	5.63	1.47	-0.14
65-69	6.45	5.69	6.27	0.18	-0.58
70-74	7.6	6.74	5.22	2.38	1.52
75-79	4.45	3.94	4.37	0.08	-0.43
>79	4.35	3.82	4.32	0.03	-0.50

Hungary
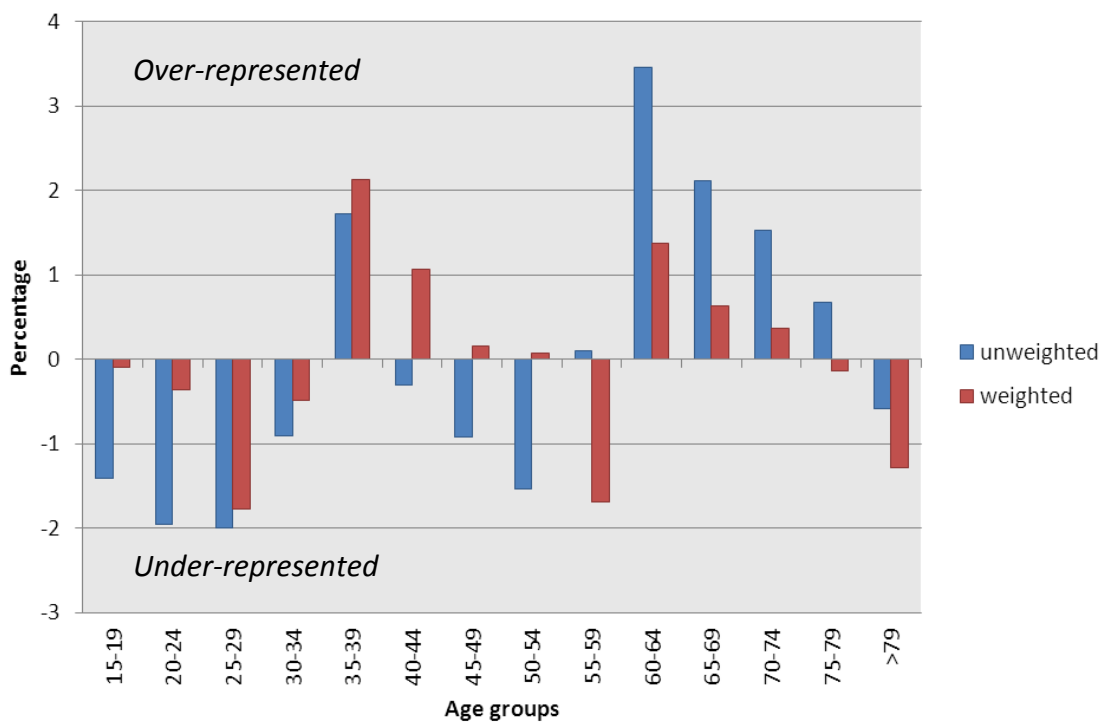
Age group	Consumer empowerment - CE			Δ = (CE-Eurostat)	
	unweighted (%)	Weighted (%)	EUROSTAT (%)	unweighted	weighted
15-19	5.85	7.17	7.26	-1.41	-0.09
20-24	5.7	7.3	7.65	-1.95	-0.35
25-29	6.86	7.09	8.86	-2.00	-1.77
30-34	9.03	9.45	9.93	-0.90	-0.48
35-39	10.19	10.6	8.47	1.72	2.13
40-44	7.05	8.41	7.35	-0.30	1.06
45-49	6.47	7.55	7.39	-0.92	0.16
50-54	7.73	9.34	9.27	-1.54	0.07
55-59	8.21	6.42	8.11	0.10	-1.69
60-64	10.14	8.06	6.68	3.46	1.38
65-69	7.97	6.48	5.85	2.12	0.63
70-74	6.33	5.17	4.80	1.53	0.37
75-79	4.69	3.88	4.01	0.68	-0.13
>79	3.77	3.08	4.36	-0.59	-1.28

Latvia
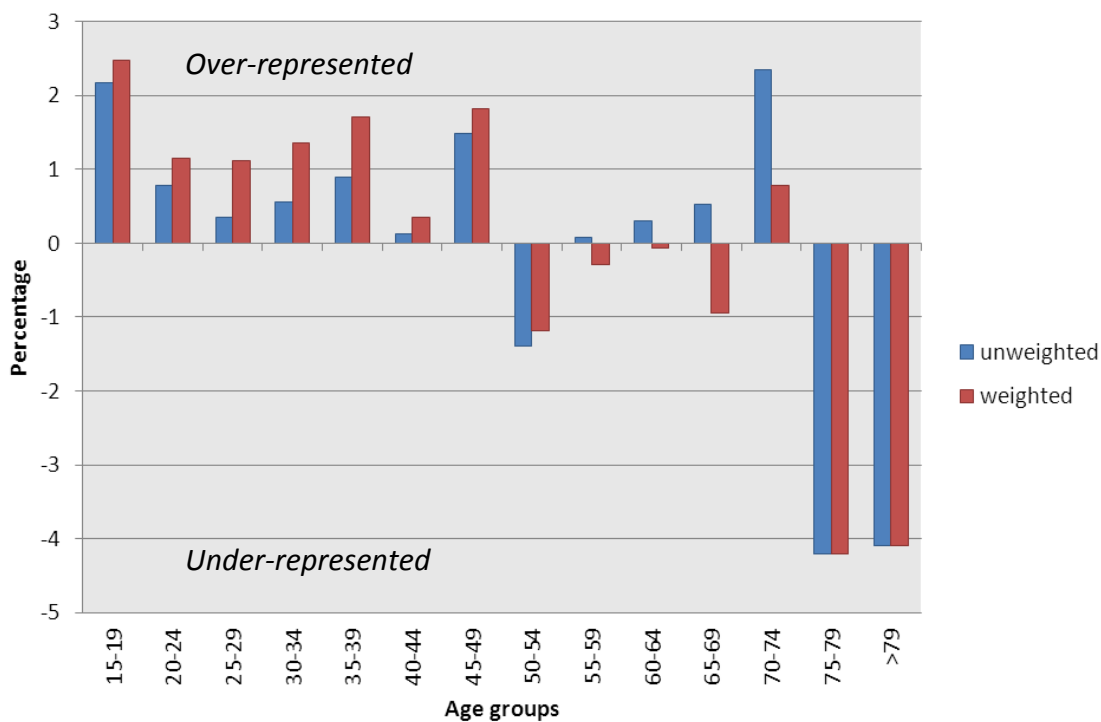
Age group	Consumer empowerment - CE			Δ = (CE-Eurostat)	
	unweighted (%)	Weighted (%)	EUROSTAT (%)	unweighted	weighted
15-19	10.73	11.03	8.55	2.18	2.48
20-24	10.28	10.65	9.50	0.78	1.15
25-29	8.69	9.45	8.33	0.36	1.12
30-34	8.64	9.44	8.08	0.56	1.36
35-39	9.04	9.84	8.14	0.90	1.70
40-44	8.15	8.37	8.02	0.13	0.35
45-49	10.28	10.61	8.80	1.48	1.81
50-54	6.41	6.63	7.81	-1.40	-1.18
55-59	7.2	6.83	7.12	0.08	-0.29
60-64	6.01	5.64	5.70	0.31	-0.06
65-69	7.05	5.57	6.52	0.53	-0.95
70-74	7.5	5.93	5.15	2.35	0.78
75-79	0	0	4.20	-4.20	-4.20
>79	0	0	4.09	-4.09	-4.09

Lithuania
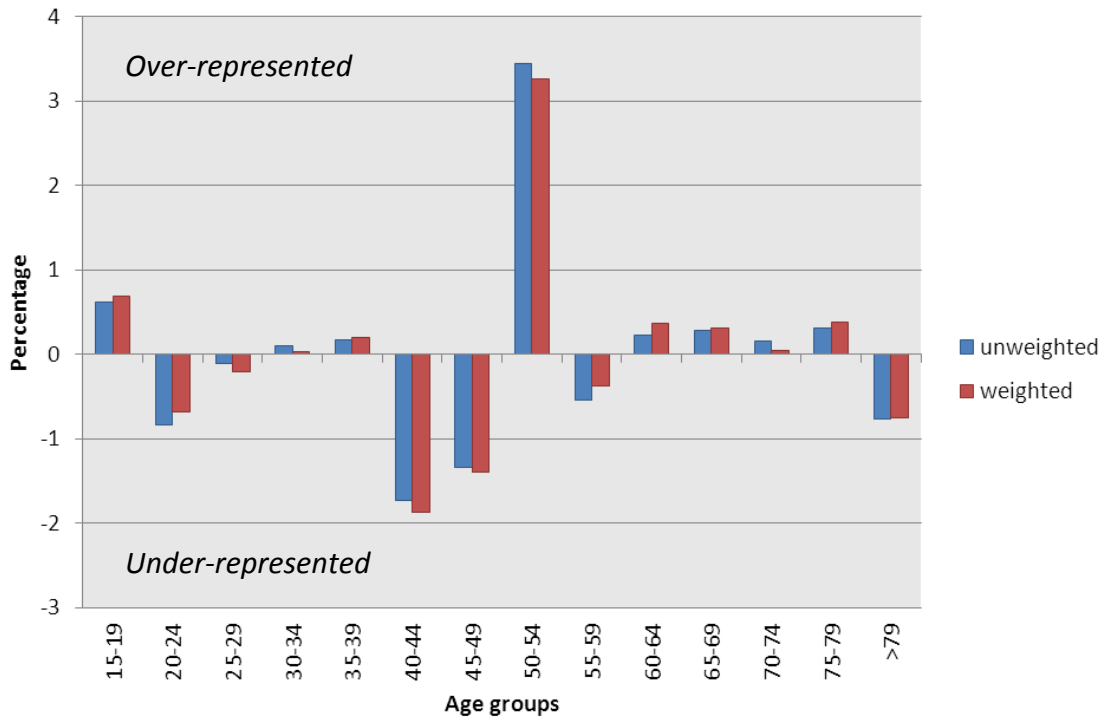
Age group	Consumer empowerment - CE			Δ = (CE-Eurostat)	
	unweighted (%)	Weighted (%)	EUROSTAT (%)	unweighted	weighted
15-19	9.79	9.86	9.18	0.61	0.68
20-24	8.76	8.91	9.59	-0.83	-0.68
25-29	7.97	7.86	8.07	-0.10	-0.21
30-34	7.92	7.85	7.83	0.09	0.02
35-39	8.81	8.83	8.64	0.17	0.19
40-44	7.09	6.94	8.81	-1.72	-1.87
45-49	8.02	7.96	9.36	-1.34	-1.40
50-54	10.97	10.8	7.53	3.44	3.27
55-59	6.2	6.38	6.75	-0.55	-0.37
60-64	5.76	5.9	5.53	0.23	0.37
65-69	6.05	6.07	5.76	0.29	0.31
70-74	5.17	5.05	5.01	0.16	0.04
75-79	4.38	4.46	4.07	0.31	0.39
>79	3.1	3.12	3.87	-0.77	-0.75

Malta
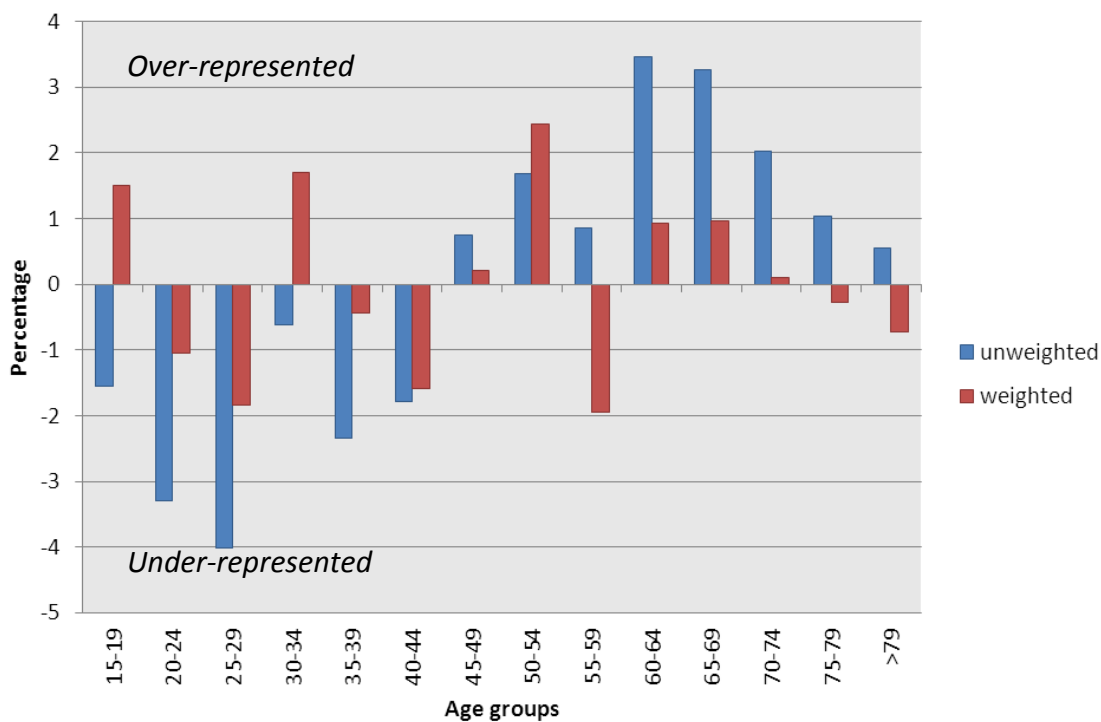
Age group	Consumer empowerment - CE			Δ = (CE-Eurostat)	
	unweighted (%)	Weighted (%)	EUROSTAT (%)	unweighted	weighted
15-19	6.8	9.86	8.36	-1.56	1.50
20-24	5.2	7.46	8.50	-3.30	-1.04
25-29	4.9	7.08	8.91	-4.01	-1.83
30-34	8	10.32	8.62	-0.62	1.70
35-39	5.1	7.02	7.45	-2.35	-0.43
40-44	5.7	5.9	7.49	-1.79	-1.59
45-49	9.5	8.97	8.76	0.74	0.21
50-54	10.3	11.06	8.62	1.68	2.44
55-59	9.6	6.78	8.74	0.86	-1.96
60-64	11.5	8.96	8.03	3.47	0.93
65-69	8.1	5.8	4.83	3.27	0.97
70-74	6.6	4.68	4.57	2.03	0.11
75-79	4.4	3.09	3.36	1.04	-0.27
>79	4.3	3.03	3.75	0.55	-0.72

Poland
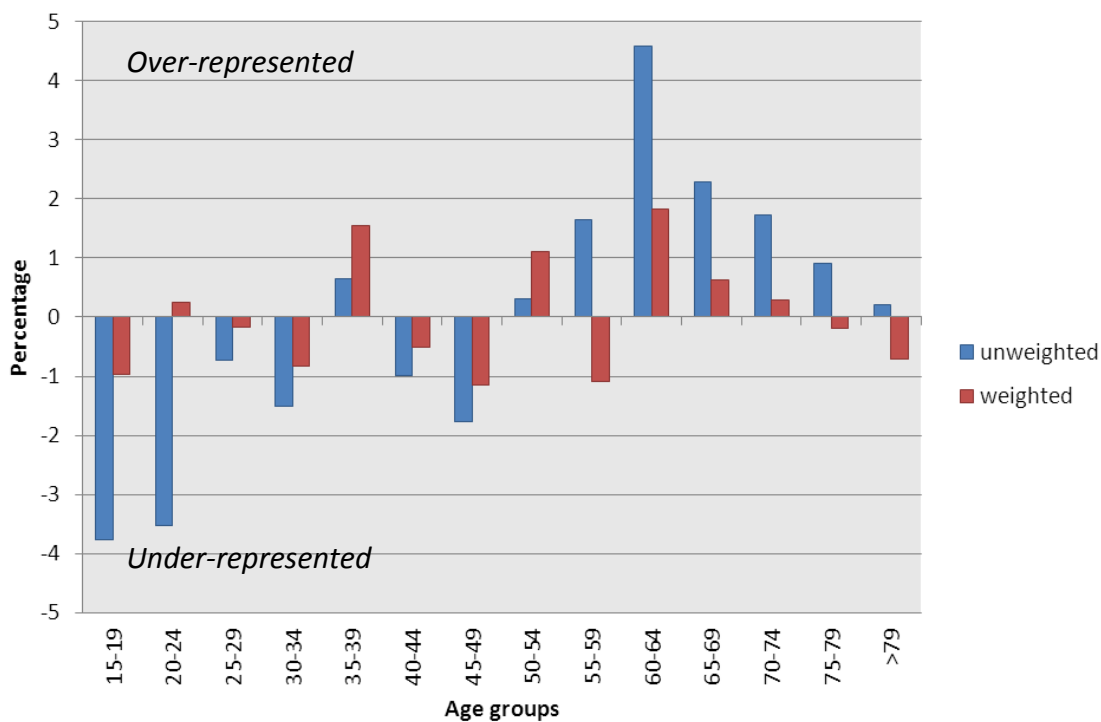
Age group	Consumer empowerment - CE			Δ = (CE-Eurostat)	
	unweighted (%)	Weighted (%)	EUROSTAT (%)	unweighted	weighted
15-19	4.65	7.44	8.41	-3.76	-0.97
20-24	6.4	10.19	9.93	-3.53	0.26
25-29	9.1	9.66	9.83	-0.73	-0.17
30-34	7.55	8.22	9.06	-1.51	-0.84
35-39	8.35	9.24	7.69	0.66	1.55
40-44	6.4	6.88	7.40	-1.00	-0.52
45-49	6.8	7.42	8.58	-1.78	-1.16
50-54	9.7	10.49	9.39	0.31	1.10
55-59	10	7.26	8.36	1.64	-1.10
60-64	10	7.26	5.42	4.58	1.84
65-69	6.8	5.14	4.51	2.29	0.63
70-74	6	4.57	4.28	1.72	0.29
75-79	4.5	3.4	3.60	0.90	-0.20
>79	3.75	2.83	3.54	0.21	-0.71

Romania
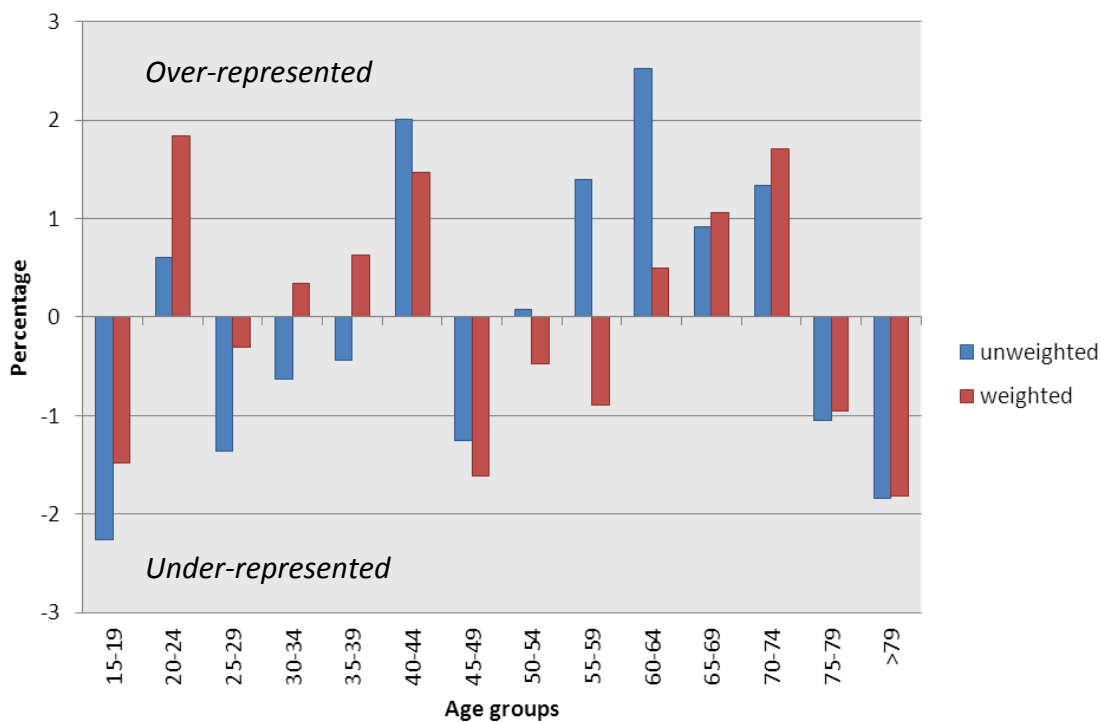
Age group	Consumer empowerment - CE			Δ = (CE-Eurostat)	
	unweighted (%)	Weighted (%)	EUROSTAT (%)	unweighted	weighted
15-19	5.88	6.66	8.14	-2.26	-1.48
20-24	9.73	10.96	9.12	0.61	1.84
25-29	8.04	9.09	9.40	-1.36	-0.31
30-34	8.86	9.83	9.49	-0.63	0.34
35-39	9.49	10.56	9.93	-0.44	0.63
40-44	9.44	8.9	7.43	2.01	1.47
45-49	6.17	5.81	7.42	-1.25	-1.61
50-54	8.53	7.98	8.45	0.08	-0.47
55-59	9.01	6.72	7.61	1.40	-0.89
60-64	7.95	5.92	5.42	2.53	0.50
65-69	6.31	6.46	5.40	0.91	1.06
70-74	6.36	6.73	5.03	1.33	1.70
75-79	2.79	2.89	3.84	-1.05	-0.95
>79	1.45	1.48	3.30	-1.85	-1.82

Slovakia
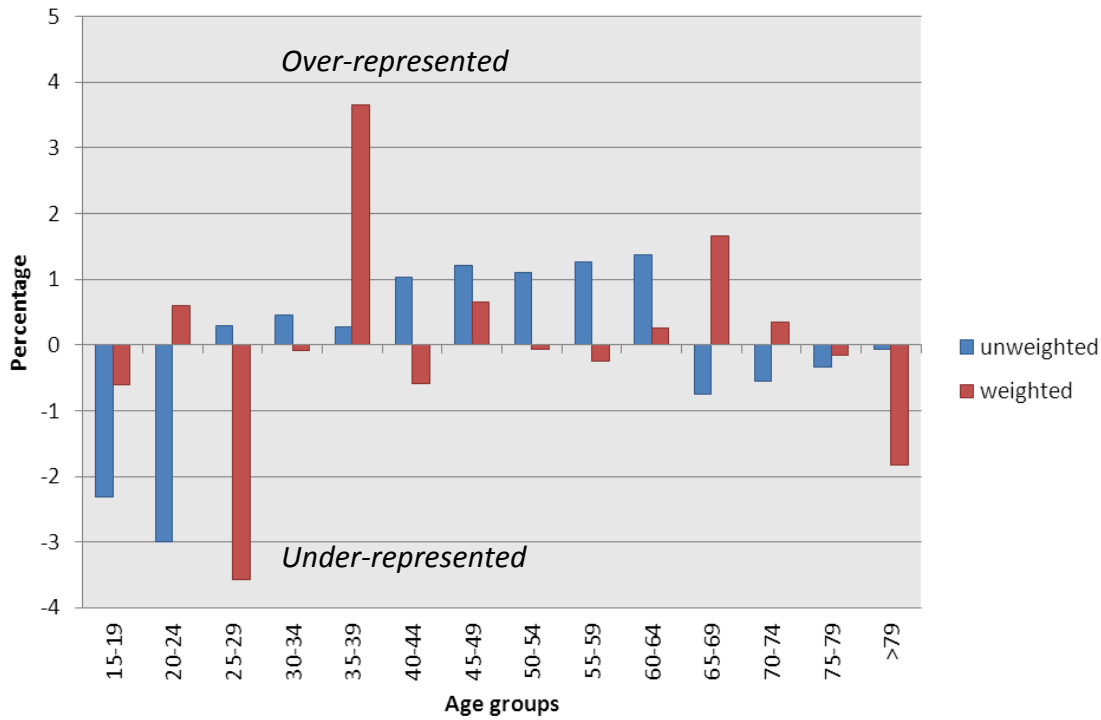
Age group	Consumer empowerment - CE			Δ = (CE-Eurostat)	
	unweighted (%)	Weighted (%)	EUROSTAT (%)	unweighted	weighted
15-19	5.67	7.99	8.60	-2.32	-0.61
20-24	7.18	10.18	9.58	-3.00	0.60
25-29	6.94	6.64	10.22	0.30	-3.58
30-34	10.48	10.02	10.10	0.46	-0.08
35-39	12.22	11.94	8.28	0.28	3.66
40-44	8.68	7.65	8.24	1.03	-0.59
45-49	10.28	9.07	8.42	1.21	0.65
50-54	9.94	8.83	8.89	1.11	-0.06
55-59	8.87	7.6	7.85	1.27	-0.25
60-64	7.23	5.86	5.61	1.37	0.25
65-69	5.43	6.18	4.52	-0.75	1.66
70-74	3.39	3.95	3.61	-0.56	0.34
75-79	2.52	2.86	3.02	-0.34	-0.16
>79	1.16	1.23	3.06	-0.07	-1.83

Slovenia
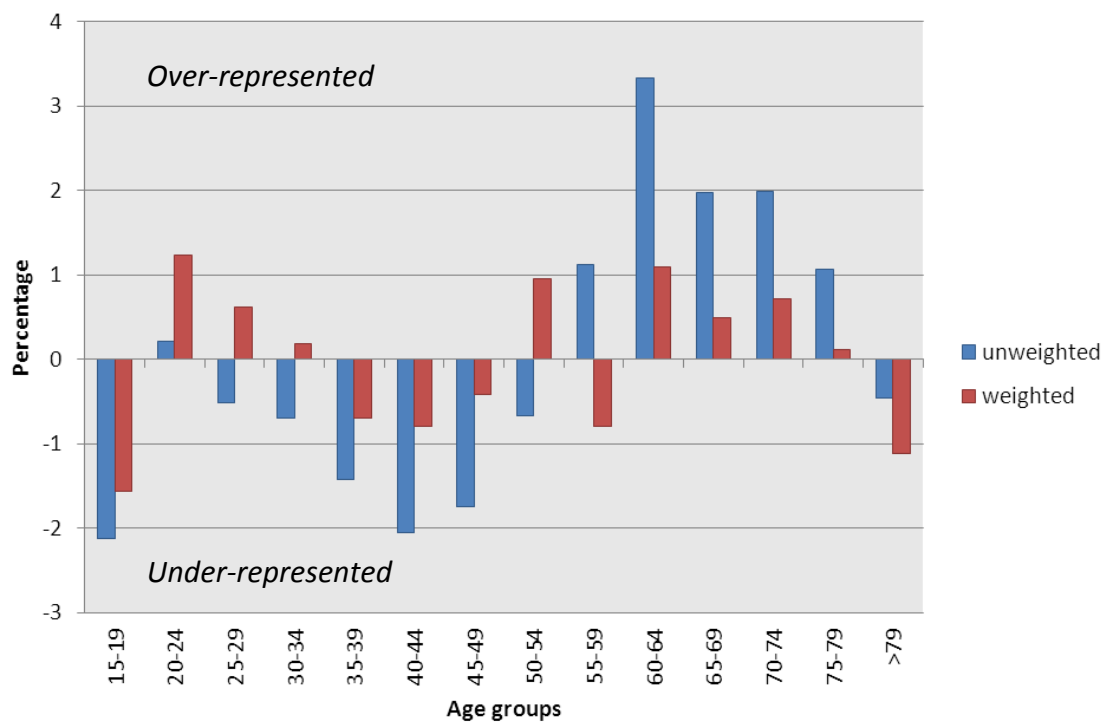
Age group	Consumer empowerment - CE			Δ = (CE-Eurostat)	
	unweighted (%)	Weighted (%)	EUROSTAT (%)	unweighted	weighted
15-19	4.46	5.02	6.58	-2.12	-1.56
20-24	7.87	8.88	7.65	0.22	1.23
25-29	8.22	9.35	8.74	-0.52	0.61
30-34	8.02	8.9	8.72	-0.70	0.18
35-39	6.93	7.65	8.35	-1.42	-0.70
40-44	6.98	8.23	9.03	-2.05	-0.80
45-49	7.13	8.46	8.88	-1.75	-0.42
50-54	8.42	10.04	9.09	-0.67	0.95
55-59	9.26	7.34	8.13	1.13	-0.79
60-64	9.26	7.03	5.93	3.33	1.10
65-69	7.67	6.19	5.70	1.97	0.49
70-74	6.93	5.66	4.94	1.99	0.72
75-79	5.15	4.2	4.09	1.06	0.11
>79	3.71	3.06	4.17	-0.46	-1.11

Appendix 3

1. The concept of empowerment

The concept of empowerment is present in several disciplines, such as political science, psychology, sociology, management, and marketing (Sehgal & Stewart, 2004; Hur, 2006; Cannoy, 2009). We offer a brief excursus into this literature and some useful references.

A single understanding or a general consensus on the concept of empowerment does not exist (Mendes-Filho, Tan & Milne, 2010; Ergeneli, Arl & Metin, 2007), and numerous definitions, often within the same discipline area can be found (Pires, Stanton & Rita, 2006; Perkins and Zimmerman, 1995). In all disciplines, though, empowerment appears as multidimensional and multilevel. It refers to both individuals and the whole society, and is investigated as a process or/and as an outcome per se (Thomas & Velthouse, 1990; Parpart et al., 2003; Hur, 2006).

At <u>individual level</u>, empowerment is connected to self-determination, mastery and decision–making abilities, capacities and personal skills (Becker, Kovach & Gronseth, 2004), as well as to participatory mechanisms (Cox, 2002, Gutierrez, 1995). As stressed by Wilson (1996), there is a vast recognition, that individual changes are prerequisites, for social change and empowerment (Page & Czuba, 1999). A broad part of this literature treats empowerment as an outcome (Behm & Staples, 2002) to be measured and evaluated (Parpart et al., 2003) in relation to subjective conditions. As reported by Hur (2006), empowerment encompasses self-determination (Fetterman, 1996; Sprague & Hayes, 2000), self-confidence (Larson, Walker & Pearce, 2005), but also mastery (Boehm & Staples, 2004), personal sense of control and efficacy (Speer, 2000), advocacy and consciousness raising (Monreau, 1990). According to Thomas and Velthouse (1990) cognitive model, empowerment is the result of four component: *meaningfulness* which is related to the individual judgment based on personal scale of values,, *competence*, the degree to which a person can skilfully perform tasks, *choice*, which involves self-determination, and *impact*, the level to which tasks and goals are actually performed.

At the <u>social or community level</u> the accent is on group empowerment (Lee, 1997), collective empowerment (Staples, 1990), organizational and political empowerment (Gutierrez et al, 1998; Peterson & Zimmerman, 2004). This literature considers empowerment as a process embracing steps and

experiences '*through which people and/or communities increase their control or mastery of their own lives and the decisions that affect their lives*' (Kreisberg, 1992, p. 19). The central focus becomes the mechanism and the opportunities to gain control and to maintain it (Pires, Stanton & Rita, 2006; Perkins & Zimmerman, 1995).The sparse literature investigates single components empowerment, such as social cohesion, community engagement, and multiple dimensions, such as building community and culture building (Fetterson, 2002), intellectual understandings of power and social change (Speer, 2000), and leadership competence and political control (Zimmerman & Zahniser, 1991). Hur (2006) identifies a set of four components common to this literature: collective belonging, involvement in the community, control over organization in the community, and community building. *The goal of collective empowerment is to establish community building, so that members of a given community can feel a sense of freedom, belonging, and power that can lead to constructive social change* (Hur, 2006, page 535).

Zimmerman and Rappaport (1988, page 725) instead define empowerment in term of participatory process as *the connection between a sense of personal competence, a desire for and a willingness to take action in the public domain*, bridging the gap between the individual and the collective empowerment. The concept is re-elaborated by Page and Czuba (1999) who define empowerment as *a multi-dimensional social process that helps people gain control over their own lives*, an important implication of this definition is that the individual and community are fundamental connected and empowerment depends upon the possibilities to expand and change this 'power'. Gutierrez (1990) defines empowerment as *a process of increasing personal, interpersonal, or political power so that individuals can take action to improve their life situations* (page 149). Empowerment is thus connected at collective level to political and objective changes, and at the individual level, to personal changes (Itzhaky & York, 2000).

Finally, the comprehensive definition given by Segal et al. (1993) considers empowerment as a process of gaining control over one's life and influencing the organizational and societal structure in which one lives.

Empowerment across disciplines

Empowerment as a multidimensional concept is analysed in various disciplines, psychology and healthcare, politics, and management. A vast literature exists for healthcare and psychotherapy where the term empowerment was firstly used in the sixties in studies related to psychology communities. In this field a relevant aspect of empowerment is self-determination as a result of information access and knowledge to be able to make informed choices (Geller et al., 1998; Wowra et al., 1999). Empowerment here implies an adequate relationship between professionals and patients, based on shared responsibilities, common objectives, and values.

It is in the political and minority rights context that empowerment is related to the protection of most vulnerable citizens, thus also consumers. In particular the idea of empowerment is connected to the movements for human rights and marginalized group, access to information for citizens' choices, greater sharing of responsibility, and local organizational capacity. Following Longwe (1991), five different degrees of increased empowerment can be identified, from *welfare*, which implies only the satisfaction of basic needs, to *control degree*, where individuals fully participant to the making decisions process. An increased participation of previously excluded groups is also advocated by Luttrell et al. (2009).

This literature also emphasizes the tight connection between empowerment and education. Education is a prerequisite for empowerment and a source of empowerment in itself. On the other hand education is a dimension of consumer empowerment, as it is necessary to correctly understand and use an increasing flow of information (Hunter, Harrison and Waite, 2006; Cutler and Nye, 2000). More recently, empowerment started appearing in management and organisational literature, where it is related to keywords such as management strategy, techniques implementation and empowering teams, employees' participation, and shared authority (Bowen & Lawler III, 1995; Spreitzer, Kizilos & Nason, 1997, Lincoln et al., 2002). Peterson and Zimmerman (2004) recognise empowerment as a multilevel concept, involving individuals, communities, and organizations, and propose three components for organizational empowerment: intraorganizational, interorganizational, and extraorganizational. Finally an interesting aspect of this literature developed by Conger and Kanungo (1988) is the positive relationship between the identification and removal of vulnerability conditions and the role of information.

2. References

Becker, J., Kovach, A., Gronseth, D. (2004). *Individual empowerment: How community health workers operationalize self-determination, self-sufficiency, and decision-making abilities of low-income mothers.* Journal of Community Psychology, 32(3), 327-342.

Boehm, A., & Staples, L.H. (2004). *Empowerment: The point of view of consumer.* Families in Society, 85(2), 270–280.

Bowen, D., Lawler III, E. (1995). *Empowering Service Employees.* MIT Sloan, Management Review, 36(4), 75-84.

Cannoy, S. D. (2009). *Incidental or Intentional? Achieving Consumer Empowerment in Electronic Healthcare Information Exchange.* AMCIS 2009 *Proceedings.* Paper 726.

Conger, J., Kanungo, R. (1988). *The empowerment process: Integrating theory and practice.* Academy of Management Review, 13(3), 471–482

Cox, C. (2002). *Empowering African America custodial grandparents.* Social Work, 47, 45-54.

Cutler, T., Nye, D. (2000). *Anything but 'empowerment'? Smokers, tar and nicotine data and cigarette design.* Health, Risk & Society, 2 (1), 69-81.

Ergeneli, A., Arl, G., Metin, S. (2007). *Psychological empowerment and its relationship to trust in immediate managers.* Journal of Business Research, 60(1), 41-49.

Fetterman, D.M. (1996). *Empowerment evaluation: An introduction to theory and practice.* Fetterman, S.J. Kaftarian, & A. Wandersman (Eds.), Empowerment evaluation: Knowledge and tools for self-assessment and accountability (pp. 3–46). Sage, CA.

Fetterson, M., (2002). *Empowerment evaluation: Building communities of practice and a culture of learning.* American Journal of Psychology, 30(1), 89–102.

Geller, J., Brown, J., Fisher, W., Grudzinskas, A., Manning., T.(1998). *A National Survey of "Consumer Empowermen"at the State Level.* Psychiatr Serv 49:498-503.

Gutierrez, L. (1995). *Understanding the empowerment process: Does consciousness make a difference?* Social Work Research, 19, 229-237.

Gutierrez, L. M., Parsons, R. J., & Cox, E. O. (Eds.). (1998). *Empowerment in social work practice.* Pacific Grove:, CA: Brooks/Cole.

Gutierrez, L.M. (1990). *Working with women of color: An empowerment perspective.* Social Work, 35(2), 149–153.

Hunter, G.L., Harrison, T., Waite, K. (2006). *The dimensions of consumer empowerment.* In Enhancing Knowledge Development in Marketing. AMA Educators' Proceedings, 17, 2007-2008.

Hur, M.H. (2006). *Empowerment in terms of theoretical perspectives: exploring a typology of the process and components across disciplines.* Journal of Community Psychology, 34 (5), 523-540.

Itzhaky, H., & York, A.S. (2000). *Sociopolitical control and empowerment*: An extended replication. Journal of Community Psychology, 28(4), 407–415.

Kreisberg, S. (1992). *Trasformig power: Domination, Empowerment, and Education.* State University of New York Press. Albany.

Larson, R., Walker, K., & Pearce, N. (2005). *A comparison of youth-driven and adult-driven youth programs: Balancing inputs from youth and adults.* Journal of Community Psychology, 33(1), 57–74.

Lee, J. (1997). *The empowerment group: The heart of the empowerment approach and an antidote to injustice.* J. Parry (Ed), From prevention to wellness through group work (pp. 15-32). Haworth Press, NY.

Lincoln, N.D., Travers, C., Ackers, P., Wilkinson, A. (2002). *The Meaning of empowerment: the interdisciplinary etymology of a new management concept.* International Journal of Management Reviews, 4-3, 271-290.

Longwe, S. (1991) *Gender Awareness: The Missing Element in the Third World Development Project.* Changing Perceptions: Writings on Gender and Development. Oxford. Oxfam, UK.

Luttrell, C., Quiroz, S., Scrutton, C., Bird, K. (2009). *Understanding and Operationalising Empowerment.* ODI Research. Working Paper, 308.

Mendes-Filho, L., Tan, F.B., Milne, S. (2010). *Backpacker Use of User-Generated Content: A Consumer Empowerment Study.* Information and Communication Technologies in Tourism 2010, 12, 455-466. SpringerWien NY.

Moreau, M. (1990). *Empowerment through advocacy and consciousness raising.* Journal of Sociology and Social Welfare, 17, 53–67.

Page, N., Czuba, C.E. (1999). *Empowerment: What is it?* Journal of Extension, 37(5), 24-32.

Parpart, J., Rai, S., Staudt, K. (2003). *Rethinking empowerment: Gender and development in a global/local world.* Routledge.

Perkins, D., Zimmerman, M.A. (1995). *Empowerment theory, research, and application.* American Journal of Community Psychology*, 23 (5), 569-579.*

Peterson, A., Zimmerman, M. (2004). *Beyond the individual: Toward a Nomological Network of Organizational Empowerment.* American Journal of Community Psychology, 34 (1/2), 129-45.

Pires, G.D., Stanton, J., Rita, P. (2006). *The internet, consumer empowerment and marketing strategies.* European Journal of Marketing, 40 (9/10), 936-949.

Segal, S., Silverman C., Temkin, T. (1993). *Empowerment and self-help agency practice for people with mental disabilities.* Social Work, 39, 727-735.

Sehgal, Rashi and Stewart, Glenn, *Exploring the Relationship between User Empowerment and Enterprise System Success Measures* (2004). AMCIS 2004 *Proceedings.* Paper 15.

Speer, P.W. (2000). *Intrapersonal and interactional empowerment: Implication for theory.* Journal of Community Psychology, 28(1), 51–61.

Spreitzer, G., Kizilos, M, Nason, S. (1997). *A Dimensional Analysis of the Relationship between Psychological Empowerment and Effectiveness, Satisfaction, and Strain.* Journal of Management, 23(5), 679-704

Staples, L.H. (1990). *Powerful ideas about empowerment.* Administration in Social Work, 14(2), 29–42.

Thomas, K.W., Velthouse, B. A., (1990). *Cognitive Elements of Empowerment: An 'Interpretive' Model of Intrinsic Task Motivation.* Academy of Management Review, 15(4), 666-681.

Wilson, P. (1996). *Empowerment: Community economic development from the inside out.* Urban Studies, 33(4-5), 617-630.

Wowra, S., McCarter, R. (1999). Validation of the Empowerment Scale with an Outpatient Mental Health Population. Psychiatr Serv, 50, 959-961.

Zimmerman, M., Rappaport, J. (1988). *Citizen participation, perceived control, and psychological empowerment.* American Journal of Community Psychology, 16, 725-750.

Zimmerman, M., Zahniser, J. (1991). *Refinements of sphere-specific measures of perceived control: Development of a sociopolitical control scale.* Journal of Community Psychology, 19, 189–204.

Appendix 4. Socio-economic analysis (tables)

1. Gender

QD10: female (sample: 30265)

female	Consumer skills		Awareness of consumer		Consumer engagement		ICE	
	scores	ranks	scores	ranks	scores	ranks	scores	ranks
EU27 averag	**16.93**		**12.51**		**12.97**		**14.13**	
BE	19.88	7	13.25	11	12.08	23	15.02	11
BG	13.51	26	7.85	29	12.83	18	11.50	27
CZ	17.95	13	15.06	4	15.18	1	16.06	7
DK	20.97	4	14.57	7	13.57	10	16.33	6
DE	19.81	8	16.55	2	14.25	6	16.80	5
EE	15.04	21	12.45	17	12.91	16	13.47	17
IE	16.97	16	10.68	25	11.20	26	12.94	23
EL	17.68	14	9.66	27	13.03	14	13.51	17
ES	13.71	25	12.93	15	11.94	24	12.84	25
FR	18.35	11	13.07	14	12.51	19	14.61	13
IT	15.47	20	11.58	22	12.17	22	13.07	21
CY	19.14	9	13.31	11	15.13	2	15.89	8
LV	16.67	19	13.24	13	12.86	16	14.24	14
LT	14.93	22	13.35	10	11.00	27	13.04	22
LU	16.82	18	11.14	23	12.42	21	13.47	17
HU	14.83	23	10.39	26	13.19	13	12.85	23
MT	13.98	24	12.06	19	10.68	28	12.20	26
NL	22.35	2	14.66	6	14.74	5	17.23	2
AT	18.47	10	12.07	19	14.15	7	14.93	12
PL	11.80	28	10.82	24	9.78	29	10.77	29
PT	13.26	27	12.47	16	13.71	9	13.17	20
RO	11.82	28	8.26	28	12.49	19	10.95	28
SI	16.92	17	11.65	21	13.36	12	14.00	15
SK	18.13	12	13.70	8	13.62	10	15.13	10
FI	20.09	6	15.80	3	14.81	4	16.86	4
SE	21.33	3	15.04	5	14.93	3	17.08	3
UK	17.11	15	12.19	18	11.68	25	13.63	16
IS	20.49	5	13.70	8	13.03	14	15.70	9
NO	24.40	1	19.89	1	14.10	7	19.31	1

QD10: male (sample: 26107)

male	Consumer skills		Awareness of consumer		Consumer engagement		ICE	
	scores	ranks	scores	ranks	scores	ranks	scores	ranks
EU27 averag	**19.99**		**14.22**		**14.10**		**16.08**	
BE	20.61	16	13.79	19	12.24	26	15.49	20
BG	17.10	23	9.70	28	14.68	7	13.92	26
CZ	20.36	17	17.22	4	15.91	4	17.79	3
DK	23.66	2	15.92	6	13.93	18	17.77	3
DE	21.43	11	17.73	3	14.50	10	17.80	3
EE	19.84	20	15.42	8	15.11	5	16.76	10
IE	23.03	3	13.78	19	14.02	17	16.92	9
EL	21.23	14	11.59	27	14.63	9	15.86	18
ES	16.68	25	14.35	15	12.61	23	14.50	23
FR	21.09	15	14.13	16	13.82	19	16.32	16
IT	16.48	26	12.60	24	12.67	22	13.90	26
CY	20.36	17	12.50	25	14.74	7	15.89	18
LV	17.48	22	13.39	21	12.50	24	14.42	24
LT	15.88	27	12.79	23	10.54	29	13.01	28
LU	21.30	13	14.04	18	14.52	10	16.61	14
HU	18.21	21	12.14	26	14.35	13	14.93	22
MT	25.88	1	20.29	1	16.76	1	20.87	1
NL	23.02	3	15.04	9	14.28	13	17.40	8
AT	22.20	7	14.50	11	16.15	3	17.63	6
PL	17.13	23	15.01	9	12.90	21	14.95	21
PT	15.09	28	13.45	21	14.28	13	14.29	25
RO	12.49	29	8.50	29	12.18	26	11.13	29
SI	22.10	8	14.40	13	16.25	2	17.60	6
SK	20.32	19	15.53	7	14.38	12	16.70	12
FI	22.93	5	17.10	5	14.84	6	18.22	2
SE	22.06	8	14.45	13	14.12	16	16.84	10
UK	21.82	10	14.47	11	13.73	20	16.63	14
IS	22.31	6	14.10	16	12.48	24	16.23	17
NO	21.41	11	17.85	2	11.33	28	16.70	12

2. Age

QD11: 15-24 (sample: 6734)

age:15-24	Consumer skills		Awareness of consumer		Consumer engagement		ICE	
	scores	ranks	scores	ranks	scores	ranks	scores	ranks
EU27 average	**26.19**		**17.05**		**17.70**		**20.30**	
BE	26.65	12	13.81	19	15.10	22	18.51	18
BG	20.17	23	11.51	27	17.22	14	16.41	22
CZ	23.97	17	19.73	9	18.06	10	20.53	13
DK	41.14	3	24.35	4	24.77	3	30.04	4
DE	27.17	10	20.33	7	16.82	17	21.34	11
EE	25.22	16	18.21	12	19.40	7	20.95	12
IE	31.76	6	18.70	11	18.41	9	22.91	6
EL	32.49	5	17.24	14	21.33	5	23.73	5
ES	17.78	27	14.09	17	13.04	25	14.93	26
FR	26.63	13	14.04	18	16.82	17	19.19	15
IT	15.36	28	11.07	28	10.87	28	12.41	29
CY	19.91	24	12.19	26	14.60	23	15.59	24
LV	19.06	25	13.73	20	12.88	26	15.19	25
LT	18.09	26	13.25	23	10.81	29	13.98	27
LU	23.89	18	12.99	25	17.03	15	18.03	19
HU	21.80	21	13.44	22	16.72	19	17.37	20
MT	29.05	7	21.07	6	17.28	13	22.35	8
NL	28.58	9	14.76	16	16.98	15	20.11	14
AT	29.06	7	19.07	10	20.24	6	22.78	7
PL	26.39	14	21.24	5	17.78	12	21.71	10
PT	20.33	22	17.80	13	17.92	11	18.68	17
RO	15.02	29	9.90	29	13.22	24	12.77	28
SI	22.83	20	13.22	24	15.70	20	17.28	21
SK	27.23	10	20.11	8	18.71	8	21.96	9
FI	40.53	4	27.85	3	28.06	2	32.11	2
SE	50.98	1	31.10	1	32.65	1	38.21	1
UK	25.96	15	15.64	15	15.56	21	19.02	16
IS	23.58	19	13.54	21	12.33	27	16.42	22
NO	44.41	2	29.64	2	22.86	4	32.09	2

QD11: 25-39 (sample: 13637)

age:25-39	Consumer skills		Awareness of consumer		Consumer engagement		ICE	
	scores	ranks	scores	ranks	scores	ranks	scores	ranks
EU27 average	**21.82**		**15.24**		**15.19**		**17.39**	
BE	23.68	9	15.35	16	14.00	19	17.62	12
BG	18.29	25	10.71	28	15.83	9	15.04	24
CZ	19.37	20	16.29	8	15.26	12	16.94	15
DK	27.88	4	17.95	5	16.52	6	20.72	4
DE	23.24	11	18.83	4	15.73	10	19.18	5
EE	21.60	14	16.71	7	16.07	8	18.09	9
IE	22.23	13	13.85	21	13.95	19	16.65	16
EL	21.26	16	10.78	27	14.60	16	15.60	22
ES	18.87	22	15.36	15	13.81	21	15.97	19
FR	21.03	17	13.15	23	13.60	24	15.91	21
IT	14.71	28	11.59	26	11.72	27	12.67	29
CY	22.48	12	13.54	22	15.49	11	17.19	13
LV	20.16	18	15.83	12	14.33	17	16.73	16
LT	17.14	27	14.27	20	11.49	28	14.23	27
LU	25.35	5	15.89	11	16.20	7	19.12	6
HU	18.51	23	11.82	25	14.66	15	15.04	24
MT	28.67	3	20.26	2	18.14	3	22.28	3
NL	24.96	6	15.79	12	15.32	12	18.65	8
AT	19.28	21	12.33	24	13.74	22	15.13	23
PL	17.38	26	14.75	19	12.98	26	14.99	24
PT	18.48	23	16.18	9	16.85	5	17.18	13
RO	14.18	29	10.43	29	14.80	14	13.23	28
SI	24.32	8	15.26	16	16.89	4	18.83	7
SK	19.50	19	14.86	18	13.70	22	15.98	19
FI	32.61	1	23.87	1	20.80	1	25.66	1
SE	30.55	2	20.15	3	19.27	2	23.27	2
UK	23.40	10	15.61	14	14.30	17	17.72	11
IS	24.73	7	16.16	9	13.45	25	18.02	10
NO	21.38	15	17.54	6	11.34	29	16.59	18

QD11: 40-54 (sample: 14350)

age: 40-54	Consumer skills		Awareness of consumer		Consumer engagement		ICE	
	scores	ranks	scores	ranks	scores	ranks	scores	ranks
EU27 average	**19.32**		**14.03**		**14.02**		**15.77**	
BE	19.28	16	13.32	20	11.48	27	14.63	20
BG	15.14	26	8.33	28	13.25	17	12.33	28
CZ	18.60	18	15.55	8	14.47	8	16.17	11
DK	22.23	6	15.44	9	13.08	19	16.84	8
DE	22.99	5	19.37	2	15.85	4	19.31	2
EE	17.55	20	13.75	15	13.84	14	15.04	18
IE	19.75	14	11.64	26	12.28	25	14.54	21
EL	18.06	19	9.56	27	12.63	21	13.46	25
ES	17.08	23	15.29	10	13.57	15	15.27	16
FR	20.52	9	15.25	10	13.95	13	16.52	9
IT	17.01	24	12.52	24	13.05	20	14.19	23
CY	20.54	9	13.23	21	15.13	6	16.32	10
LV	17.64	20	13.91	13	13.25	17	14.90	19
LT	15.73	25	13.61	17	11.11	28	13.42	26
LU	19.97	12	13.66	15	13.97	10	15.85	14
HU	20.36	11	13.40	19	16.80	3	16.91	7
MT	19.39	15	15.59	7	13.28	16	16.02	12
NL	23.19	3	15.69	6	14.83	7	17.86	5
AT	18.97	17	12.37	25	14.01	10	15.14	17
PL	14.62	27	13.52	18	12.28	25	13.44	26
PT	14.21	28	12.59	23	13.96	10	13.62	24
RO	11.84	29	7.98	29	12.41	24	10.83	29
SI	23.16	3	15.90	4	17.98	2	19.04	3
SK	17.36	22	13.21	21	12.55	22	14.34	22
FI	30.42	1	23.11	1	19.73	1	24.31	1
SE	22.09	7	15.30	10	14.27	9	17.17	6
UK	24.00	2	15.85	5	15.48	5	18.41	4
IS	21.67	8	13.87	13	12.51	22	15.96	12
NO	19.77	13	16.76	3	10.73	29	15.60	15

QD11: over 55 (sample: 21637)

age: over -54	Consumer skills		Awareness of consumer		Consumer engagement		ICE	
	scores	ranks	scores	ranks	scores	ranks	scores	ranks
EU27 average	**13.79**		**10.86**		**11.25**		**11.97**	
BE	17.12	5	12.56	7	10.77	15	13.43	10
BG	11.64	22	6.84	28	11.51	11	10.09	26
CZ	17.46	4	15.00	2	15.63	1	16.04	2
DK	16.49	8	12.28	11	10.98	14	13.21	12
DE	16.54	8	14.31	3	12.34	9	14.34	7
EE	11.43	23	10.42	18	10.73	18	10.86	18
IE	13.09	15	8.52	26	9.19	28	10.27	23
EL	14.89	13	9.15	24	11.75	10	11.97	14
ES	10.03	26	10.93	15	9.94	22	10.28	23
FR	16.21	12	12.63	7	11.26	12	13.32	11
IT	16.37	10	12.42	10	13.01	5	13.93	8
CY	16.38	10	12.53	9	14.45	3	14.49	5
LV	12.01	20	10.08	20	10.51	20	10.87	18
LT	11.95	20	11.61	13	9.94	22	11.13	16
LU	13.03	18	9.55	22	10.35	21	10.99	17
HU	11.24	24	8.91	25	10.61	19	10.29	23
MT	10.72	25	11.10	14	9.43	27	10.38	22
NL	18.97	3	13.67	4	12.98	5	15.17	4
AT	19.16	2	12.74	6	15.47	2	15.83	3
PL	8.14	29	8.24	27	7.34	29	7.89	29
PT	9.13	28	9.36	23	10.79	15	9.79	27
RO	9.50	27	6.36	29	9.92	22	8.67	28
SI	13.11	15	9.76	21	11.23	13	11.39	15
SK	16.95	7	13.09	5	13.59	4	14.54	5
FI	12.66	19	10.49	17	9.69	25	10.92	18
SE	14.88	13	10.62	16	10.80	15	12.09	13
UK	13.13	15	10.16	19	9.61	26	10.95	18
IS	17.10	5	12.17	12	12.59	8	13.95	8
NO	21.40	1	19.01	1	12.86	7	17.60	1

3. Occupation

Non Active Population

D15a1: Responsible for ordinary shopping and looking after the home, or without any current occupation, not working (sample: 4463)

D15a.1	Consumer skills		Awareness of consumer		Consumer engagement		ICE	
	scores	ranks	scores	ranks	scores	ranks	scores	ranks
EU27 average	16.95		12.85		12.95		14.24	
BE	19.26	7	12.82	13	11.96	19	14.64	13
BG	14.85	22	9.31	27	14.09	11	12.84	21
CZ	15.23	19	13.78	8	13.28	14	14.08	15
DK	18.01	11	13.86	7	14.90	7	15.60	8
DE	22.89	3	18.89	3	16.54	2	19.37	3
EE	20.05	6	16.82	5	15.81	3	17.52	5
IE	14.87	21	9.63	26	10.01	28	11.49	24
EL	14.77	22	8.88	28	11.56	20	11.78	23
ES	11.40	26	11.84	18	10.90	24	11.36	25
FR	16.47	17	12.76	13	11.38	22	13.49	17
IT	14.79	22	11.47	19	12.05	18	12.77	21
CY	17.42	13	13.17	11	15.30	6	15.33	9
LV	19.29	7	16.36	6	13.76	13	16.40	6
LT	15.22	19	13.66	9	10.45	25	13.03	19
LU	16.85	16	11.34	20	12.32	16	13.51	17
HU	17.43	13	10.59	24	14.35	9	14.19	14
MT	11.36	26	11.00	23	9.57	29	10.61	28
NL	20.09	5	13.68	9	14.00	12	15.91	7
AT	16.44	18	9.80	25	12.31	16	12.89	20
PL	12.26	25	11.20	21	10.35	27	11.25	26
PT	10.06	29	11.08	22	11.54	21	10.91	27
RO	10.39	28	7.07	29	10.48	25	9.39	29
SI	18.47	10	11.87	17	14.60	8	15.02	11
SK	18.84	9	12.37	16	13.13	15	14.77	12
FI	27.88	1	21.36	1	18.36	1	22.44	1
SE	26.08	2	19.48	2	15.36	4	20.19	2
UK	16.99	15	12.72	15	11.40	22	13.66	16
IS	17.95	11	13.03	12	14.28	9	15.10	10
NO	20.73	4	17.91	4	15.36	4	17.93	4

D15a2: Student (sample: 4725)

D15a.2	Consumer skills		Awareness of consumer		Consumer engagement		ICE	
	scores	ranks	scores	ranks	scores	ranks	scores	ranks
EU27 averag	**26.15**		**16.54**		**17.17**		**19.94**	
BE	27.11	13	13.04	21	15.17	22	18.44	17
BG	20.34	23	11.33	27	16.67	15	16.21	23
CZ	24.40	17	20.01	8	17.85	8	20.69	12
DK	37.69	2	22.06	4	22.81	3	27.48	3
DE	29.93	8	21.00	5	19.02	6	23.24	5
EE	25.15	16	16.88	12	18.97	6	20.35	13
IE	31.39	6	18.31	10	17.06	13	22.18	8
EL	31.81	5	16.69	14	20.69	4	23.11	6
ES	19.41	26	14.44	16	13.03	25	15.58	25
FR	26.93	14	12.57	24	16.13	18	18.58	16
IT	15.36	29	11.12	28	10.85	29	12.42	29
CY	20.27	23	12.48	25	14.69	23	15.84	24
LV	19.69	25	12.78	22	12.67	26	15.02	26
LT	18.53	27	13.23	19	10.90	28	14.15	27
LU	24.28	18	12.43	26	16.26	16	17.71	19
HU	21.52	21	12.67	23	15.55	20	16.62	22
MT	30.39	7	20.41	7	17.67	9	22.73	7
NL	28.09	11	14.39	16	16.35	16	19.61	15
AT	28.23	9	16.85	13	17.42	11	20.81	11
PL	26.67	15	20.75	6	17.42	11	21.52	10
PT	20.53	22	17.85	11	16.86	14	18.38	17
RO	16.28	28	10.45	29	13.14	24	13.33	28
SI	23.00	20	13.20	19	15.47	21	17.24	20
SK	27.64	12	19.78	9	19.16	5	22.15	8
FI	37.11	3	26.48	2	26.72	2	30.07	2
SE	46.08	1	28.81	1	29.10	1	34.61	1
UK	28.21	9	16.73	14	15.90	19	20.22	14
IS	23.94	19	13.91	18	12.65	27	16.77	21
NO	34.14	4	23.35	3	17.66	9	24.88	4

D15a3: Unemployed or temporarily not working (sample: 4601)

D15a.3	Consumer skills		Awareness of consumer		Consumer engagement		ICE	
	scores	ranks	scores	ranks	scores	ranks	scores	ranks
EU27 averag	**18.74**		**13.68**		**13.94**		**15.44**	
BE	20.36	8	13.27	18	12.38	25	15.29	15
BG	15.28	26	9.03	28	13.62	17	12.73	28
CZ	17.85	19	14.43	9	14.46	7	15.57	11
DK	24.41	3	17.95	4	16.00	2	19.39	2
DE	16.13	23	13.09	19	11.28	28	13.45	25
EE	18.04	18	14.74	8	14.24	13	15.65	11
IE	22.60	4	13.77	14	13.99	14	16.76	6
EL	19.55	12	10.70	27	14.37	10	14.93	18
ES	16.19	22	14.96	6	12.89	20	14.63	21
FR	20.17	9	15.01	6	14.41	10	16.50	10
IT	15.67	24	12.18	24	12.44	25	13.42	25
CY	18.41	16	11.93	25	14.46	7	14.97	17
LV	17.33	21	13.55	16	13.31	18	14.71	19
LT	15.31	26	13.51	16	11.20	29	13.28	27
LU	19.47	12	12.53	22	13.76	15	15.26	15
HU	19.21	14	12.26	23	15.28	6	15.63	11
MT	17.57	20	18.13	3	15.65	4	17.06	5
NL	21.95	5	13.73	15	14.40	10	16.68	7
AT	18.68	15	11.93	25	13.19	19	14.61	21
PL	14.67	28	14.43	9	12.62	23	13.86	24
PT	15.46	25	12.82	21	14.50	7	14.29	23
RO	12.83	29	8.96	28	12.62	23	11.54	29
SI	19.86	10	13.97	12	16.02	2	16.65	8
SK	18.10	17	13.13	19	12.91	20	14.69	19
FI	26.30	1	19.27	1	17.84	1	21.08	1
SE	24.80	2	16.04	5	15.64	5	18.79	3
UK	19.69	11	14.05	12	12.90	20	15.50	14
IS	21.91	5	14.21	11	13.78	15	16.60	8
NO	21.49	7	18.78	2	12.18	27	17.32	4

D15a4: Retired or unable to work through illness (sample: 16000)

D15a.4	Consumer skills		Awareness of consumer		Consumer engagement		ICE	
	scores	ranks	scores	ranks	scores	ranks	scores	ranks
EU27 average	13.81		10.94		11.41		12.06	
BE	17.12	5	12.82	7	10.98	17	13.58	9
BG	11.28	22	6.77	28	11.66	10	10.00	26
CZ	17.45	4	15.30	2	15.85	2	16.20	3
DK	15.79	11	12.15	12	11.23	15	13.02	11
DE	16.26	8	13.85	3	12.25	8	14.07	7
EE	11.03	25	10.35	16	11.07	16	10.83	19
IE	14.00	15	9.11	25	9.53	25	10.87	18
EL	15.09	12	8.99	26	11.64	11	11.95	14
ES	9.94	26	10.62	15	9.88	24	10.13	25
FR	16.24	10	12.68	9	11.31	12	13.36	10
IT	16.32	8	12.46	11	13.03	6	13.94	8
CY	16.79	6	12.71	9	14.85	3	14.82	5
LV	11.26	22	9.56	22	10.31	22	10.39	23
LT	11.30	22	11.44	13	9.53	25	10.71	20
LU	13.20	17	10.01	19	10.68	21	11.30	17
HU	11.58	21	9.36	23	10.84	19	10.63	21
MT	13.83	16	13.37	5	11.30	12	12.78	12
NL	18.88	3	13.71	4	12.95	7	15.15	4
AT	19.90	2	12.87	6	15.93	1	16.28	2
PL	8.48	29	8.40	27	7.58	29	8.14	29
PT	9.16	28	9.21	24	10.95	17	9.81	27
RO	9.55	27	6.62	29	10.31	22	8.90	28
SI	13.00	18	9.85	20	11.25	12	11.39	16
SK	16.77	6	12.76	7	13.67	4	14.41	6
FI	12.06	20	10.34	17	9.54	25	10.63	21
SE	14.26	13	10.29	17	10.81	19	11.79	15
UK	12.34	19	9.89	20	9.14	28	10.43	23
IS	14.05	14	11.30	14	11.77	9	12.38	13
NO	22.27	1	19.60	1	13.61	5	18.34	1

Self Employed Population

D15a5: Farmer (sample: 580)

	Consumer skills		Awareness of consumer		Consumer engagement		ICE	
	scores	ranks	scores	ranks	scores	ranks	scores	ranks
EU27 average	**17.89**		**12.73**		**12.73**		**14.43**	
BE	22.99	1	17.03	2	11.57	17	17.05	2
BG	17.24	18	7.97	27	14.31	8	13.29	23
CZ	21.52	4	15.45	6	16.93	2	17.98	1
DK	19.40	10	13.11	13	12.80	15	15.08	11
DE	19.46	9	16.14	5	15.07	4	16.86	3
EE	16.79	20	19.19	1	13.66	11	16.42	4
IE	19.04	14	10.59	24	11.05	22	13.54	21
EL	19.05	14	9.41	26	13.77	9	14.15	19
ES	14.30	27	7.20	28	11.20	20	10.97	28
FR	15.85	24	14.63	7	13.82	9	14.74	14
IT	16.63	21	16.53	4	10.37	25	14.36	16
CY	14.49	26	10.53	25	10.82	23	11.94	26
LV	19.05	14	13.95	9	14.56	7	15.85	6
LT	20.26	7	14.41	8	11.88	16	15.44	10
LU	19.34	11	12.60	15	11.34	18	14.38	16
HU	15.88	23	11.10	20	14.97	5	14.06	19
MT	19.57	8	16.80	3	7.56	29	14.41	16
NL	21.18	5	12.69	14	13.07	12	15.63	8
AT	23.04	1	10.82	23	15.26	3	16.44	4
PL	12.65	28	13.54	10	11.28	18	12.44	25
PT	15.96	22	12.64	15	17.67	1	15.53	9
RO	10.08	29	6.31	29	10.83	23	9.17	29
SI	19.23	12	13.19	12	14.92	6	15.80	6
SK	19.19	12	13.35	11	12.86	14	15.10	11
FI	17.12	19	10.92	22	10.29	26	12.74	24
SE	18.84	17	12.59	15	13.06	12	14.82	13
UK	14.86	25	11.06	20	8.69	27	11.47	27
IS	21.77	3	11.26	19	11.12	21	14.68	14
NO	20.85	6	11.93	18	7.99	28	13.47	21

D15a6: Fisherman

Not considered, only 36 cases.

D15a7: Professional (lawyer, medical practitioner, accountant, architect, etc.) (sample: 767)

D15a.7	Consumer skills		Awareness of consumer		Consumer engagement		ICE	
	scores	ranks	scores	ranks	scores	ranks	scores	ranks
EU27 average	22.06		15.09		14.41		17.15	
BE	22.38	12	14.33	19	11.09	27	15.83	22
BG	15.86	27	7.60	29	13.12	21	12.30	29
CZ	21.71	16	17.09	7	17.03	4	18.59	9
DK	22.20	14	13.90	22	11.42	26	15.75	22
DE	26.07	4	20.27	1	15.49	10	20.48	2
EE	21.42	18	11.79	27	12.58	22	15.25	25
IE	26.75	3	14.08	21	15.21	13	18.66	7
EL	21.79	15	12.98	24	16.89	5	17.28	13
ES	20.58	24	15.32	15	13.72	16	16.48	18
FR	20.71	23	16.00	11	13.74	16	16.75	16
IT	18.64	25	14.42	18	14.44	14	15.82	22
CY	24.39	7	15.63	14	15.84	7	18.60	9
LV	22.59	11	18.25	5	15.38	11	18.66	7
LT	17.98	26	14.98	16	9.99	29	14.18	26
LU	21.45	18	14.49	17	13.49	19	16.43	19
HU	23.44	8	13.61	23	17.13	3	18.11	11
MT	33.05	1	19.12	2	13.94	15	21.87	1
NL	22.77	10	15.85	13	13.56	18	17.32	13
AT	21.26	20	12.90	26	13.45	19	15.85	21
PL	13.97	29	16.28	9	11.07	27	13.66	27
PT	22.26	13	18.94	4	17.32	2	19.46	5
RO	15.11	28	9.44	28	15.32	12	13.41	28
SI	24.90	5	13.05	24	18.15	1	18.78	6
SK	21.45	17	16.77	8	15.68	9	17.92	12
FI	24.79	6	18.11	6	16.04	6	19.58	3
SE	20.93	22	16.20	10	12.29	24	16.37	19
UK	27.17	2	16.01	11	15.76	7	19.61	3
IS	23.33	9	14.20	20	12.35	23	16.55	17
NO	21.09	21	19.15	2	11.46	25	17.04	15

D15a8: Owner of a shop, craftsmen, other self-employed person (sample: 1609)

D15a.8	Consumer skills		Awareness of consumer		Consumer engagement		ICE	
	scores	ranks	scores	ranks	scores	ranks	scores	ranks
EU27 averag	**20.62**		**14.18**		**14.24**		**16.33**	
BE	18.74	24	12.52	22	10.08	29	13.70	28
BG	16.84	28	9.68	28	15.23	7	14.03	27
CZ	20.37	16	16.85	4	15.76	6	17.62	5
DK	23.65	4	15.96	8	12.78	21	17.36	6
DE	22.37	6	18.18	2	16.13	4	18.83	3
EE	19.82	18	12.31	23	12.77	22	14.95	23
IE	24.36	3	13.00	21	13.05	20	16.77	12
EL	21.48	11	10.67	27	13.97	17	15.42	22
ES	19.57	20	14.19	15	13.47	19	15.71	20
FR	22.12	7	16.16	7	12.73	23	16.90	9
IT	17.36	26	12.29	24	12.60	25	14.07	26
CY	21.05	13	11.87	25	14.30	14	15.77	19
LV	18.79	23	15.66	9	15.08	8	16.49	14
LT	18.52	25	14.89	14	11.66	27	14.93	24
LU	19.64	19	13.21	20	14.71	13	15.87	18
HU	21.92	8	13.65	17	16.07	5	17.24	8
MT	26.62	1	20.27	1	16.33	2	20.96	1
NL	21.72	9	13.43	19	14.27	15	16.46	15
AT	21.54	10	14.14	16	14.92	10	16.86	10
PL	19.53	21	15.58	10	14.05	16	16.33	16
PT	17.23	27	14.99	12	16.17	3	16.15	17
RO	14.60	29	9.15	29	14.93	9	13.02	29
SI	25.27	2	15.07	11	18.33	1	19.60	2
SK	19.12	22	16.65	5	13.92	18	16.49	13
FI	20.80	14	16.36	6	14.91	11	17.31	7
SE	20.16	17	11.20	26	11.54	28	14.28	25
UK	23.53	5	14.95	13	14.75	12	17.71	4
IS	20.71	15	13.48	18	12.64	24	15.57	21
NO	21.43	12	17.53	3	11.92	26	16.82	11

D15a9: Business proprietors, owner (full or partner) of a company (sample: 1011)

D15a.9	Consumer skills		Awareness of consumer		Consumer engagement		ICE	
	scores	ranks	scores	ranks	scores	ranks	scores	ranks
EU27 average	**20.61**		**14.89**		**14.54**		**16.65**	
BE	20.43	17	16.67	8	12.09	26	16.27	16
BG	18.76	21	11.24	26	16.68	6	15.66	21
CZ	20.59	16	17.95	4	16.81	4	18.41	4
DK	23.31	5	16.60	9	13.71	19	17.78	7
DE	22.98	6	20.67	1	14.81	13	19.34	3
EE	20.59	15	15.90	10	15.23	9	17.21	11
IE	19.12	20	13.13	23	12.21	25	14.78	26
EL	21.15	13	10.10	27	13.48	21	14.95	25
ES	19.16	19	14.56	18	14.32	16	15.99	19
FR	21.85	10	18.47	3	13.73	18	17.89	5
IT	17.66	25	14.05	21	14.89	12	15.54	23
CY	21.96	9	9.50	28	14.40	15	15.36	24
LV	21.82	11	16.99	7	14.12	17	17.56	8
LT	19.94	18	14.19	20	13.22	22	15.74	20
LU	15.12	28	9.17	29	9.14	28	11.12	29
HU	18.61	22	12.76	24	19.37	2	17.05	13
MT	25.53	2	17.86	5	9.07	29	17.25	10
NL	22.14	8	14.94	13	13.05	23	16.64	14
AT	20.93	14	14.89	14	15.64	7	17.15	12
PL	18.32	23	15.88	11	12.92	24	15.63	22
PT	16.69	27	15.06	12	17.11	3	16.33	15
RO	14.51	29	11.69	25	16.75	5	14.43	27
SI	25.57	1	17.14	6	19.38	1	20.73	1
SK	18.30	24	14.56	17	15.15	10	16.01	18
FI	24.28	4	18.69	2	15.53	8	19.41	2
SE	22.73	7	14.84	15	15.10	11	17.54	9
UK	24.51	3	14.51	19	14.59	14	17.84	6
IS	21.45	12	13.81	22	13.61	20	16.26	17
NO	17.40	26	14.82	16	9.63	27	13.82	28

Employed

D15a10: Employed professional (employed doctor, lawyer, accountant, architect) (sample: 1551)

D15a.10	Consumer skills		Awareness of consumer		Consumer engagement		ICE	
	scores	ranks	scores	ranks	scores	ranks	scores	ranks
EU27 averag	**22.20**		**15.42**		**15.19**		**17.58**	
BE	21.80	12	15.54	12	11.72	27	16.24	18
BG	19.49	21	10.64	27	14.94	16	15.10	26
CZ	18.85	25	14.40	22	14.61	18	15.94	19
DK	27.42	4	19.48	3	15.90	9	20.82	5
DE	25.49	7	22.16	1	16.18	8	21.13	4
EE	19.60	19	14.95	16	15.02	14	16.51	17
IE	23.79	11	13.63	24	15.85	11	17.78	11
EL	20.55	16	10.37	28	14.85	17	15.33	24
ES	20.77	15	16.66	9	14.26	20	17.16	14
FR	19.58	20	14.80	17	12.74	25	15.64	21
IT	15.06	29	13.46	25	13.61	22	14.04	28
CY	24.05	10	14.02	23	15.62	12	17.90	10
LV	18.28	26	15.52	13	14.12	21	15.93	20
LT	19.27	23	14.65	19	12.02	26	15.23	25
LU	17.53	27	8.24	29	10.26	29	12.03	29
HU	18.96	24	14.63	20	16.89	6	16.87	15
MT	32.18	2	18.98	4	18.97	1	23.33	2
NL	25.58	6	17.24	8	14.94	15	19.17	8
AT	21.04	14	14.77	18	17.37	5	17.77	12
PL	19.30	22	14.97	15	12.83	24	15.63	22
PT	21.72	13	18.44	6	18.59	2	19.57	6
RO	15.12	28	11.20	26	15.85	10	14.16	27
SI	26.19	5	14.45	21	16.85	7	19.18	7
SK	20.09	17	15.26	14	15.03	13	16.77	16
FI	33.02	1	21.93	2	18.54	3	24.38	1
SE	24.45	8	17.32	7	14.30	19	18.60	9
UK	30.30	3	18.69	5	18.27	4	22.37	3
IS	24.31	9	16.01	11	12.85	23	17.62	13
NO	19.96	18	16.09	10	10.85	28	15.50	23

D15a11: General management, director or top management (managing directors, director general, other director) (sample: 580)

D15a.11	Consumer skills		Awareness of consumer		Consumer engagement		ICE	
	scores	ranks	scores	ranks	scores	ranks	scores	ranks
EU27 average	**22.98**		**16.89**		**16.11**		**18.98**	
BE	22.76	16	15.60	18	12.98	26	17.03	21
BG	20.51	24	13.10	22	15.67	17	16.46	24
CZ	23.56	13	22.17	3	18.80	4	21.43	5
DK	25.66	8	15.56	19	13.74	23	18.25	14
DE	29.65	3	25.14	2	19.92	3	24.77	3
EE	21.47	20	16.02	15	16.57	12	18.01	15
IE	24.50	10	13.90	21	17.64	8	18.73	10
EL	23.16	14	12.69	23	15.50	18	17.15	19
ES	16.13	27	12.20	26	9.33	29	12.47	29
FR	23.06	15	17.24	9	15.71	15	18.62	11
IT	19.30	26	12.21	25	14.11	21	15.23	27
CY	7.00	6	29.00	13	14.00	13	26.00	6
LV	20.63	22	18.61	6	13.43	24	17.43	18
LT	22.60	17	17.16	10	14.00	22	17.83	16
LU	25.11	9	15.64	17	14.73	20	18.44	12
HU	21.61	19	11.74	28	17.46	9	17.04	20
MT	34.99	2	25.28	1	21.75	1	27.23	1
NL	26.19	7	18.18	8	16.24	14	20.13	7
AT	22.42	18	16.63	11	17.25	10	18.76	9
PL	24.37	11	16.22	14	18.46	6	19.71	8
PT	16.09	28	16.27	13	16.85	11	16.42	25
RO	16.08	29	12.27	24	15.70	16	14.75	28
SI	28.92	4	14.92	20	18.75	5	20.91	6
SK	19.38	25	11.94	27	15.29	19	15.59	26
FI	28.82	5	19.29	5	18.02	7	21.98	4
SE	20.83	21	16.58	12	12.65	27	16.58	22
UK	35.78	1	20.50	4	20.54	2	25.55	2
IS	23.91	12	15.91	16	13.04	25	17.53	17
NO	20.58	23	18.29	7	11.09	28	16.47	23

D15a12: Middle management, other management (department head, junior manager, teacher, technician)

(sample: 3543)

D15a.12	Consumer skills		Awareness of consumer		Consumer engagement		ICE	
	scores	ranks	scores	ranks	scores	ranks	scores	ranks
EU27 average	22.30		15.20		15.32		17.59	
BE	24.21	10	15.45	12	14.26	21	17.92	11
BG	17.34	27	8.95	29	14.46	20	13.68	28
CZ	21.13	17	17.23	5	15.78	8	18.00	10
DK	24.50	8	16.22	8	13.80	22	18.09	9
DE	25.22	4	21.41	2	16.81	5	21.02	3
EE	21.02	19	15.19	14	14.78	17	16.97	18
IE	23.73	11	13.99	22	15.52	12	17.75	13
EL	22.36	15	11.00	27	15.71	9	16.43	20
ES	20.91	21	16.12	9	15.61	10	17.52	15
FR	22.75	14	15.14	15	14.61	18	17.46	16
IT	17.14	28	13.68	23	13.50	24	14.76	27
CY	24.78	7	13.52	24	16.37	7	18.25	8
LV	20.97	20	14.60	20	13.49	25	16.30	21
LT	18.71	25	14.93	17	12.36	28	15.26	26
LU	24.48	9	14.79	19	13.67	23	17.59	14
HU	18.52	26	12.49	26	15.16	14	15.43	25
MT	29.84	2	21.31	3	18.27	1	23.04	2
NL	24.91	5	16.22	7	15.54	11	18.84	6
AT	20.38	22	13.44	25	14.90	15	16.25	23
PL	19.63	24	14.83	18	14.47	19	16.28	22
PT	21.05	18	16.72	6	18.19	3	18.67	7
RO	14.18	29	9.97	28	15.31	13	13.26	29
SI	24.87	6	15.49	10	17.85	4	19.43	4
SK	19.77	23	14.57	21	13.40	26	15.87	24
FI	30.18	1	22.39	1	18.27	2	23.49	1
SE	23.47	12	15.42	13	14.88	16	17.88	12
UK	26.19	3	15.47	11	16.60	6	19.41	5
IS	22.80	13	15.10	16	13.25	27	16.98	17
NO	21.41	16	18.07	4	11.03	29	16.66	19

D15a13: Employed position, working mainly at a desk (sample: 4594)

D15a.13	Consumer skills		Awareness of consumer		Consumer engagement		ICE	
	scores	ranks	scores	ranks	scores	ranks	scores	ranks
EU27 averag	20.90		14.65		14.68		16.72	
BE	21.84	11	15.78	12	12.65	26	16.66	15
BG	17.00	26	8.52	29	15.46	7	13.80	27
CZ	19.22	22	16.30	9	15.25	8	16.89	13
DK	24.15	5	16.20	10	13.15	23	17.74	9
DE	22.77	10	19.05	2	16.03	4	19.20	4
EE	20.06	18	14.40	16	14.55	15	16.32	17
IE	20.62	16	12.63	24	12.75	24	15.31	23
EL	21.00	13	10.41	27	15.01	10	15.54	21
ES	19.45	20	15.98	11	14.97	11	16.77	14
FR	20.75	15	13.39	20	14.22	16	16.11	19
IT	15.78	28	11.89	26	12.71	25	13.47	28
CY	22.93	9	13.23	21	14.94	13	17.04	11
LV	20.47	17	17.36	5	14.21	17	17.26	10
LT	17.97	24	14.36	17	12.09	28	14.74	25
LU	21.54	12	13.10	22	14.02	20	16.21	18
HU	17.87	25	12.52	25	15.57	5	15.38	22
MT	26.56	2	18.35	3	14.58	14	19.71	2
NL	25.25	3	17.10	6	15.52	6	19.23	3
AT	18.62	23	12.69	23	14.20	18	15.18	24
PL	16.75	27	14.12	18	12.18	27	14.29	26
PT	19.69	19	16.63	8	17.85	2	18.07	8
RO	13.97	29	9.92	28	14.00	21	12.71	29
SI	23.61	7	15.49	13	17.20	3	18.78	5
SK	19.22	21	15.02	15	14.08	19	16.07	20
FI	28.81	1	19.15	1	18.97	1	22.27	1
SE	23.91	6	16.88	7	14.95	12	18.51	6
UK	24.53	4	15.16	14	15.25	9	18.28	7
IS	23.43	8	14.11	19	13.62	22	17.01	12
NO	20.79	14	18.00	4	11.39	29	16.56	16

D15a14: Employed position, not at a desk but traveling (salesmen, driver, etc.) (sample: 1806)

D15a.14	Consumer skills		Awareness of consumer		Consumer engagement		ICE	
	scores	ranks	scores	ranks	scores	ranks	scores	ranks
EU27 average	**21.02**		**14.94**		**14.84**		**16.91**	
BE	20.10	17	13.83	21	12.21	27	15.32	23
BG	19.21	22	10.40	28	15.61	12	15.16	26
CZ	21.50	13	17.23	7	15.76	10	18.11	9
DK	24.51	4	15.74	11	12.84	24	17.60	10
DE	21.16	15	17.49	6	13.94	17	17.43	11
EE	19.38	20	15.25	14	13.13	22	15.86	20
IE	23.51	8	14.21	19	13.14	21	16.90	13
EL	22.35	12	11.18	26	14.34	14	16.00	19
ES	18.60	23	16.92	8	13.96	16	16.42	16
FR	22.48	11	13.16	24	13.74	18	16.44	15
IT	16.00	28	10.57	27	11.43	29	12.67	29
CY	20.72	16	13.60	23	14.04	15	16.11	18
LV	18.01	25	14.98	15	13.08	23	15.30	24
LT	16.47	27	13.83	22	12.26	26	14.14	27
LU	22.82	10	15.82	9	17.65	4	18.79	6
HU	19.93	18	12.53	25	16.20	7	16.28	17
MT	23.91	6	19.22	3	17.85	2	20.28	3
NL	23.17	9	15.36	13	16.19	8	18.23	7
AT	19.27	21	15.50	12	16.61	6	17.14	12
PL	17.68	26	14.66	18	13.65	19	15.30	25
PT	18.54	24	15.80	10	16.09	9	16.81	14
RO	14.74	29	8.75	29	14.36	13	12.73	28
SI	25.79	2	17.53	5	17.70	3	20.32	2
SK	19.57	19	14.68	17	13.43	20	15.85	21
FI	30.50	1	22.24	1	19.08	1	23.84	1
SE	24.03	5	14.80	16	15.68	11	18.16	8
UK	23.65	7	18.17	4	16.69	5	19.45	4
IS	21.42	14	14.04	20	11.83	28	15.69	22
NO	24.59	3	19.95	2	12.56	25	18.84	5

D15a15: Employed position, not at a desk, but in a service job (hospital, restaurant, police, fireman, etc.)

(sample: 3794)

D15a.15	Consumer skills		Awareness of consumer		Consumer engagement		ICE	
	scores	ranks	scores	ranks	scores	ranks	scores	ranks
EU27 average	**20.11**		**14.52**		**14.52**		**16.37**	
BE	22.12	8	14.35	15	12.72	26	16.33	15
BG	17.37	25	10.31	28	14.72	13	14.21	26
CZ	19.09	18	16.04	6	14.89	10	16.64	11
DK	24.14	2	15.32	8	14.46	16	17.93	4
DE	21.20	12	18.78	3	15.08	9	18.26	3
EE	17.91	23	14.13	16	13.95	18	15.31	23
IE	21.20	13	13.27	23	13.11	25	15.83	17
EL	20.63	15	11.80	25	14.33	17	15.62	19
ES	17.96	22	15.00	11	13.71	20	15.52	21
FR	19.76	17	13.18	24	13.41	22	15.43	22
IT	15.31	28	11.40	27	12.22	27	12.98	29
CY	21.65	9	13.59	22	14.81	11	16.68	10
LV	18.39	20	15.16	10	13.21	23	15.53	20
LT	16.50	27	13.90	21	11.61	28	13.94	27
LU	21.39	11	15.00	12	16.14	3	17.52	8
HU	18.30	21	11.49	26	14.77	12	14.91	25
MT	23.42	4	20.64	2	15.21	6	19.62	2
NL	22.28	7	14.08	18	14.47	15	16.93	9
AT	20.29	16	14.09	17	15.18	7	16.52	13
PL	16.92	26	14.62	14	13.87	19	15.11	24
PT	17.56	24	16.14	5	16.12	4	16.60	12
RO	14.41	29	9.43	29	15.10	8	13.10	28
SI	22.81	5	14.05	19	16.20	2	17.71	7
SK	18.87	19	15.20	9	13.20	24	15.70	18
FI	27.12	1	21.03	1	19.32	1	22.43	1
SE	22.31	6	15.39	7	15.67	5	17.77	5
UK	24.14	3	14.66	13	14.52	14	17.74	6
IS	21.60	10	13.97	20	13.65	21	16.37	14
NO	20.97	14	16.67	4	11.21	29	16.14	16

D15a16: Supervisor (sample: 408)

D15a.16	Consumer skills		Awareness of consumer		Consumer engagement		ICE	
	scores	ranks	scores	ranks	scores	ranks	scores	ranks
EU27 average	**20.98**		**15.48**		**14.69**		**17.01**	
BE	22.36	11	13.26	20	12.45	22	15.97	16
BG	21.58	16	6.91	29	12.59	21	13.78	25
CZ	16.28	25	16.75	6	13.85	14	15.56	18
DK	23.69	6	16.68	7	13.85	13	17.98	10
DE	26.33	3	21.27	4	17.04	7	21.43	3
EE	19.89	18	17.73	5	18.16	6	18.60	7
IE	22.12	15	14.17	16	13.61	17	16.59	14
EL	14.61	28	13.14	21	8.49	29	11.97	28
ES	15.87	26	16.61	8	13.88	12	15.39	20
FR	22.28	13	11.93	27	13.78	16	16.01	15
IT	14.90	27	12.11	26	12.31	23	13.10	26
CY	19.78	19	13.41	19	13.84	15	15.67	17
LV	18.59	21	14.35	15	12.16	24	14.97	23
LT	18.67	20	15.36	13	10.16	26	14.59	24
LU	30.23	1	12.20	24	20.13	2	20.98	5
HU	22.79	9	12.19	25	18.51	5	17.95	11
MT	26.15	4	27.60	1	20.44	1	24.56	1
NL	22.13	14	13.81	18	15.12	11	17.02	12
AT	20.46	17	12.56	23	13.21	19	15.40	19
PL	22.45	10	24.58	3	16.93	8	21.14	4
PT	17.64	23	15.07	14	12.70	20	15.07	22
RO	12.53	29	7.50	28	10.52	25	10.24	29
SI	22.86	8	15.77	12	18.72	3	19.16	6
SK	18.00	22	13.98	17	13.59	18	15.17	21
FI	28.39	2	26.33	2	18.53	4	24.23	2
SE	22.30	12	16.61	9	16.62	9	18.49	8
UK	23.52	7	16.15	11	15.47	10	18.34	9
IS	25.54	5	16.60	10	9.42	27	16.99	13
NO	17.16	24	13.12	22	9.08	28	13.01	27

D15a17: Skilled manual worker (sample: 4506)

D15a.17	Consumer skills		Awareness of consumer		Consumer engagement		ICE	
	scores	ranks	scores	ranks	scores	ranks	scores	ranks
EU27 average	20.00		14.48		14.43		16.28	
BE	20.87	13	13.85	19	13.40	20	16.01	14
BG	15.54	26	9.18	28	13.42	19	12.79	28
CZ	18.10	21	15.05	11	14.59	11	15.89	16
DK	24.64	5	17.38	5	14.36	13	18.69	6
DE	21.68	10	18.04	4	14.18	15	17.87	8
EE	17.37	23	14.47	14	14.03	16	15.27	21
IE	21.93	9	13.65	21	14.74	10	16.77	10
EL	19.28	18	11.75	27	13.34	22	14.80	24
ES	18.15	20	15.04	12	12.89	24	15.30	19
FR	21.27	12	14.29	16	14.21	14	16.57	12
IT	16.16	25	12.10	25	11.90	28	13.37	26
CY	20.08	16	13.06	22	16.01	6	16.43	13
LV	18.15	19	14.21	17	13.61	18	15.30	20
LT	15.45	27	12.94	23	10.72	29	12.97	27
LU	23.79	6	16.53	7	17.17	2	19.15	5
HU	19.58	17	12.07	26	15.16	8	15.65	18
MT	28.01	1	19.87	3	18.24	1	21.98	1
NL	25.70	3	16.83	6	16.26	5	19.56	3
AT	20.29	15	12.61	24	14.56	12	15.84	17
PL	16.93	24	14.74	13	12.79	25	14.77	25
PT	15.15	28	14.40	15	15.11	9	14.90	23
RO	12.48	29	9.14	29	13.36	21	11.75	29
SI	21.31	11	15.73	9	16.39	4	17.81	9
SK	17.99	22	14.12	18	12.94	23	14.98	22
FI	26.52	2	20.05	2	16.84	3	21.04	2
SE	20.40	14	13.76	20	13.91	17	16.00	15
UK	23.21	7	16.15	8	15.34	7	18.19	7
IS	22.41	8	15.50	10	12.16	27	16.59	11
NO	24.82	4	20.83	1	12.72	26	19.25	4

D15a18: Other (unskilled) manual worker, servant (sample: 1802)

D15a.18	Consumer skills		Awareness of consumer		Consumer engagement		ICE	
	scores	ranks	scores	ranks	scores	ranks	scores	ranks
EU27 average	16.86		12.80		13.05		14.23	
BE	20.95	4	12.00	22	12.06	23	14.98	14
BG	13.09	26	8.11	29	12.13	21	11.19	27
CZ	17.37	16	13.78	13	15.14	5	15.45	11
DK	22.17	2	14.84	5	14.20	9	17.03	2
DE	18.73	11	15.43	3	13.29	13	15.76	8
EE	15.03	22	12.27	20	13.46	11	13.61	19
IE	16.63	18	10.87	26	11.91	25	13.14	22
EL	16.22	21	9.26	27	12.31	20	12.64	23
ES	13.25	25	14.23	9	12.66	17	13.34	21
FR	19.80	6	14.37	7	13.29	12	15.78	7
IT	13.58	24	11.29	25	10.63	27	11.81	26
CY	18.23	12	15.50	2	16.31	1	16.69	4
LV	16.41	20	13.30	14	12.49	18	14.04	17
LT	15.02	23	12.58	18	9.38	29	12.24	25
LU	18.84	10	14.53	6	14.70	8	16.01	6
HU	17.82	15	12.14	21	14.80	7	14.96	15
MT	19.05	8	14.15	11	13.82	10	15.65	9
NL	16.69	17	11.64	24	11.95	24	13.42	20
AT	18.13	14	12.71	17	14.86	6	15.27	13
PL	10.30	29	13.15	15	10.10	28	11.12	28
PT	12.80	27	11.86	23	12.70	16	12.47	24
RO	10.53	28	8.55	28	12.33	19	10.55	29
SI	19.79	7	13.10	16	15.28	4	16.09	5
SK	18.17	13	12.41	19	10.91	26	13.77	18
FI	16.42	19	15.30	4	13.25	14	14.93	16
SE	21.29	3	13.94	12	15.33	3	16.86	3
UK	18.98	9	14.30	8	13.16	15	15.44	12
IS	20.31	5	14.23	9	12.08	22	15.47	10
NO	27.51	1	20.99	1	15.99	2	21.36	1

4. Education

QD8bis: High (ISCED level 5,6) (sample: 12501)

high	Consumer skills		Awareness of consumer		Consumer engagement		ICE	
	scores	ranks	scores	ranks	scores	ranks	scores	ranks
EU27 average	**21.01**		**14.64**		**14.71**		**16.77**	
BE	21.55	13	14.58	14	12.52	27	16.14	18
BG	17.94	27	9.54	29	14.98	11	14.26	28
CZ	20.98	17	18.47	2	16.43	4	18.57	4
DK	23.21	7	15.72	7	14.15	20	17.63	7
DE	21.59	12	18.26	3	14.30	15	17.95	6
EE	18.84	23	13.71	21	14.15	16	15.56	23
IE	23.36	6	13.29	22	14.99	11	17.22	13
EL	21.36	14	10.93	27	15.25	10	15.92	21
ES	19.48	22	15.68	7	13.97	21	16.32	17
FR	21.76	11	14.06	19	14.21	16	16.65	15
IT	17.66	28	13.25	22	13.40	25	14.76	26
CY	23.79	4	13.29	22	15.37	7	17.50	8
LV	19.56	21	14.96	12	13.57	22	15.98	20
LT	18.11	26	14.22	18	12.03	28	14.72	27
LU	21.36	14	12.91	25	13.45	23	15.89	21
HU	18.37	24	12.75	26	15.35	7	15.53	24
MT	26.96	1	19.78	1	16.65	2	21.03	1
NL	22.73	8	15.13	11	14.17	16	17.29	11
AT	20.90	19	14.69	13	16.60	2	17.42	9
PL	18.26	25	14.51	16	13.15	26	15.26	25
PT	21.29	16	18.11	4	18.10	1	19.16	3
RO	15.11	29	10.72	28	15.27	9	13.79	29
SI	21.85	10	13.87	20	16.11	5	17.30	11
SK	19.67	20	14.44	17	14.15	16	16.06	18
FI	24.56	2	17.91	5	15.82	6	19.36	2
SE	22.49	9	15.39	9	14.38	14	17.37	9
UK	24.63	2	15.20	10	14.69	13	18.13	5
IS	23.47	5	14.64	14	13.48	23	17.14	14
NO	20.95	17	17.63	6	11.44	29	16.52	16

QD8bis: Medium (ISCED level 3,4) (sample: 26963)

medium	Consumer skills		Awareness of consumer		Consumer engagement		ICE	
	scores	ranks	scores	ranks	scores	ranks	scores	ranks
EU27 averag	**19.18**		**13.69**		**13.96**		**15.60**	
BE	20.36	13	13.55	15	12.59	26	15.46	18
BG	15.18	27	8.73	28	13.69	15	12.63	27
CZ	18.94	20	15.79	6	15.43	3	16.70	8
DK	22.60	3	15.56	7	13.69	15	17.22	5
DE	20.07	15	16.55	4	14.05	11	16.82	7
EE	17.33	23	13.76	12	14.02	12	15.03	22
IE	21.46	6	13.40	17	13.14	21	15.97	15
EL	21.72	5	11.48	26	15.09	6	16.15	12
ES	18.45	21	14.40	11	13.55	19	15.44	19
FR	20.82	11	13.77	12	13.66	15	16.06	12
IT	16.82	24	12.58	24	13.08	21	14.16	25
CY	21.05	9	13.07	22	15.41	3	16.54	10
LV	16.80	24	13.35	19	12.89	23	14.32	24
LT	15.54	26	13.51	16	11.06	28	13.31	26
LU	19.05	18	12.69	23	13.53	20	15.09	20
HU	17.80	22	11.37	27	14.84	9	14.73	23
MT	21.50	6	16.31	5	14.04	12	17.21	5
NL	23.78	2	15.04	8	15.15	6	17.96	4
AT	20.84	11	13.43	17	15.17	5	16.50	10
PL	13.91	28	12.62	24	11.09	28	12.50	28
PT	20.16	14	16.70	3	17.67	1	18.19	3
RO	12.15	29	8.48	29	12.37	27	11.08	29
SI	19.97	16	13.29	19	14.98	8	16.10	12
SK	19.05	18	14.76	9	13.95	14	15.88	16
FI	21.99	4	17.55	2	15.49	2	18.28	2
SE	21.31	8	14.54	10	14.46	10	16.74	8
UK	19.13	17	13.30	19	12.83	24	15.06	20
IS	21.01	9	13.70	14	12.78	24	15.78	17
NO	25.12	1	20.04	1	13.72	15	19.46	1

QD8bis: Low (ISCED level 0,1,2) (sample: 16473)

low	Consumer skills		Awareness of consumer		Consumer engagement		ICE	
	scores	ranks	scores	ranks	scores	ranks	scores	ranks
EU27 average	15.58		11.88		12.16		13.20	
BE	18.48	8	12.22	14	10.86	23	13.80	13
BG	20.35	4	13.91	5	13.26	9	15.81	6
CZ	11.83	25	7.54	28	12.01	15	10.55	26
DK	18.54	8	16.02	3	15.44	2	16.65	4
DE	20.38	4	16.82	2	14.65	4	17.22	2
EE	14.49	19	13.34	9	12.96	11	13.58	14
IE	15.65	16	9.92	25	10.32	24	11.95	23
EL	15.93	15	9.39	27	11.72	18	12.38	18
ES	12.60	22	12.73	11	11.30	21	12.18	20
FR	16.32	14	12.67	11	11.38	20	13.41	15
IT	14.07	20	11.02	20	11.15	22	12.07	21
CY	16.55	12	12.65	13	14.14	7	14.47	10
LV	15.63	16	11.96	15	11.55	19	13.02	17
LT	12.51	23	10.93	21	8.97	28	10.75	24
LU	16.78	11	11.72	17	13.09	10	13.88	11
HU	15.39	18	10.81	22	12.99	11	13.10	16
MT	10.58	28	11.62	19	9.93	25	10.67	25
NL	21.12	2	14.16	4	14.22	5	16.48	5
AT	18.26	10	12.02	15	14.23	5	14.87	9
PL	10.94	27	10.82	22	9.42	27	10.36	27
PT	12.23	24	11.66	17	12.85	13	12.27	19
RO	10.37	29	6.49	29	9.92	25	8.99	29
SI	13.97	21	10.39	24	11.95	15	12.13	21
SK	19.21	7	13.66	7	14.10	7	15.65	7
FI	16.47	13	12.83	10	12.59	14	13.94	11
SE	21.07	2	13.93	5	15.03	3	16.68	3
UK	10.98	26	9.49	26	8.24	29	9.54	28
IS	19.92	6	13.54	8	12.02	15	15.10	8
NO	24.92	1	21.16	1	15.52	1	20.39	1

5. Income

The question chosen to represent the income of the respondent was QA51: A household may have different sources of income and more than one household member may contribute to it. Thinking of your household's total income, is your household able to make ends meet (namely, to pay for its usual necessary expenses)…?

QA51: answer categories: *with great difficulty* and *with difficulties* (sample: 9993)

	Consumer skills		Awareness of consumer		Consumer engagement		ICE	
	scores	ranks	scores	ranks	scores	ranks	scores	ranks
EU27 averag	**16.72**		**12.69**		**12.87**		**14.08**	
BE	17.37	12	12.79	16	11.87	24	13.97	13
BG	12.83	26	7.88	28	12.26	21	11.07	26
CZ	16.77	13	15.03	5	14.12	4	15.28	9
DK	22.07	3	15.48	3	14.30	3	17.23	3
DE	16.35	15	13.80	10	11.84	25	13.94	15
EE	14.81	22	12.87	15	13.03	12	13.57	19
IE	19.27	7	12.77	16	12.71	16	14.89	11
EL	16.27	15	9.84	27	12.36	20	12.86	23
ES	14.44	23	13.77	10	12.05	23	13.37	20
FR	18.52	10	12.81	16	12.89	13	14.72	12
IT	13.19	25	12.20	20	11.56	26	12.30	25
CY	19.08	9	13.40	12	15.03	2	15.85	6
LV	15.77	19	12.96	13	12.62	18	13.76	16
LT	14.08	24	12.48	19	10.68	28	12.37	24
LU	15.27	21	10.73	23	13.56	5	13.24	21
HU	15.81	19	10.73	23	12.85	14	13.16	21
MT	16.69	14	15.49	3	13.19	9	15.07	10
NL	20.70	5	14.61	7	13.44	6	16.21	4
AT	17.56	11	10.65	23	12.83	14	13.71	17
PL	11.14	27	11.33	22	9.98	29	10.79	28
PT	10.84	28	10.28	26	12.07	22	11.10	26
RO	10.83	28	7.33	29	11.33	27	9.91	29
SI	16.32	15	11.48	21	13.13	10	13.67	17
SK	16.34	15	12.99	13	12.74	16	14.00	13
FI	29.35	1	19.71	1	18.76	1	22.55	1
SE	20.54	6	14.25	8	13.11	10	15.92	6
UK	19.15	8	14.97	5	13.26	8	15.74	8
IS	21.60	4	14.05	9	12.45	19	15.97	5
NO	25.08	2	19.06	2	13.40	6	19.03	2

QA51: answer category: *with some difficulties* (sample: 16156)

	Consumer skills		*Awareness of consumer*		*Consumer engagement*		*ICE*	
	scores	ranks	scores	ranks	scores	ranks	scores	ranks
EU27 averag	**18.43**		**13.25**		**13.67**		**15.11**	
BE	19.69	12	13.00	17	12.05	27	14.86	19
BG	17.04	21	9.14	28	14.69	5	13.73	25
CZ	19.01	15	15.77	4	15.78	2	16.84	5
DK	24.45	1	15.84	3	14.14	10	18.08	3
DE	19.93	9	15.69	5	13.81	14	16.42	6
EE	16.81	22	13.80	12	13.76	15	14.78	20
IE	19.78	10	12.78	18	12.57	23	15.02	17
EL	21.15	6	10.74	27	14.13	11	15.39	14
ES	15.35	25	13.68	13	12.38	24	13.77	23
FR	20.05	7	14.21	9	13.53	17	15.89	10
IT	15.85	24	11.61	25	12.37	25	13.28	26
CY	19.98	8	12.73	20	15.22	3	16.01	8
LV	17.60	20	13.29	14	12.81	22	14.54	21
LT	15.29	26	12.75	19	10.93	28	12.94	27
LU	18.81	17	13.06	16	13.92	13	15.26	16
HU	16.01	23	11.00	26	14.03	12	13.73	24
MT	19.12	14	15.61	6	13.26	18	15.93	9
NL	22.73	4	15.53	7	15.07	4	17.74	4
AT	18.99	16	12.20	23	14.52	7	15.27	15
PL	13.04	28	12.00	24	10.93	29	11.96	28
PT	14.57	27	12.72	21	14.27	8	13.88	22
RO	12.38	29	8.47	29	12.34	26	11.14	29
SI	18.39	18	12.32	22	14.26	9	15.01	18
SK	18.38	19	14.44	8	13.58	16	15.43	13
FI	24.15	3	18.19	2	16.76	1	19.65	1
SE	19.74	11	13.13	15	14.68	6	15.86	11
UK	19.18	13	14.11	11	13.18	19	15.45	12
IS	21.49	5	14.13	10	12.95	21	16.13	7
NO	24.22	2	19.88	1	13.03	20	18.87	2

QA51: answer category: *quite easily* (sample: 14419)

	Consumer skills		Awareness of consumer		Consumer engagement		ICE	
	scores	ranks	scores	ranks	scores	ranks	scores	ranks
EU27 average	**19.12**		**13.63**		**13.86**		**15.52**	
BE	20.58	9	13.52	18	12.38	25	15.44	16
BG	18.49	21	10.50	28	16.12	1	15.14	21
CZ	19.30	16	16.38	4	15.16	3	16.91	7
DK	22.34	3	15.44	5	14.19	13	17.27	3
DE	20.31	11	17.05	2	14.10	15	17.07	6
EE	17.73	23	13.81	13	14.03	16	15.18	20
IE	20.43	10	12.18	24	12.71	21	15.09	22
EL	21.29	7	11.52	27	15.90	2	16.31	10
ES	15.28	28	13.55	16	12.29	26	13.67	27
FR	19.99	13	13.35	20	13.39	18	15.56	14
IT	17.18	24	12.04	26	12.90	20	14.04	25
CY	20.25	12	12.70	22	14.79	9	15.94	12
LV	18.75	19	14.08	11	13.08	19	15.27	19
LT	16.20	25	13.89	12	10.70	29	13.52	28
LU	19.21	17	13.50	19	13.73	17	15.46	15
HU	18.74	20	12.16	25	14.84	8	15.29	18
MT	18.09	22	14.57	9	12.52	24	15.00	23
NL	22.71	1	14.26	10	14.85	7	17.26	4
AT	20.59	8	13.54	17	14.95	5	16.37	9
PL	16.08	27	13.56	15	11.71	28	13.73	26
PT	16.14	26	15.02	6	15.13	4	15.43	17
RO	14.38	29	10.02	29	14.18	14	12.94	29
SI	19.60	15	12.87	21	14.93	6	15.83	13
SK	19.98	14	14.95	7	14.34	12	16.39	8
FI	21.66	6	16.58	3	14.60	11	17.55	2
SE	22.16	5	14.60	8	14.61	10	17.10	5
UK	18.89	18	12.34	23	12.07	27	14.40	24
IS	22.23	4	13.65	14	12.68	22	16.13	11
NO	22.49	2	18.14	1	12.63	23	17.61	1

QA51: answer categories: *easily* and *very easily* (sample: 14469)

	Consumer skills		Awareness of consumer		Consumer engagement		ICE	
	scores	ranks	scores	ranks	scores	ranks	scores	ranks
EU27 average	**19.25**		**14.00**		**13.89**		**15.69**	
BE	21.66	4	14.62	10	12.29	25	16.11	11
BG	18.66	20	11.05	27	15.95	3	15.31	18
CZ	20.66	10	17.57	3	16.66	1	18.26	2
DK	21.40	6	14.84	9	13.30	16	16.45	10
DE	22.60	2	19.19	1	15.74	4	19.08	1
EE	19.03	17	14.16	15	14.55	11	15.91	13
IE	18.65	21	10.96	28	11.78	28	13.79	27
EL	21.40	6	11.25	26	14.92	8	15.91	12
ES	15.13	28	13.40	21	12.39	22	13.61	28
FR	19.32	16	13.53	20	12.55	21	15.09	20
IT	17.51	22	12.97	23	13.09	17	14.51	24
CY	20.47	12	12.57	24	14.39	12	15.83	14
LV	17.40	23	14.13	16	11.90	27	14.42	25
LT	16.92	26	14.02	18	11.00	29	13.90	26
LU	18.83	18	11.78	25	12.99	18	14.54	22
HU	17.34	24	14.53	11	15.36	6	15.75	16
MT	18.69	19	14.27	13	12.30	24	15.02	21
NL	22.89	1	15.21	6	14.29	14	17.42	4
AT	21.19	8	14.25	14	15.98	2	17.16	5
PL	17.24	25	14.30	12	12.18	26	14.51	23
PT	15.44	27	15.64	4	15.29	7	15.45	17
RO	14.71	29	10.70	29	14.57	10	13.40	29
SI	20.91	9	14.03	17	15.48	5	16.82	7
SK	20.43	13	15.06	8	14.70	9	16.70	8
FI	20.12	14	15.64	5	14.28	15	16.63	9
SE	21.65	5	15.08	7	14.37	13	16.99	6
UK	19.58	15	13.11	22	12.71	20	15.10	19
IS	20.64	11	13.96	19	12.88	19	15.78	15
NO	22.16	3	18.69	2	12.31	23	17.56	3

6. Language spoken

The question chosen to represent the intra-EU migrant status is QA49: Is your mother tongue different from the official language(s) spoken in (OUR COUNTRY)?

We are aware that this question does not fully account for the migrant status, as (i) only EU citizens are interviewed, and (ii) there are migrants whose mother tongue does not differ from the official language (such as e.g. French or Dutch migrants in Belgium).

QA49: answer No (sample: 4891)

No	Consumer skills		Awareness of consumer		Consumer engagement		ICE	
	scores	ranks	scores	ranks	scores	ranks	scores	ranks
EU27 average	**17.45**		**13.12**		**13.45**		**14.67**	
BE	19.01	11	11.92	20	9.83	29	13.51	21
BG	11.82	25	7.40	28	12.75	22	10.77	25
CZ	17.16	19	14.15	9	15.52	4	15.63	11
DK	23.41	1	16.04	7	14.97	6	18.09	5
DE	23.20	2	18.67	3	15.32	5	18.97	1
EE	15.75	22	13.36	13	13.87	12	14.33	19
IE	20.59	8	13.61	11	14.03	11	16.06	9
EL	15.25	23	9.31	27	12.05	23	12.25	24
ES	17.37	18	13.45	12	12.77	21	14.50	17
FR	17.74	16	13.14	15	13.32	18	14.72	16
IT	11.34	27	9.95	25	9.95	28	10.41	27
CY	20.37	9	11.83	21	14.67	7	15.66	10
LV	16.42	20	13.14	15	13.22	20	14.25	19
LT	15.89	21	13.09	15	11.18	25	13.33	22
LU	18.91	12	12.69	18	13.82	13	15.14	13
HU	8.72	29	9.80	26	11.16	25	9.93	28
MT	19.69	10	19.73	1	14.17	10	17.73	6
NL	21.70	6	14.42	8	14.44	8	16.83	8
AT	18.70	13	11.06	24	13.60	16	14.49	17
PL	10.15	28	11.75	21	10.39	27	10.74	26
PT	13.76	24	11.33	23	13.71	15	12.98	23
RO	11.41	26	6.54	29	11.39	24	9.88	28
SI	17.66	16	12.55	19	14.36	8	14.88	15
SK	18.34	14	13.35	14	13.81	13	15.16	12
FI	20.74	7	19.53	2	17.07	1	19.05	1
SE	23.10	3	16.19	5	16.10	2	18.44	3
UK	23.03	4	16.22	5	15.65	3	18.27	4
IS	17.88	15	14.10	9	13.38	17	15.09	13
NO	21.85	5	17.53	4	13.27	18	17.43	7

QA49: answer Yes (sample: 51289)

Yes	Consumer skills		Awareness of consumer		Consumer engagement		ICE	
	scores	ranks	scores	ranks	scores	ranks	scores	ranks
EU27 averag	**18.34**		**13.28**		**13.45**		**15.01**	
BE	20.38	7	13.70	11	12.43	24	15.45	13
BG	15.41	24	8.79	28	13.72	13	12.74	27
CZ	19.20	16	16.20	4	15.54	1	16.95	5
DK	22.20	3	15.17	5	13.67	13	16.96	5
DE	20.31	9	16.96	2	14.27	8	17.11	4
EE	17.31	20	13.74	11	13.82	11	14.95	16
IE	19.54	12	11.95	25	12.32	25	14.59	20
EL	19.46	12	10.60	27	13.83	11	14.68	18
ES	15.01	26	13.63	13	12.27	25	13.60	25
FR	19.75	10	13.58	13	13.10	17	15.44	13
IT	16.47	22	12.28	23	12.71	19	13.81	22
CY	19.73	11	12.94	19	14.94	3	15.89	11
LV	17.30	20	13.40	16	12.51	22	14.37	21
LT	15.30	25	13.13	17	10.73	29	12.99	26
LU	18.79	18	12.32	23	13.15	16	14.75	17
HU	16.45	22	11.17	26	13.74	13	13.83	22
MT	18.30	19	14.89	6	12.87	18	15.29	15
NL	22.76	1	14.88	6	14.52	6	17.35	3
AT	20.41	7	13.52	15	15.27	2	16.41	8
PL	14.17	27	12.59	22	11.11	28	12.58	28
PT	14.18	27	13.01	18	14.01	9	13.75	22
RO	12.33	29	8.64	29	12.50	22	11.23	29
SI	19.31	14	12.87	19	14.64	5	15.63	12
SK	19.29	14	14.77	8	14.01	9	15.99	9
FI	21.43	6	16.36	3	14.79	4	17.48	2
SE	21.61	4	14.64	9	14.42	7	16.86	7
UK	18.87	17	12.92	19	12.31	25	14.67	18
IS	21.48	5	13.90	10	12.74	19	15.99	9
NO	22.81	1	18.83	1	12.57	21	17.91	1

7. Internet use

The question used is QA1: When did you last use the Internet?

QA1: answers *Within the last 3 months*, *Between 3 months and a year ago*, and *More than one year ago*. (sample: 37537)

using	Consumer skills		Awareness of consumer		Consumer engagement		ICE	
	scores	ranks	scores	ranks	scores	ranks	scores	ranks
EU27 average	**20.86**		**14.61**		**14.75**		**16.72**	
BE	21.42	14	14.09	18	12.81	27	16.05	21
BG	18.34	25	10.40	28	15.56	8	14.86	26
CZ	20.20	19	16.80	5	15.86	5	17.58	10
DK	23.72	4	15.99	7	14.35	17	17.96	4
DE	23.23	5	19.28	1	15.68	6	19.30	3
EE	19.86	20	15.08	12	15.13	12	16.68	15
IE	22.48	10	13.66	22	13.95	20	16.68	15
EL	24.03	3	12.37	27	16.67	3	17.75	7
ES	18.63	24	15.17	11	13.81	22	15.83	22
FR	21.26	15	14.05	19	13.94	21	16.39	18
IT	16.59	28	12.39	26	12.82	26	13.93	28
CY	21.66	13	12.84	24	15.17	11	16.58	17
LV	19.10	23	14.55	15	13.60	24	15.71	25
LT	17.42	27	13.94	20	11.50	29	14.22	27
LU	20.88	16	13.34	23	14.12	19	16.11	20
HU	19.11	22	12.45	25	15.63	7	15.78	24
MT	25.22	1	18.15	4	15.54	9	19.55	2
NL	23.05	6	14.99	13	14.67	14	17.53	11
AT	20.83	17	13.88	21	15.37	10	16.70	14
PL	18.32	26	15.60	8	13.61	23	15.79	23
PT	19.32	21	16.48	6	17.10	1	17.64	9
RO	14.66	29	10.31	29	14.52	16	13.25	29
SI	22.47	11	14.32	16	16.15	4	17.66	8
SK	20.48	18	15.46	10	14.61	15	16.81	13
FI	25.10	2	18.78	2	16.79	2	20.16	1
SE	22.92	7	15.54	9	15.11	13	17.82	6
UK	22.79	9	14.65	14	14.22	18	17.18	12
IS	22.12	12	14.11	17	12.88	25	16.31	19
NO	22.81	8	18.73	3	12.46	28	17.84	5

QA1: answers *Never used.* (sample: 18410)

not using	Consumer skills		Awareness of consumer		Consumer engagement		ICE	
	scores	ranks	scores	ranks	scores	ranks	scores	ranks
EU27 average	**13.47**		**10.66**		**11.14**		**11.76**	
BE	17.10	5	12.02	9	10.42	20	13.12	8
BG	12.15	19	7.10	28	11.89	7	10.48	23
CZ	16.60	6	14.47	2	14.78	2	15.28	2
DK	13.44	13	10.54	16	10.04	23	11.32	16
DE	15.30	10	12.78	4	11.77	9	13.25	7
EE	10.93	24	10.63	15	11.08	16	10.89	21
IE	13.53	12	8.58	26	9.27	26	10.46	24
EL	15.81	8	9.18	23	11.56	11	12.22	11
ES	10.87	25	11.74	11	10.42	20	10.98	20
FR	15.47	9	12.30	7	11.00	17	12.88	9
IT	14.68	11	11.31	12	11.56	11	12.51	10
CY	17.98	3	12.98	3	14.71	3	15.25	3
LV	12.38	17	10.52	17	10.67	18	11.19	17
LT	12.12	20	11.75	10	9.64	25	11.12	19
LU	13.33	15	10.03	20	11.35	14	11.59	13
HU	13.16	16	9.69	22	11.56	11	11.50	15
MT	11.32	22	12.04	8	10.21	22	11.15	18
NL	17.12	4	12.76	5	12.21	6	14.00	5
AT	18.40	2	11.28	13	14.24	4	14.69	4
PL	9.08	29	9.08	24	8.17	29	8.76	29
PT	10.29	26	10.28	18	11.70	10	10.79	22
RO	10.07	27	6.83	29	10.55	19	9.23	27
SI	13.34	14	10.16	19	11.89	7	11.83	12
SK	16.21	7	12.48	6	12.58	5	13.74	6
FI	9.96	28	8.99	25	8.66	28	9.19	28
SE	12.05	21	8.49	27	9.90	24	10.17	25
UK	11.03	23	9.91	21	8.89	27	9.92	26
IS	12.27	18	11.24	14	11.14	15	11.54	14
NO	22.09	1	20.46	1	16.53	1	19.59	1

8. Perception of empowerment

The question used is QA48: In general, when choosing and buying goods and services, how (1) Confident do you feel as a consumer?; (2) Knowledgeable do you feel as a consumer?; (3) Well protected by consumer law do you feel? We chose to represent the extremes of the sample distribution and to extract only the sample of respondents answering they feel very or quite confident, knowledgeable and protected and those who feel they are not very or not at all confident, knowledgeable and protected.

QA48: Feel very or quite confident, knowledgeable and protected (sample: 24296)

feel	Consumer skills		Awareness of consumer		Consumer engagement		ICE	
	scores	ranks	scores	ranks	scores	ranks	scores	ranks
EU27 average	**19.39**		**13.99**		**14.22**		**15.85**	
BE	20.46	13	13.71	18	12.06	28	15.35	20
BG	16.51	25	11.16	27	15.33	8	14.42	23
CZ	19.76	17	16.67	4	15.81	4	17.38	6
DK	22.53	5	15.48	5	14.26	14	17.37	6
DE	22.24	6	19.04	2	15.57	5	18.86	1
EE	19.78	17	14.82	11	14.86	9	16.47	12
IE	20.60	11	12.62	23	13.28	19	15.49	18
EL	20.61	11	10.87	28	14.18	15	15.27	20
ES	16.02	27	13.79	16	12.87	24	14.20	25
FR	20.05	15	13.76	16	13.15	20	15.62	17
IT	15.86	28	12.31	25	12.81	25	13.66	27
CY	20.91	10	13.03	22	16.12	2	16.73	9
LV	18.42	21	14.15	15	13.94	16	15.48	18
LT	16.83	24	13.29	21	11.31	29	13.75	27
LU	18.45	20	12.55	24	13.10	23	14.69	22
HU	16.89	23	11.71	26	14.57	13	14.44	23
MT	19.15	19	14.87	10	13.56	18	15.81	16
NL	23.16	1	15.40	7	14.85	10	17.76	4
AT	21.72	8	14.48	12	16.12	2	17.46	5
PL	16.12	26	13.68	18	12.47	27	14.06	26
PT	17.71	22	15.48	5	16.20	1	16.47	12
RO	13.15	29	9.21	29	13.19	20	11.93	29
SI	20.48	13	13.41	20	15.45	7	16.47	12
SK	19.96	15	15.13	9	14.80	10	16.61	10
FI	22.68	3	17.44	3	15.46	6	18.46	2
SE	22.06	7	15.30	8	14.78	10	17.34	8
UK	21.33	9	14.29	13	13.86	16	16.46	12
IS	22.57	4	14.27	13	13.24	20	16.64	10
NO	22.83	2	19.14	1	12.66	26	18.04	3

QA48: Feel not very or not at all confident, knowledgeable and protected (sample: 18410)

not feel	Consumer skills		Awareness of consumer		Consumer engagement		ICE	
	scores	ranks	scores	ranks	scores	ranks	scores	ranks
EU27 average	**15.63**		**11.84**		**11.76**		**13.06**	
BE	18.83	3	13.00	9	11.34	21	14.33	8
BG	13.86	22	8.01	29	12.68	7	11.61	25
CZ	18.27	5	15.09	4	14.55	1	15.95	3
DK	22.34	1	15.24	3	10.77	25	15.99	2
DE	16.06	14	12.89	10	11.27	21	13.36	16
EE	13.54	23	12.21	14	12.21	14	12.65	19
IE	15.47	17	10.40	22	9.89	26	11.89	23
EL	18.13	6	10.29	23	12.98	6	13.84	11
ES	14.89	19	13.58	6	12.28	12	13.55	15
FR	17.45	8	12.70	11	11.99	15	14.01	10
IT	15.78	15	11.50	19	12.02	15	13.10	17
CY	18.48	4	12.60	12	13.66	2	14.92	5
LV	15.36	18	12.02	16	11.31	21	12.87	18
LT	13.36	24	12.45	13	9.40	27	11.66	24
LU	17.21	9	11.77	18	11.88	17	13.61	14
HU	14.33	21	10.27	23	11.84	18	12.17	20
MT	16.89	12	15.32	2	12.69	7	14.90	5
NL	16.94	12	11.07	20	13.11	5	13.73	13
AT	17.58	7	11.88	17	13.55	3	14.35	7
PL	10.41	29	9.44	27	7.75	29	9.15	29
PT	11.77	28	12.11	15	12.54	11	12.15	20
RO	11.97	27	8.16	28	11.82	18	10.73	27
SI	14.42	20	10.02	26	11.68	20	12.07	22
SK	17.01	10	13.27	8	12.72	7	14.31	8
FI	15.70	16	13.35	7	12.32	12	13.76	11
SE	12.59	26	10.18	25	11.10	24	11.31	26
UK	13.33	25	10.87	21	8.14	28	10.71	27
IS	20.68	2	14.90	5	13.23	4	16.21	1
NO	16.97	10	16.97	1	12.69	7	15.44	4

Consumer Empowerment Index

Country profiles

Belgium

Consumer Empowerment Index

	score	rank	Do you feel confident, knowledgeable and protected?			
				Skills	Awareness	Engagement	CEI
EU27	**14.97**			Skills	Awareness	Engagement	CEI
BE	15.25	15	No	18.83	13.00	11.34	14.33
min	11.05		Yes	20.46	13.71	12.06	15.35
max	17.89						

CEI PILLARS

Skills / Engagement / Awareness

BE
EU27

CEI SUB-PILLARS

Basic skills / Logos and labels / Unfair practices / Cooling off / Guaranteed period / Comparing products / Reading terms and conditions / Interest in information / Tendency to talk / Detriment and redress

BE
EU27

CEI rescaled for average EU27

	Category	Value
GENDER	Male	~103
	Female	~100
AGE GROUP	15-24	~124
	25-39	~118
	40-54	~98
	over -54	~90
MOTHER TONGUE	Non-official language	~90
	Official language	~103
EDUCATION	High education	~108
	Medium education	~103
	Low education	~92
INTERNET	Users	~107
	NON users	~87
EMPLOYED	General management	~114
	Supervisor	~107
	Employed professional	~108
	Employed position - travelling	~102
	Middle management	~120
	Employed position - service job	~109
	Employed position - working at desk	~111
	Skilled manual workers	~107
	Other manual workers	~100
SELF-EMPLOYED	Farmer	~114
	Professional	~105
	Owner of a shop	~92
	Business proprietors	~109
NON ACTIVE	Student	~124
	Responsible for ordinary shopping....	~98
	Unemployed or temporarily not working	~102
	Retired or unable to work through illness	~91
	EU27 Average	~100

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Bulgaria

Consumer Empowerment Index

	score	rank	*Do you feel confident, knowledgeable and protected?*			
				Skills	*Awareness*	*Engagement*	*CEI*
EU27	**14.97**					
BG	12.52	27	*No*	*13.86*	*8.01*	*12.68*	*11.61*
min	11.05		*Yes*	*16.51*	*11.16*	*15.33*	*14.42*
max	17.89					

CEI rescaled for average EU27

Category	Subcategory
GENDER	Male
	Female
AGE GROUP	15-24
	25-39
	40-54
	over -54
MOTHER TONGUE	Non-official language
	Official language
EDUCATION	High education
	Medium education
	Low education
INTERNET	Users
	NON users
EMPLOYED	General management
	Supervisor
	Employed professional
	Employed position - travelling
	Middle management
	Employed position - service job
	Employed position - working at desk
	Skilled manual workers
	Other manual workers
SELF-EMPLOYED	Farmer
	Professional
	Owner of a shop
	Business proprietors
NON ACTIVE	Student
	Responsible for ordinary shopping....
	Unemployed or temporarily not working
	Retired or unable to work through illness
	EU27 Average

Czech Republic

Consumer Empowerment Index

	score	rank	Do you feel confident, knowledgeable and protected?			
				Skills	Awareness	Engagement	CEI
EU27	**14.97**						
CZ	16.87	7	No	18.27	15.09	14.55	15.95
min	11.05		Yes	19.76	16.67	15.81	17.38
max	17.89						

CEI PILLARS

CEI SUB-PILLARS

CEI rescaled for average EU27

	Category	Value
GENDER	Male	~119
	Female	~107
AGE GROUP	15-24	~137
	25-39	~114
	40-54	~108
	over -54	~107
MOTHER TONGUE	Non-official language	~105
	Official language	~114
EDUCATION	High education	~124
	Medium education	~111
	Low education	~72
INTERNET	Users	~118
	NON users	~102
EMPLOYED	General management	~144
	Supervisor	~104
	Employed professional	~106
	Employed position - travelling	~121
	Middle management	~120
	Employed position - service job	~111
	Employed position - working at desk	~113
	Skilled manual workers	~106
	Other manual workers	~103
SELF-EMPLOYED	Farmer	~120
	Professional	~124
	Owner of a shop	~118
	Business proprietors	~123
NON ACTIVE	Student	~138
	Responsible for ordinary shopping....	~94
	Unemployed or temporarily not working	~104
	Retired or unable to work through illness	~108
	EU27 Average	~100

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Denmark

Consumer Empowerment Index

	score	rank	Do you feel confident, knowledgeable and protected?			
				Skills	Awareness	Engagement	CEI
EU27	**14.97**					
DK	17.01	5	No	22.34	15.24	10.77	15.99
min	11.05		Yes	22.53	15.48	14.26	17.37
max	17.89					

CEI PILLARS — radar chart of Skills, Awareness, Engagement for DK and EU27

CEI SUB-PILLARS — radar chart of Basic skills, Logos and labels, Unfair practices, Cooling off, Guaranteed period, Comparing products, Reading terms and conditions, Interest in information, Tendency to talk, Detriment and redress for DK and EU27

CEI rescaled for average EU27

Category	Subcategory	Value
GENDER	Male	~120
	Female	~108
AGE GROUP	15-24	200.59
	25-39	~138
	40-54	~113
	over -54	~88
MOTHER TONGUE	Non-official language	~122
	Official language	~113
EDUCATION	High education	~118
	Medium education	~115
	Low education	~110
INTERNET	Users	~120
	NON users	~75
EMPLOYED	General management	~122
	Supervisor	~120
	Employed professional	~138
	Employed position - travelling	~118
	Middle management	~121
	Employed position - service job	~120
	Employed position - working at desk	~118
	Skilled manual workers	~125
	Other manual workers	~113
SELF-EMPLOYED	Farmer	~100
	Professional	~104
	Owner of a shop	~116
	Business proprietors	~119
NON ACTIVE	Student	~183
	Responsible for ordinary shopping....	~104
	Unemployed or temporarily not working	~129
	Retired or unable to work through illness	~86
	EU27 Average	~100

Germany

Consumer Empowerment Index

	score	rank	Do you feel confident, knowledgeable and protected?			
				Skills	Awareness	Engagement	CEI
EU27	**14.97**					
DE	17.28	4	No	16.06	12.89	11.27	13.36
min	11.05		Yes	22.24	19.04	15.57	18.86
max	17.89					

CEI PILLARS

CEI SUB-PILLARS

CEI rescaled for average EU27

GENDER
- Male
- Female

AGE GROUP
- 15-24
- 25-39
- 40-54
- over -54

MOTHER TONGUE
- Non-official language
- Official language

EDUCATION
- High education
- Medium education
- Low education

INTERNET
- Users
- NON users

EMPLOYED
- General management
- Supervisor
- Employed professional
- Employed position - travelling
- Middle management
- Employed position - service job
- Employed position - working at desk
- Skilled manual workers
- Other manual workers

SELF-EMPLOYED
- Farmer
- Professional
- Owner of a shop
- Business proprietors

NON ACTIVE
- Student
- Responsible for ordinary shopping....
- Unemployed or temporarily not working
- Retired or unable to work through illness

- EU27 Average

0   20   40   60   80   100   120   140   160   180   200

Estonia

Consumer Empowerment Index

	score	rank	Do you feel confident, knowledgeable and protected?			
				Skills	Awareness	Engagement	CEI
EU27	14.97					
EE	14.82	18	No	13.54	12.21	12.21	12.65
min	11.05		Yes	19.78	14.82	14.86	16.47
max	17.89					

CEI PILLARS

CEI SUB-PILLARS

CEI rescaled for average EU27

	Category	Value
GENDER	Male	
	Female	
AGE GROUP	15-24	
	25-39	
	40-54	
	over -54	
MOTHER TONGUE	Non-official language	
	Official language	
EDUCATION	High education	
	Medium education	
	Low education	
INTERNET	Users	
	NON users	
EMPLOYED	General management	
	Supervisor	
	Employed professional	
	Employed position - travelling	
	Middle management	
	Employed position - service job	
	Employed position - working at desk	
	Skilled manual workers	
	Other manual workers	
SELF-EMPLOYED	Farmer	
	Professional	
	Owner of a shop	
	Business proprietors	
NON ACTIVE	Student	
	Responsible for ordinary shopping….	
	Unemployed or temporarily not working	
	Retired or unable to work through illness	
	EU27 Average	

Ireland

Consumer Empowerment Index

	score	rank	Do you feel confident, knowledgeable and protected?			
				Skills	Awareness	Engagement	CEI
EU27	14.97					
IE	14.68	19	No	15.47	10.40	9.89	11.89
min	11.05		Yes	20.60	12.62	13.28	15.49
max	17.89					

CEI rescaled for average EU27

Horizontal bar chart showing CEI values rescaled for average EU27, grouped by category:

GENDER
- Male: ~112
- Female: ~86

AGE GROUP
- 15-24: ~152
- 25-39: ~110
- 40-54: ~96
- over -54: ~68

MOTHER TONGUE
- Non-official language: ~106
- Official language: ~97

EDUCATION
- High education: ~115
- Medium education: ~106
- Low education: ~79

INTERNET
- Users: ~111
- NON users: ~69

EMPLOYED
- General management: ~125
- Supervisor: ~111
- Employed professional: ~119
- Employed position - travelling: ~112
- Middle management: ~119
- Employed position - service job: ~104
- Employed position - working at desk: ~101
- Skilled manual workers: ~112
- Other manual workers: ~88

SELF-EMPLOYED
- Farmer: ~90
- Professional: ~125
- Owner of a shop: ~112
- Business proprietors: ~98

NON ACTIVE
- Student: ~148
- Responsible for ordinary shopping....: ~77
- Unemployed or temporarily not working: ~111
- Retired or unable to work through illness: ~72

EU27 Average: ~100

(horizontal axis: 0 20 40 60 80 100 120 140 160 180 200)

185

Greece

Consumer Empowerment Index

	score	rank	Do you feel confident, knowledgeable and protected?			
				Skills	Awareness	Engagement	CEI
EU27	14.97					
EL	14.61	20	No	18.13	10.29	12.98	13.84
min	11.05		Yes	20.61	10.87	14.18	15.27
max	17.89					

CEI PILLARS

CEI SUB-PILLARS

CEI rescaled for average EU27

Category	Subcategory	Value
GENDER	Male	~105
	Female	~90
AGE GROUP	15-24	~158
	25-39	~104
	40-54	~90
	over -54	~80
MOTHER TONGUE	Non-official language	~82
	Official language	~97
EDUCATION	High education	~105
	Medium education	~107
	Low education	~83
INTERNET	Users	~118
	NON users	~81
EMPLOYED	General management	~114
	Supervisor	~80
	Employed professional	~102
	Employed position - travelling	~106
	Middle management	~110
	Employed position - service job	~104
	Employed position - working at desk	~104
	Skilled manual workers	~98
	Other manual workers	~85
SELF-EMPLOYED	Farmer	~94
	Professional	~116
	Owner of a shop	~103
	Business proprietors	~100
NON ACTIVE	Student	~153
	Responsible for ordinary shopping....	~78
	Unemployed or temporarily not working	~99
	Retired or unable to work through illness	~80
	EU27 Average	100

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Spain

Consumer Empowerment Index

	score	rank	Do you feel confident, knowledgeable and protected?			
				Skills	Awareness	Engagement	CEI
EU27	**14.97**					
ES	13.63	24	No	14.89	13.58	12.28	13.55
min	11.05		Yes	16.02	13.79	12.87	14.20
max	17.89						

CEI PILLARS

CEI SUB-PILLARS

CEI rescaled for average EU27

		CEI value
GENDER	Male	~95
	Female	~85
AGE GROUP	15-24	~98
	25-39	~105
	40-54	~101
	over -54	~67
MOTHER TONGUE	Non-official language	~95
	Official language	~89
EDUCATION	High education	~107
	Medium education	~101
	Low education	~80
INTERNET	Users	~104
	NON users	~72
EMPLOYED	General management	~83
	Supervisor	~101
	Employed professional	~113
	Employed position - travelling	~108
	Middle management	~116
	Employed position - service job	~103
	Employed position - working at desk	~111
	Skilled manual workers	~101
	Other manual workers	~87
SELF-EMPLOYED	Farmer	~72
	Professional	~109
	Owner of a shop	~104
	Business proprietors	~105
NON ACTIVE	Student	~103
	Responsible for ordinary shopping....	~75
	Unemployed or temporarily not working	~96
	Retired or unable to work through illness	~66
	EU27 Average	~100

189

France

Consumer Empowerment Index

	score	rank	Do you feel confident, knowledgeable and protected?			
				Skills	Awareness	Engagement	CEI
EU27	14.97					
FR	15.38	14	No	17.45	12.70	11.99	14.01
min	11.05		Yes	20.05	13.76	13.15	15.62
max	17.89					

CEI PILLARS

CEI SUB-PILLARS

CEI rescaled for average EU27

		CEI value
GENDER	Male	108
	Female	98
AGE GROUP	15-24	128
	25-39	106
	40-54	110
	over -54	89
MOTHER TONGUE	Non-official language	98
	Official language	103
EDUCATION	High education	110
	Medium education	107
	Low education	90
INTERNET	Users	109
	NON users	86
EMPLOYED	General management	124
	Supervisor	106
	Employed professional	104
	Employed position - travelling	109
	Middle management	116
	Employed position - service job	102
	Employed position - working at desk	107
	Skilled manual workers	110
	Other manual workers	105
SELF-EMPLOYED	Farmer	98
	Professional	110
	Owner of a shop	112
	Business proprietors	119
NON ACTIVE	Student	124
	Responsible for ordinary shopping....	90
	Unemployed or temporarily not working	110
	Retired or unable to work through illness	89
	EU27 Average	100

191

Italy

Consumer Empowerment Index

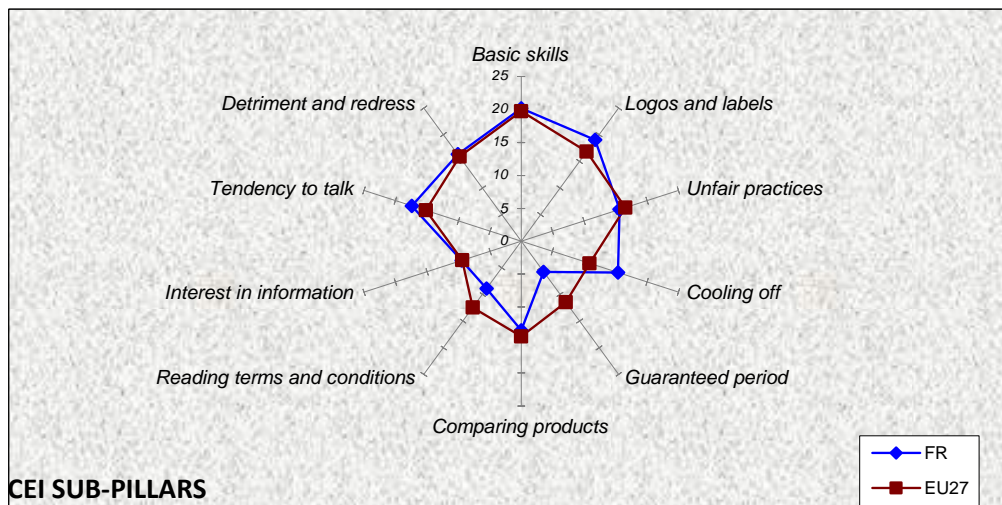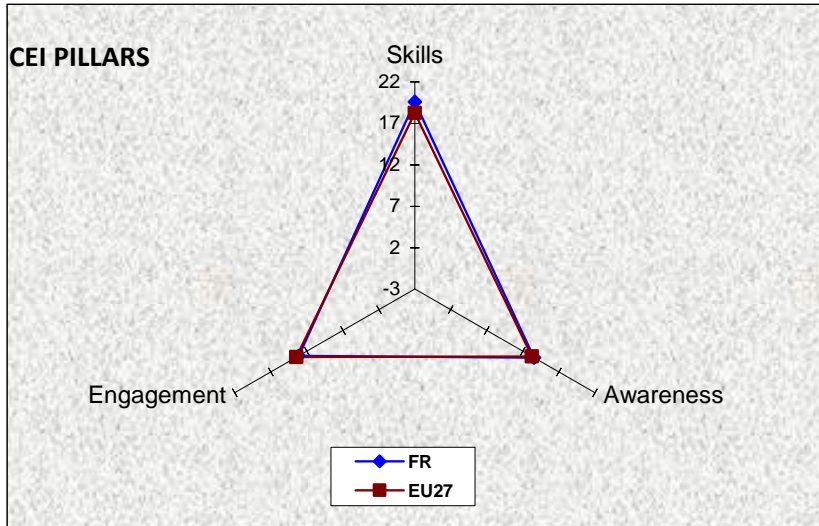|	score	rank	Do you feel confident, knowledgeable and protected?			
				Skills	Awareness	Engagement	CEI
EU27	14.97			Skills	Awareness	Engagement	CEI
IT	13.46	25	No	15.78	11.50	12.02	13.10
min	11.05		Yes	15.86	12.31	12.81	13.66
max	17.89						

CEI PILLARS

- IT
- EU27

CEI SUB-PILLARS

- IT
- EU27

CEI rescaled for average EU27
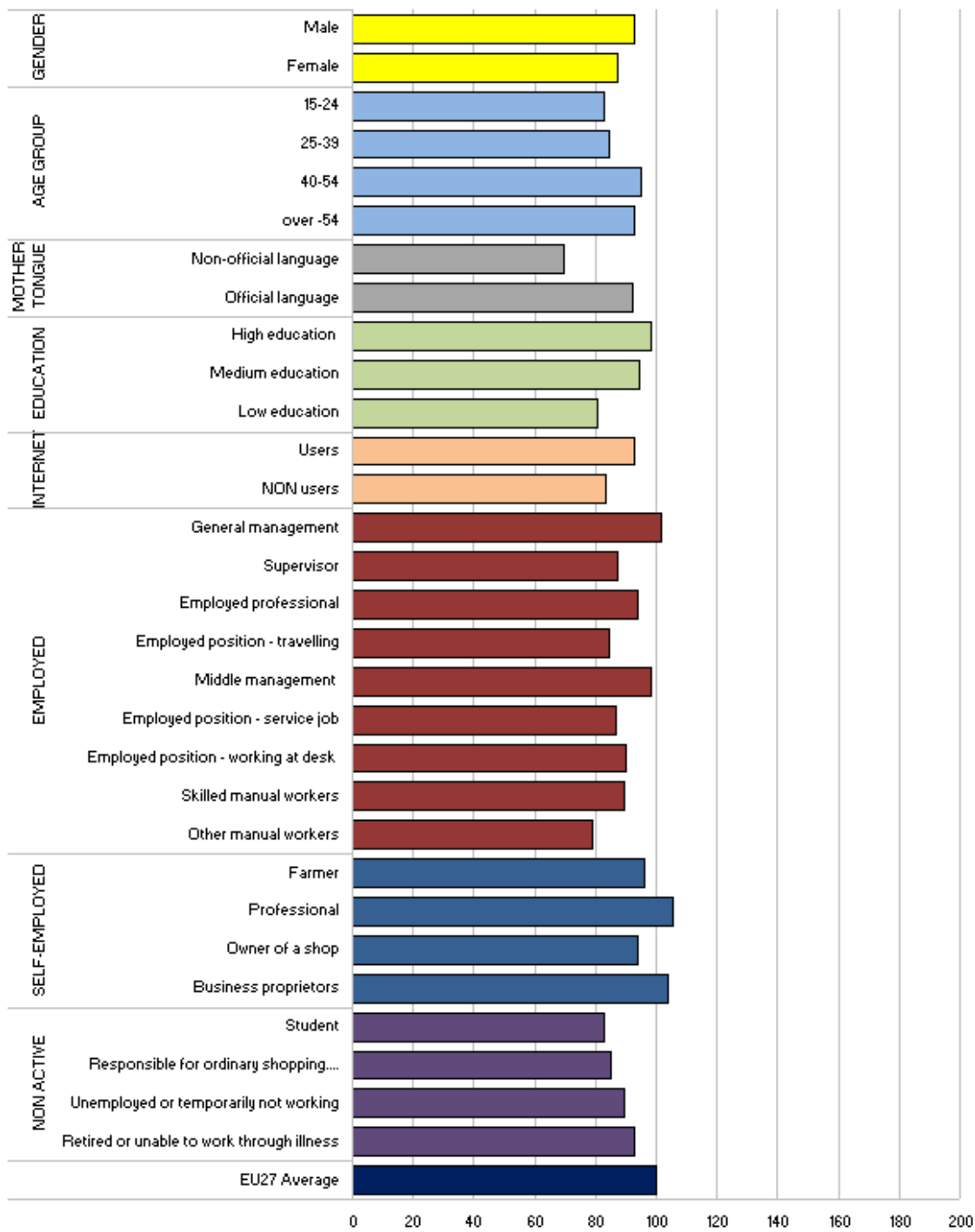
Cyprus

Consumer Empowerment Index

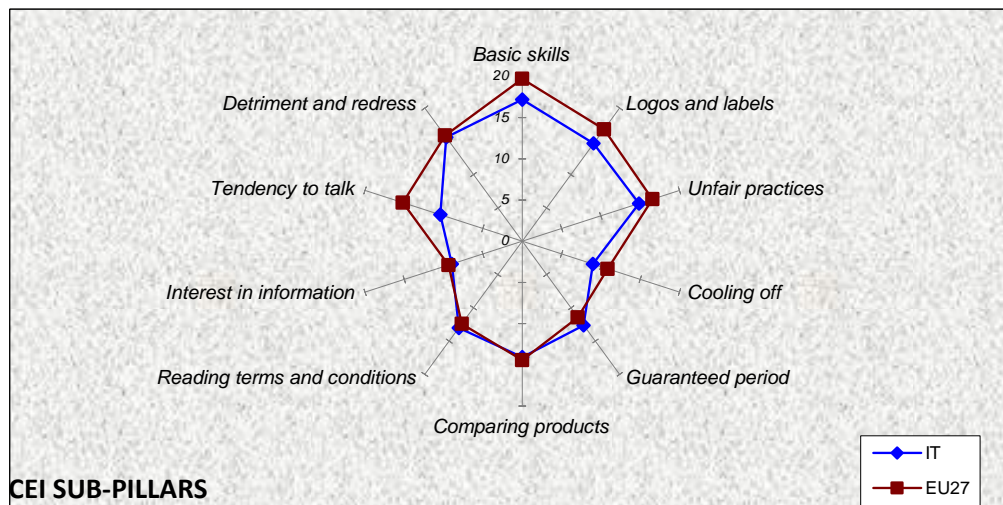|	score	rank	Do you feel confident, knowledgeable and protected?			
				Skills	Awareness	Engagement	CEI
EU27	**14.97**					
CY	15.89	10	No	18.48	12.60	13.66	14.92
min	11.05		Yes	20.91	13.03	16.12	16.73
max	17.89					

CEI PILLARS

CEI SUB-PILLARS
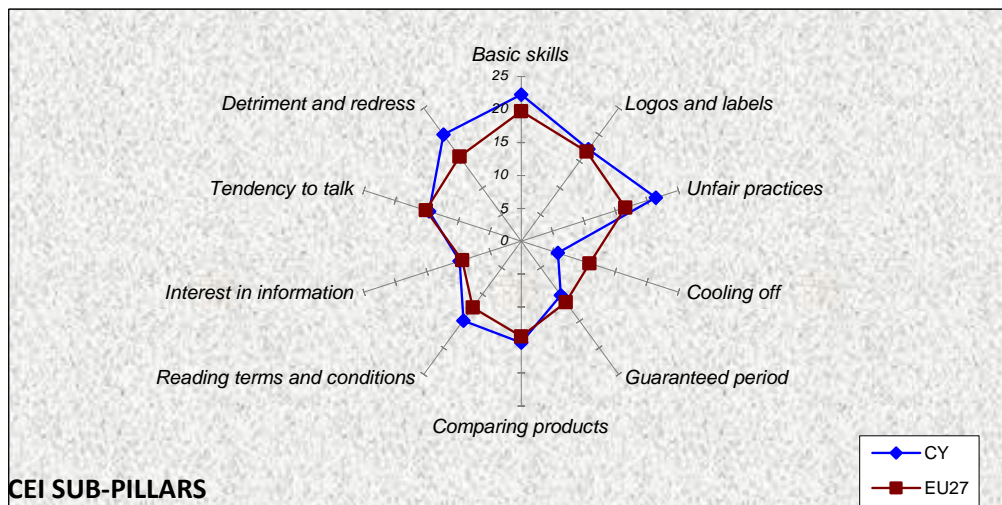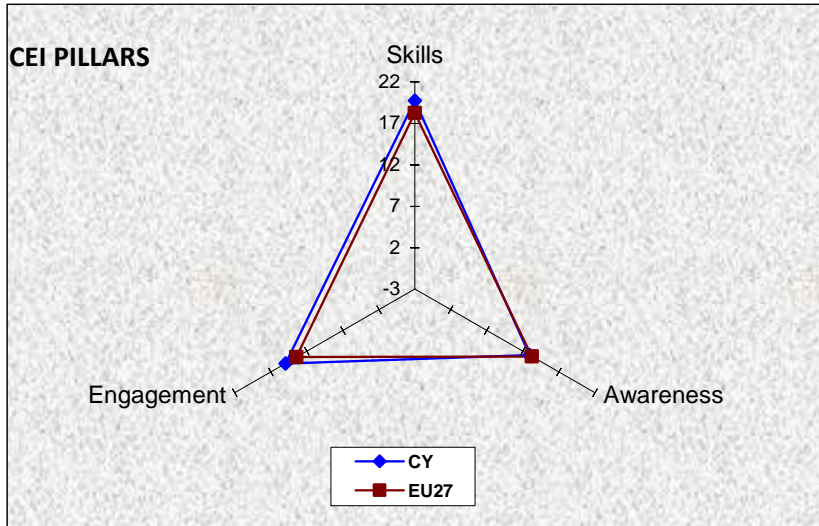
CEI rescaled for average EU27
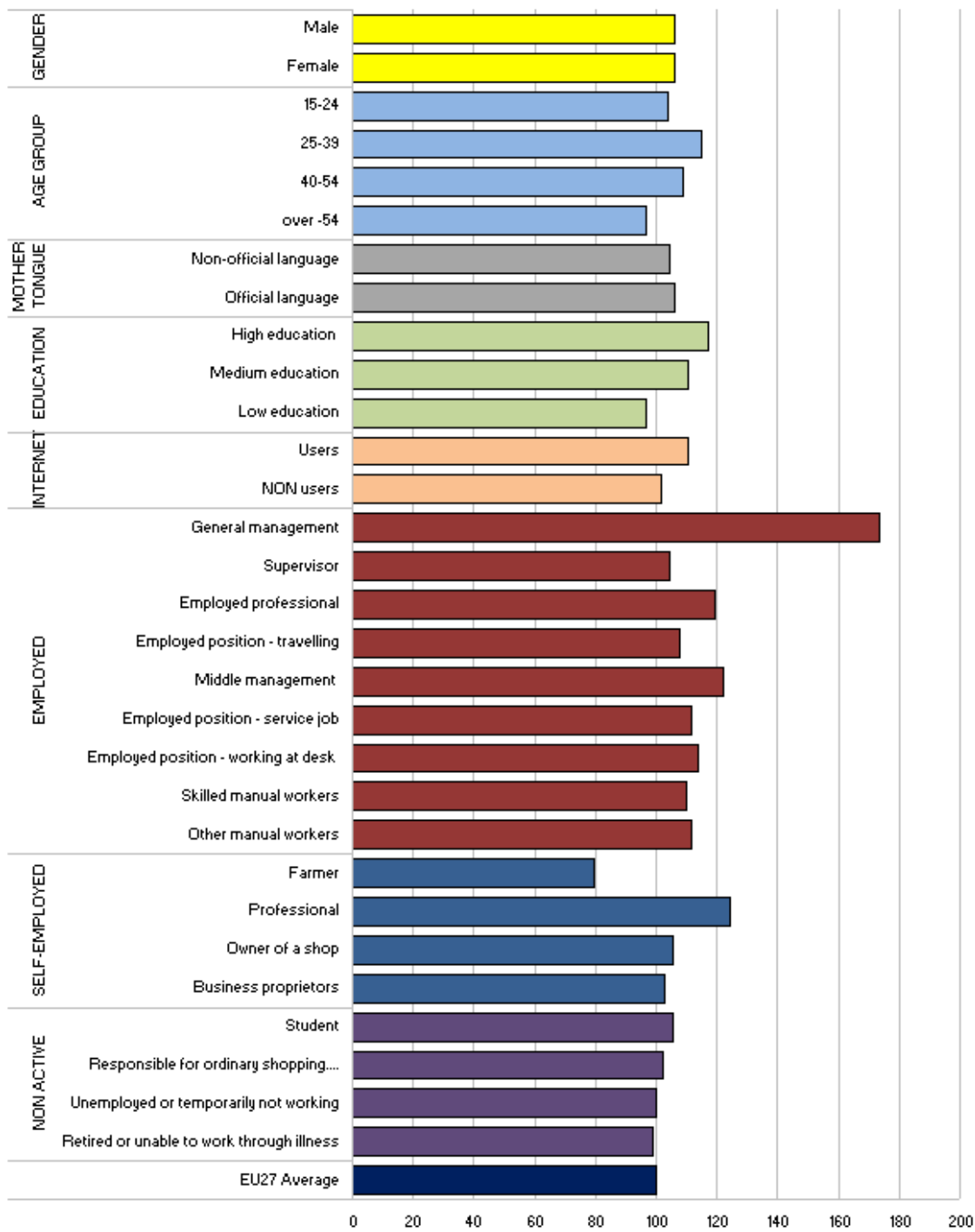
Latvia

Consumer Empowerment Index

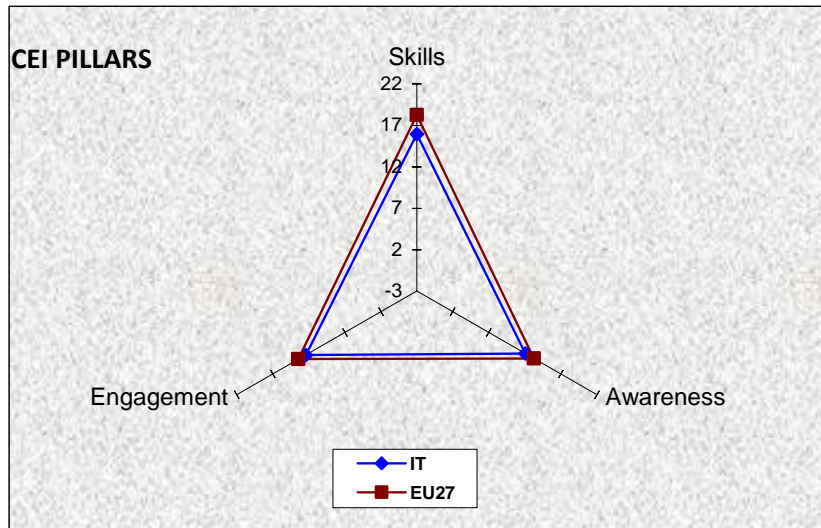|	score	rank	Do you feel confident, knowledgeable and protected?			
				Skills	Awareness	Engagement	CEI
EU27	**14.97**					
LV	14.32	21	No	15.36	12.02	11.31	12.87
min	11.05		Yes	18.42	14.15	13.94	15.48
max	17.89					
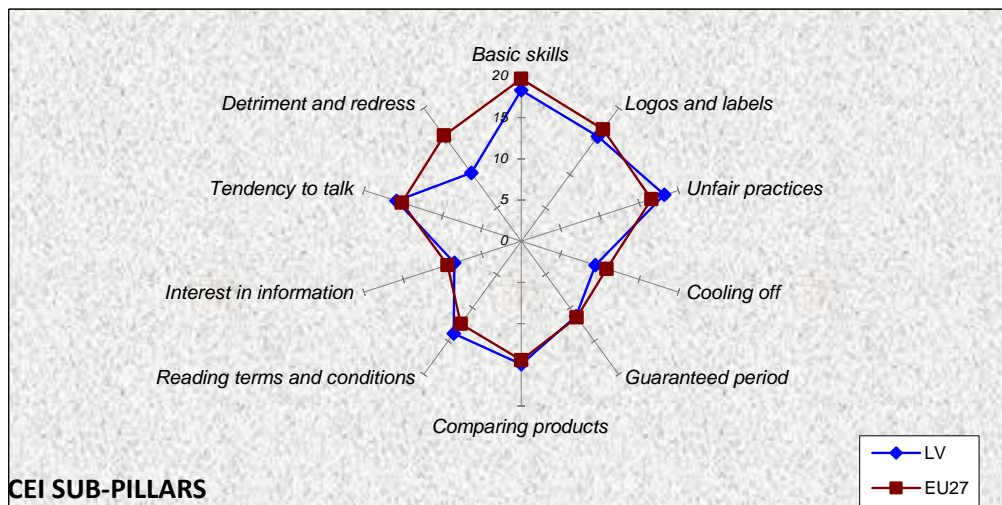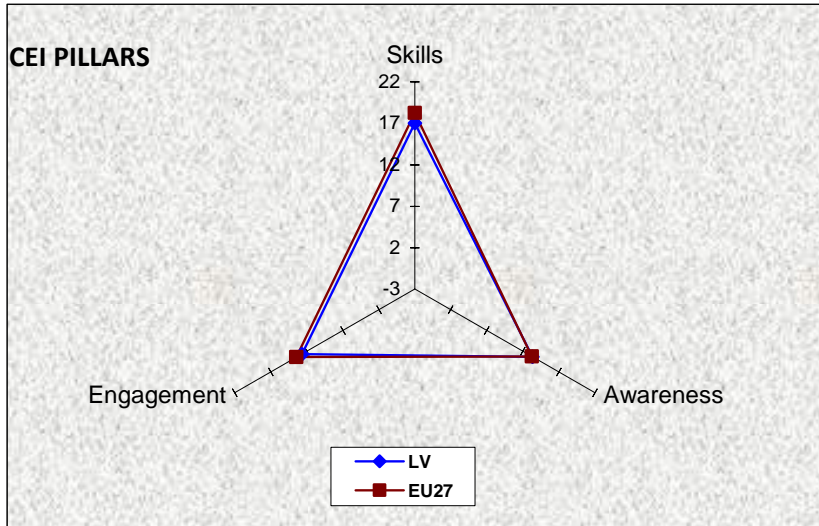
CEI rescaled for average EU27
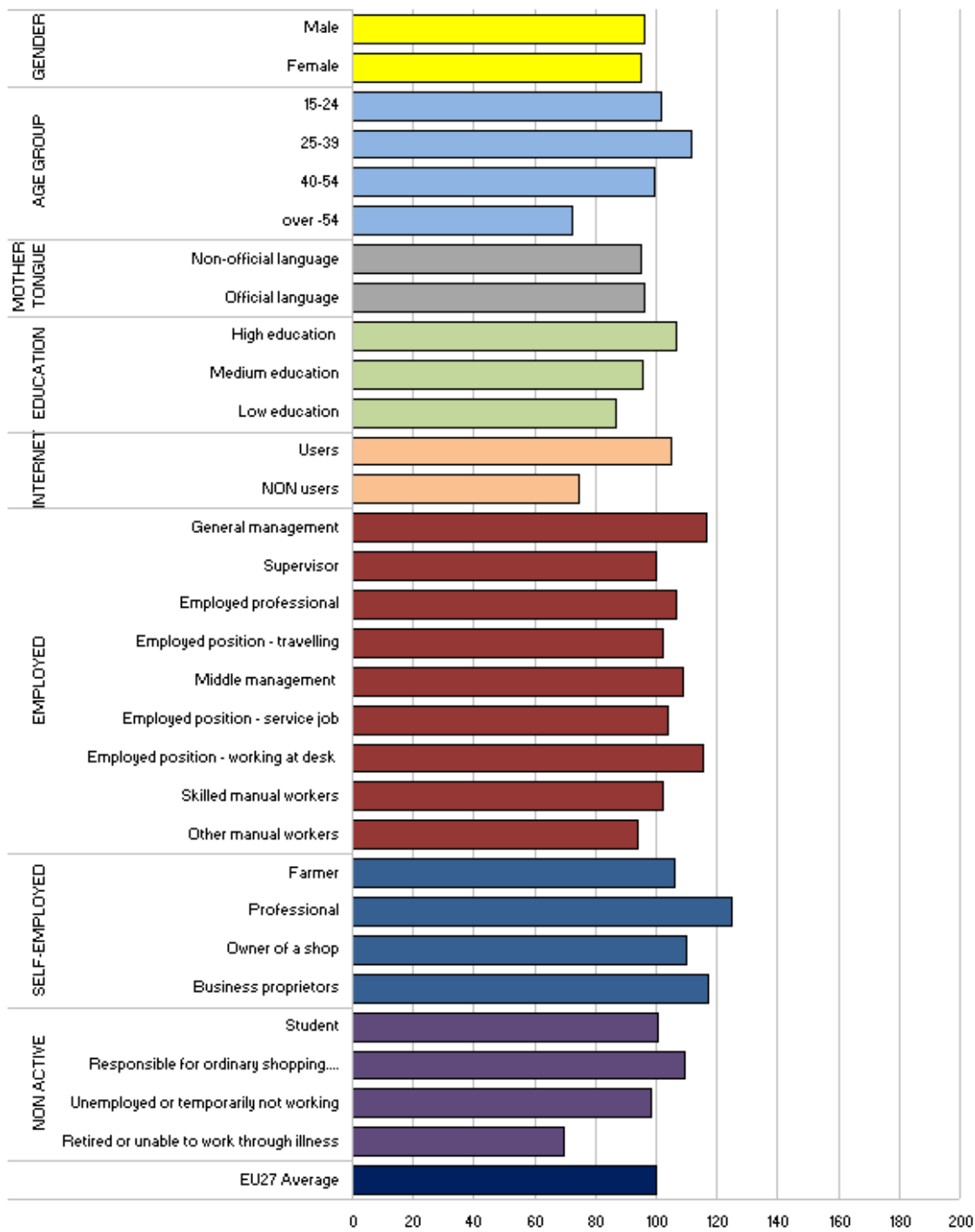
Lithuania

Consumer Empowerment Index

	score	rank	Do you feel confident, knowledgeable and protected?			
				Skills	Awareness	Engagement	CEI
EU27	**14.97**						
LT	13.02	26	No	13.36	12.45	9.40	11.66
min	11.05		Yes	16.83	13.29	11.31	13.75
max	17.89						

CEI PILLARS

CEI SUB-PILLARS

CEI rescaled for average EU27

Category	Subcategory	Value
GENDER	Male	~86
GENDER	Female	~86
AGE GROUP	15-24	~92
AGE GROUP	25-39	~94
AGE GROUP	40-54	~89
AGE GROUP	over -54	~75
MOTHER TONGUE	Non-official language	~88
MOTHER TONGUE	Official language	~85
EDUCATION	High education	~97
EDUCATION	Medium education	~88
EDUCATION	Low education	~72
INTERNET	Users	~94
INTERNET	NON users	~74
EMPLOYED	General management	~118
EMPLOYED	Supervisor	~96
EMPLOYED	Employed professional	~101
EMPLOYED	Employed position - travelling	~93
EMPLOYED	Middle management	~101
EMPLOYED	Employed position - service job	~92
EMPLOYED	Employed position - working at desk	~98
EMPLOYED	Skilled manual workers	~86
EMPLOYED	Other manual workers	~81
SELF-EMPLOYED	Farmer	~103
SELF-EMPLOYED	Professional	~94
SELF-EMPLOYED	Owner of a shop	~99
SELF-EMPLOYED	Business proprietors	~105
NON ACTIVE	Student	~93
NON ACTIVE	Responsible for ordinary shopping....	~86
NON ACTIVE	Unemployed or temporarily not working	~88
NON ACTIVE	Retired or unable to work through illness	~71
	EU27 Average	~100

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Luxembourg

Consumer Empowerment Index

	score	rank	Do you feel confident, knowledgeable and protected?			
				Skills	Awareness	Engagement	CEI
EU27	**14.97**						
LU	14.88	17	No	17.21	11.77	11.88	13.61
min	11.05		Yes	18.45	12.55	13.10	14.69
max	17.89						

CEI PILLARS

CEI SUB-PILLARS
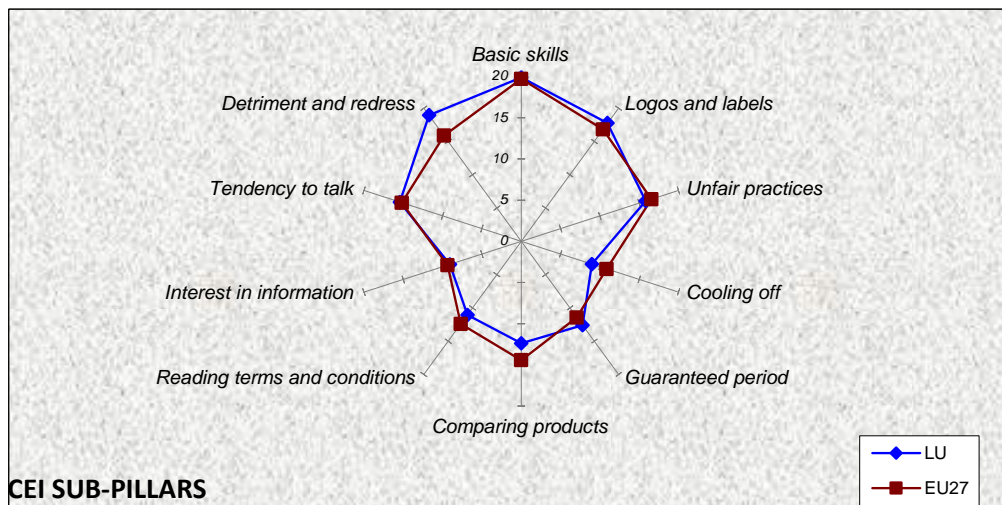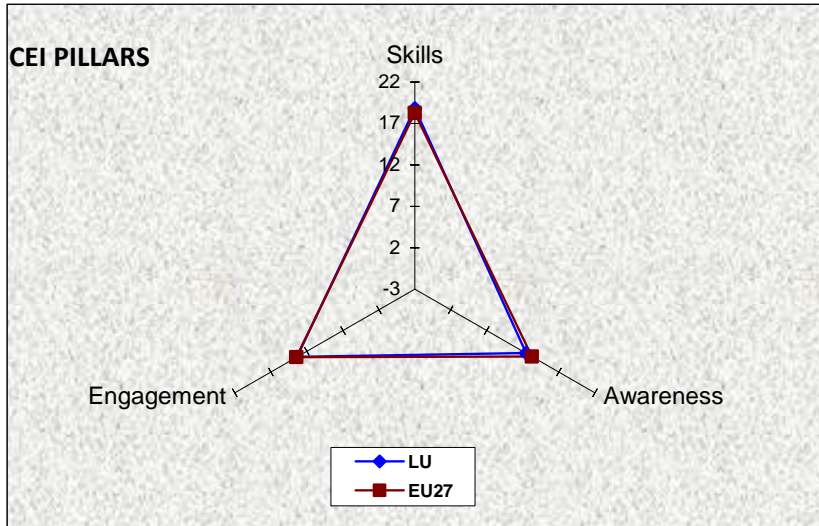
CEI rescaled for average EU27
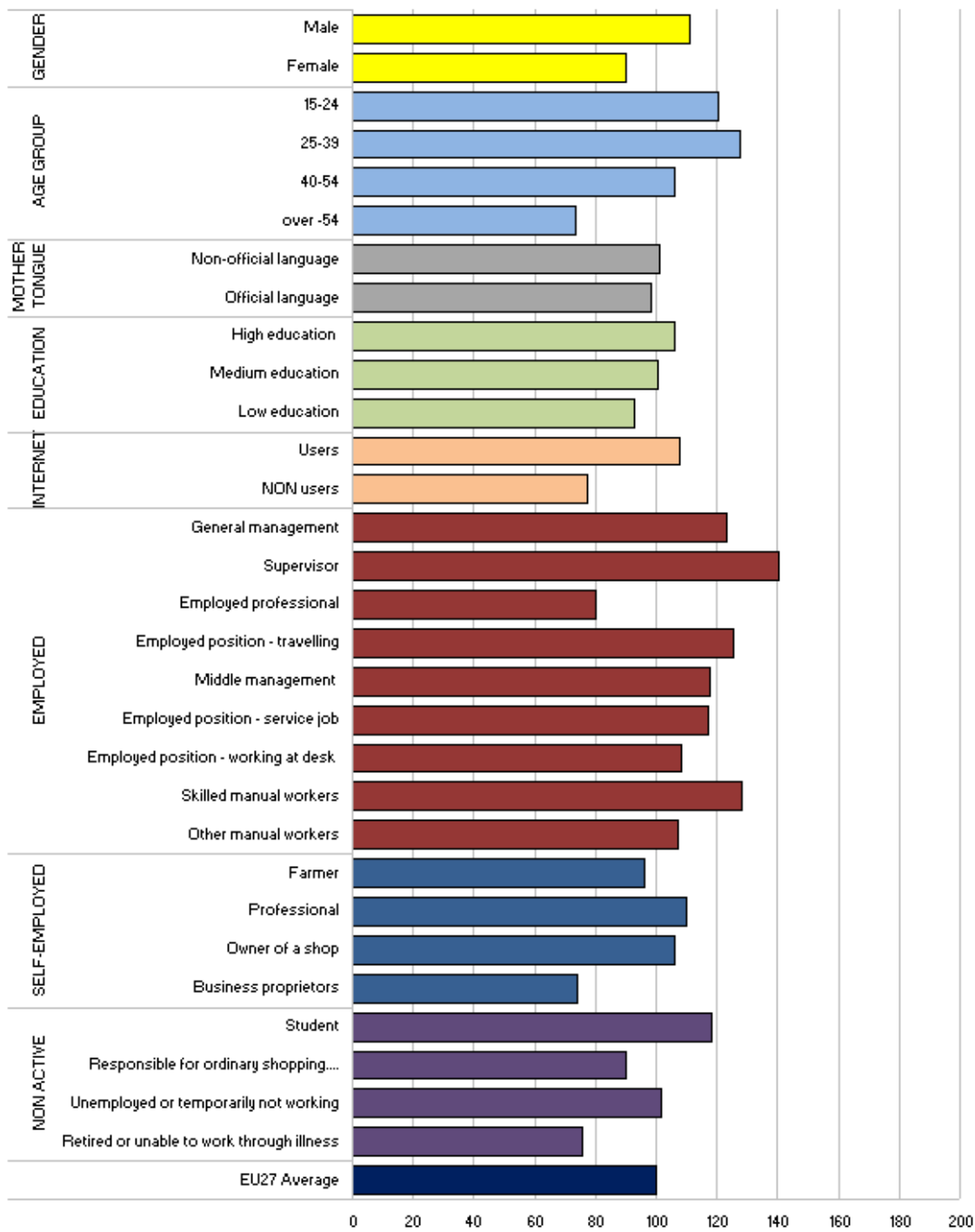
Hungary

Consumer Empowerment Index

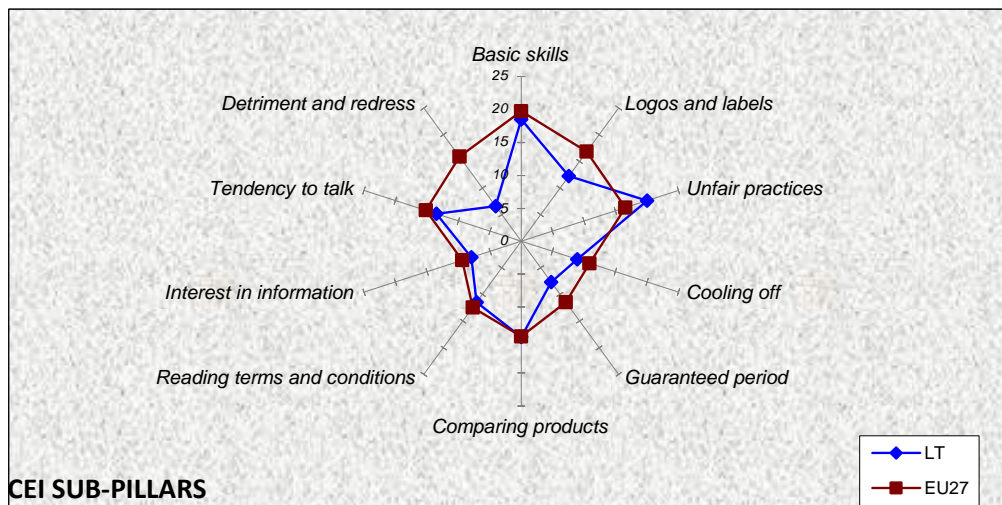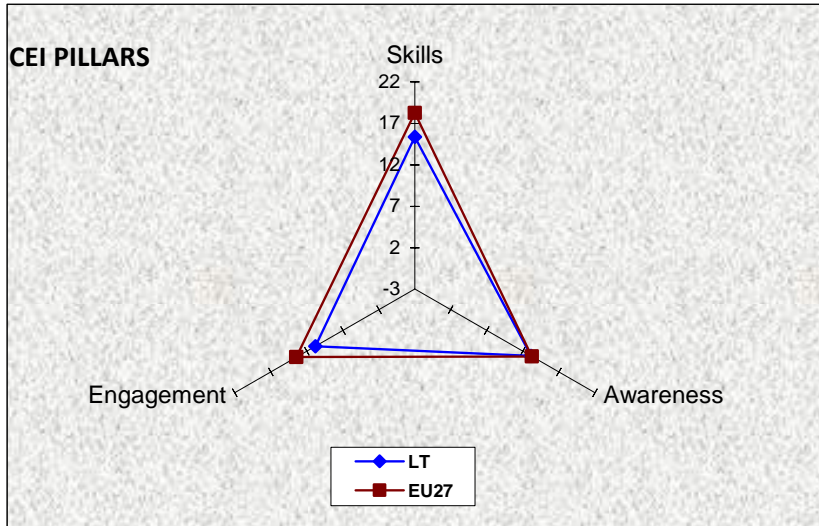|	score	rank	Do you feel confident, knowledgeable and protected?			
				Skills	Awareness	Engagement	CEI
EU27	14.97					
HU	13.75	22	No	14.33	10.27	11.84	12.17
min	11.05		Yes	16.89	11.71	14.57	14.44
max	17.89					

CEI PILLARS

CEI SUB-PILLARS
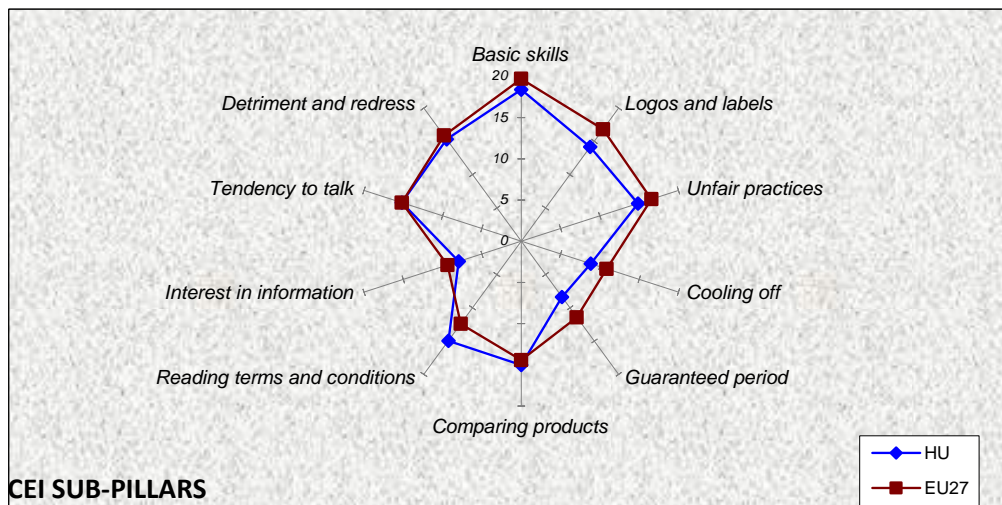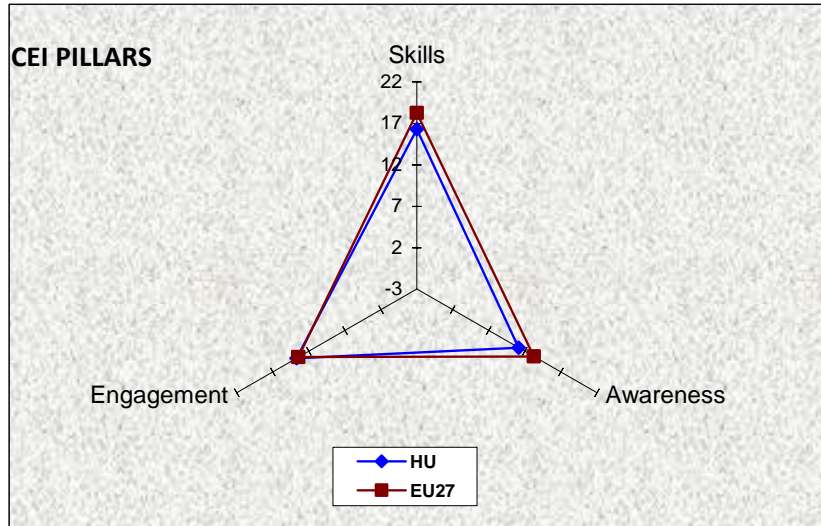
CEI rescaled for average EU27
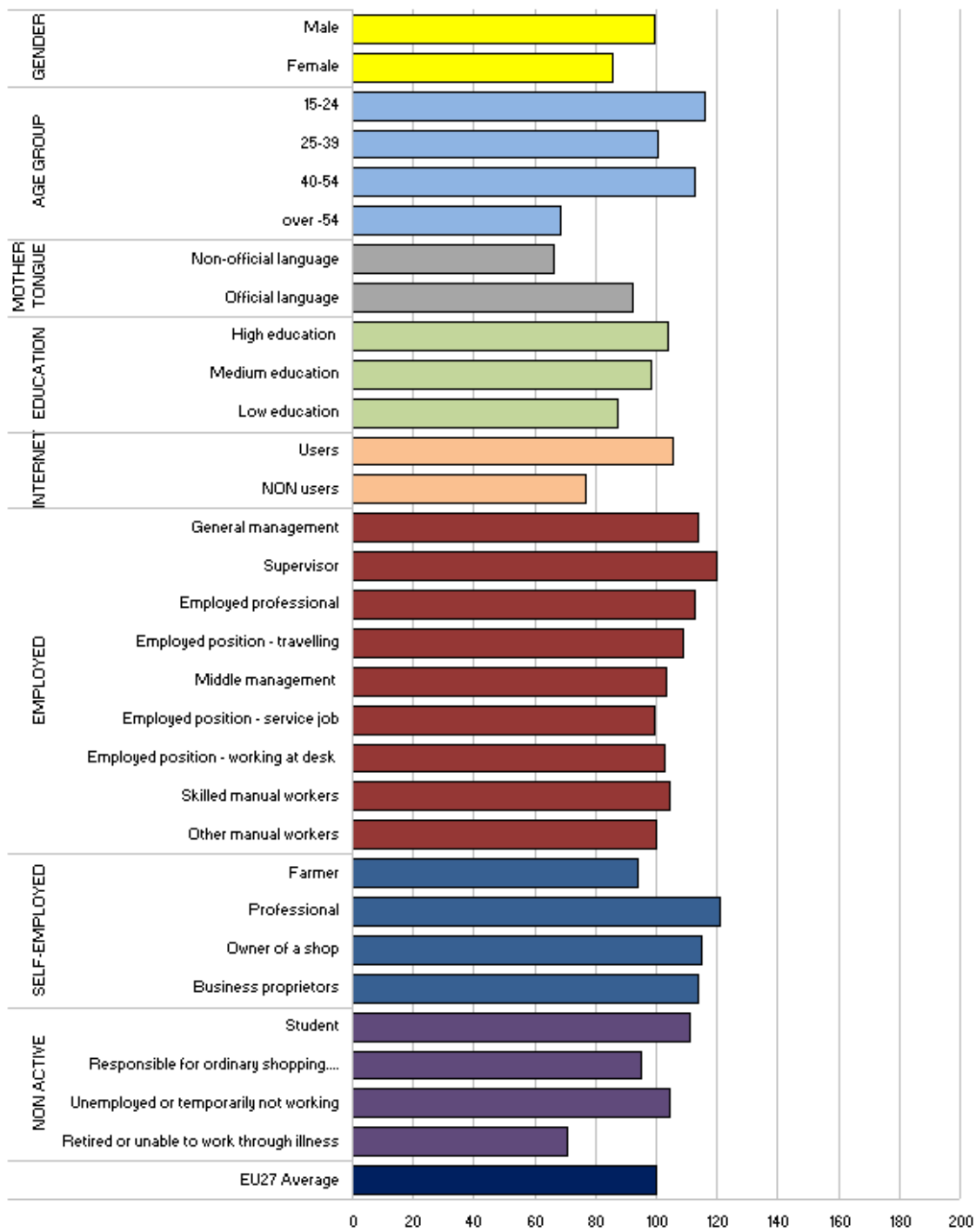
Malta

Consumer Empowerment Index

	score	rank	Do you feel confident, knowledgeable and protected?			
				Skills	Awareness	Engagement	CEI
EU27	14.97					
MT	15.39	13	No	16.89	15.32	12.69	14.90
min	11.05		Yes	19.15	14.87	13.56	15.81
max	17.89					

CEI PILLARS

CEI SUB-PILLARS

CEI rescaled for average EU27

	Category	Value
GENDER	Male	
	Female	
AGE GROUP	15-24	
	25-39	
	40-54	
	over -54	
MOTHER TONGUE	Non-official language	
	Official language	
EDUCATION	High education	
	Medium education	
	Low education	
INTERNET	Users	
	NON users	
EMPLOYED	General management	
	Supervisor	
	Employed professional	
	Employed position - travelling	
	Middle management	
	Employed position - service job	
	Employed position - working at desk	
	Skilled manual workers	
	Other manual workers	
SELF-EMPLOYED	Farmer	
	Professional	
	Owner of a shop	
	Business proprietors	
NON ACTIVE	Student	
	Responsible for ordinary shopping....	
	Unemployed or temporarily not working	
	Retired or unable to work through illness	
	EU27 Average	

Netherlands

Consumer Empowerment Index

	score	rank	Do you feel confident, knowledgeable and protected?			
				Skills	Awareness	Engagement	CEI
EU27	14.97						
NL	17.31	3	No	16.94	11.07	13.11	13.73
min	11.05		Yes	23.16	15.40	14.85	17.76
max	17.89						

CEI PILLARS

CEI SUB-PILLARS

CEI rescaled for average EU27

Category	Subcategory	Value
GENDER	Male	~117
	Female	~115
AGE GROUP	15-24	~135
	25-39	~124
	40-54	~119
	over-54	~101
MOTHER TONGUE	Non-official language	~112
	Official language	~116
EDUCATION	High education	~115
	Medium education	~120
	Low education	~110
INTERNET	Users	~117
	NON users	~93
EMPLOYED	General management	~134
	Supervisor	~114
	Employed professional	~128
	Employed position - travelling	~121
	Middle management	~126
	Employed position - service job	~113
	Employed position - working at desk	~128
	Skilled manual workers	~130
	Other manual workers	~89
SELF-EMPLOYED	Farmer	~104
	Professional	~115
	Owner of a shop	~109
	Business proprietors	~111
NON ACTIVE	Student	~131
	Responsible for ordinary shopping....	~106
	Unemployed or temporarily not working	~111
	Retired or unable to work through illness	~101
	EU27 Average	~100

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Austria

Consumer Empowerment Index

	score	rank	Do you feel confident, knowledgeable and protected?			
				Skills	*Awareness*	*Engagement*	*CEI*
EU27	**14.97**					
AT	16.16	8	*No*	*17.58*	*11.88*	*13.55*	*14.35*
min	11.05		*Yes*	*21.72*	*14.48*	*16.12*	*17.46*
max	17.89					

CEI PILLARS

CEI SUB-PILLARS

CEI rescaled for average EU27

	Category	Value (approx.)
GENDER	Male	~117
	Female	~100
AGE GROUP	15-24	~151
	25-39	~101
	40-54	~101
	over -54	~105
MOTHER TONGUE	Non-official language	~96
	Official language	~108
EDUCATION	High education	~116
	Medium education	~110
	Low education	~99
INTERNET	Users	~110
	NON users	~98
EMPLOYED	General management	~126
	Supervisor	~103
	Employed professional	~119
	Employed position - travelling	~114
	Middle management	~108
	Employed position - service job	~110
	Employed position - working at desk	~101
	Skilled manual workers	~105
	Other manual workers	~102
SELF-EMPLOYED	Farmer	~109
	Professional	~105
	Owner of a shop	~113
	Business proprietors	~115
NON ACTIVE	Student	~139
	Responsible for ordinary shopping....	~86
	Unemployed or temporarily not working	~97
	Retired or unable to work through illness	~108
	EU27 Average	~100

Poland

Consumer Empowerment Index

	score	rank	Do you feel confident, knowledgeable and protected?			
				Skills	Awareness	Engagement	CEI
EU27	14.97					
PL	12.46	28	No	10.41	9.44	7.75	9.15
min	11.05		Yes	16.12	13.68	12.47	14.06
max	17.89					

CEI PILLARS

CEI SUB-PILLARS

CEI rescaled for average EU27

Category	Subcategory
GENDER	Male
	Female
AGE GROUP	15-24
	25-39
	40-54
	over -54
MOTHER TONGUE	Non-official language
	Official language
EDUCATION	High education
	Medium education
	Low education
INTERNET	Users
	NON users
EMPLOYED	General management
	Supervisor
	Employed professional
	Employed position - travelling
	Middle management
	Employed position - service job
	Employed position - working at desk
	Skilled manual workers
	Other manual workers
SELF-EMPLOYED	Farmer
	Professional
	Owner of a shop
	Business proprietors
NON ACTIVE	Student
	Responsible for ordinary shopping....
	Unemployed or temporarily not working
	Retired or unable to work through illness
	EU27 Average

Portugal

Consumer Empowerment Index

	score	rank	Do you feel confident, knowledgeable and protected?			
				Skills	Awareness	Engagement	CEI
EU27	14.97			Skills	Awareness	Engagement	CEI
PT	13.70	23	No	11.77	12.11	12.54	12.15
min	11.05		Yes	17.71	15.48	16.20	16.47
max	17.89						

CEI PILLARS

CEI SUB-PILLARS

CEI rescaled for average EU27

Category	Subcategory	Value
GENDER	Male	~95
	Female	~88
AGE GROUP	15-24	~125
	25-39	~115
	40-54	~92
	over -54	~65
MOTHER TONGUE	Non-official language	~87
	Official language	~91
EDUCATION	High education	~128
	Medium education	~122
	Low education	~82
INTERNET	Users	~118
	NON users	~72
EMPLOYED	General management	~110
	Supervisor	~101
	Employed professional	~131
	Employed position - travelling	~112
	Middle management	~125
	Employed position - service job	~111
	Employed position - working at desk	~120
	Skilled manual workers	~99
	Other manual workers	~84
SELF-EMPLOYED	Farmer	~104
	Professional	~130
	Owner of a shop	~108
	Business proprietors	~109
NON ACTIVE	Student	~123
	Responsible for ordinary shopping....	~73
	Unemployed or temporarily not working	~95
	Retired or unable to work through illness	~66
	EU27 Average	~100

Romania

Consumer Empowerment Index

	score	rank	Do you feel confident, knowledgeable and protected?			
				Skills	Awareness	Engagement	CEI
EU27	**14.97**					
RO	11.05	29	No	11.97	8.16	11.82	10.73
min	11.05		Yes	13.15	9.21	13.19	11.93
max	17.89					

CEI PILLARS

CEI SUB-PILLARS
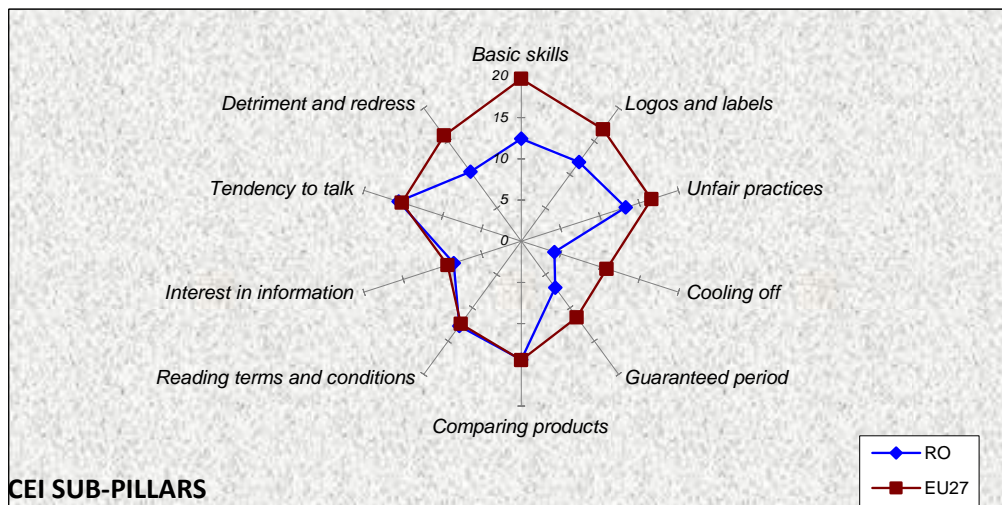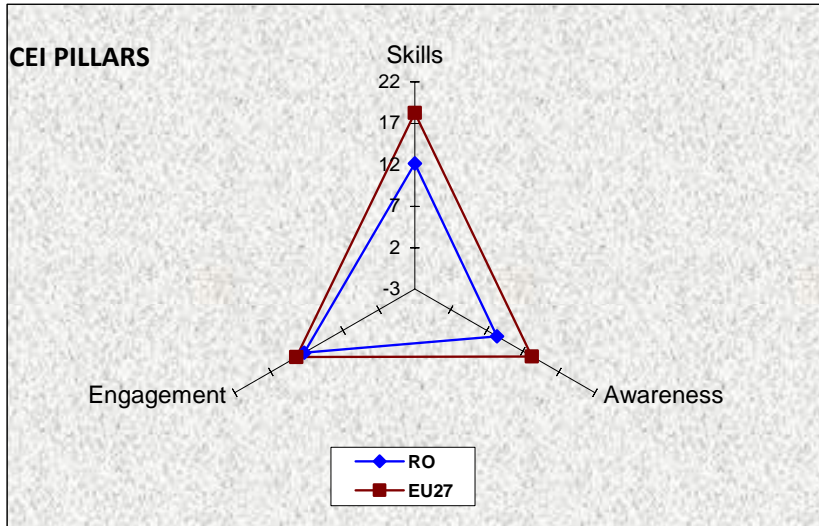
CEI rescaled for average EU27
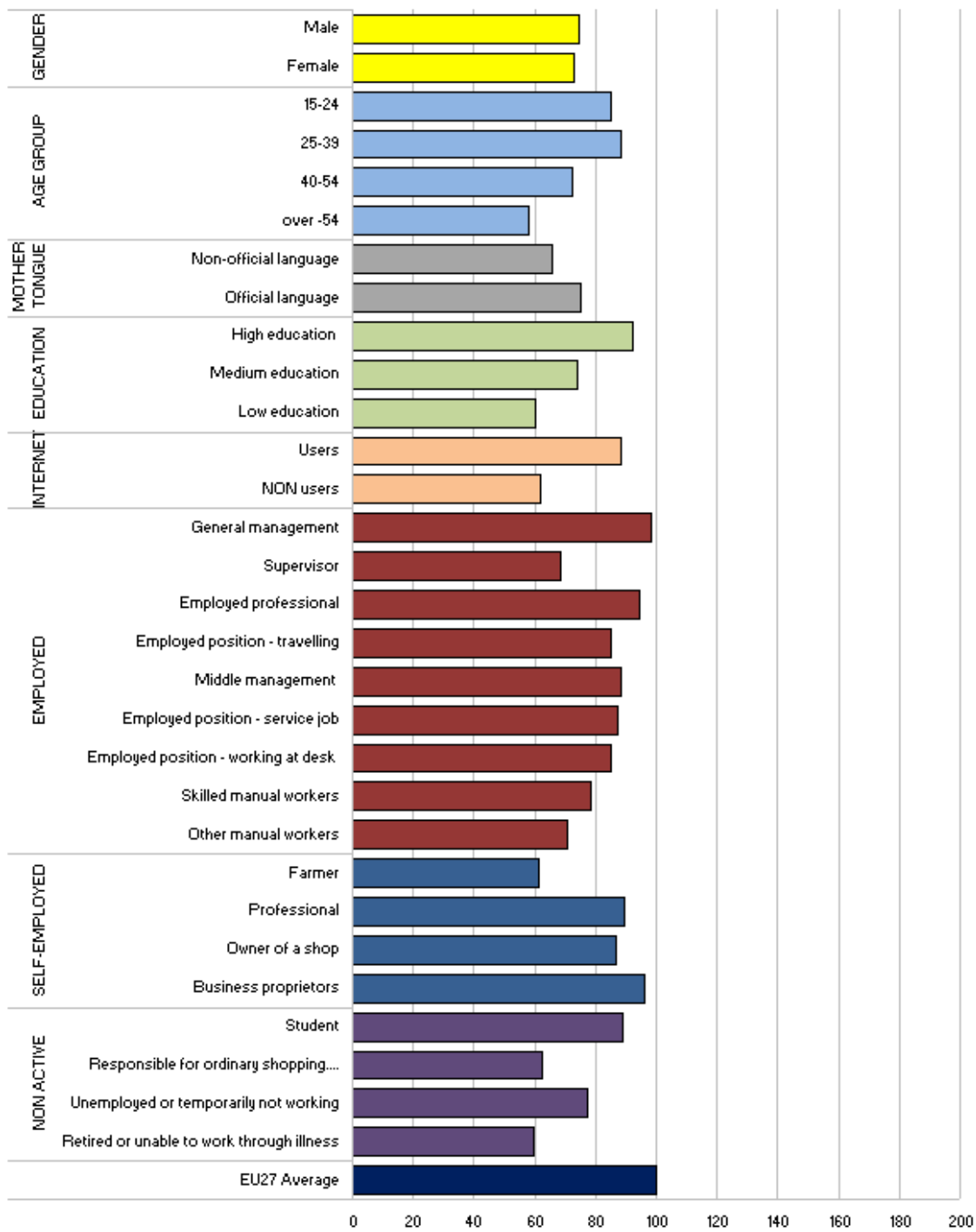
Slovenia

Consumer Empowerment Index

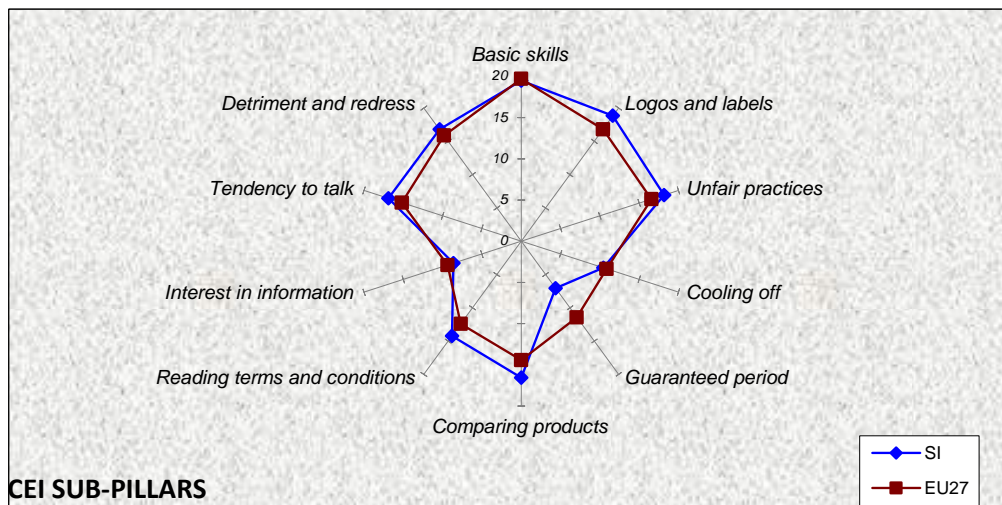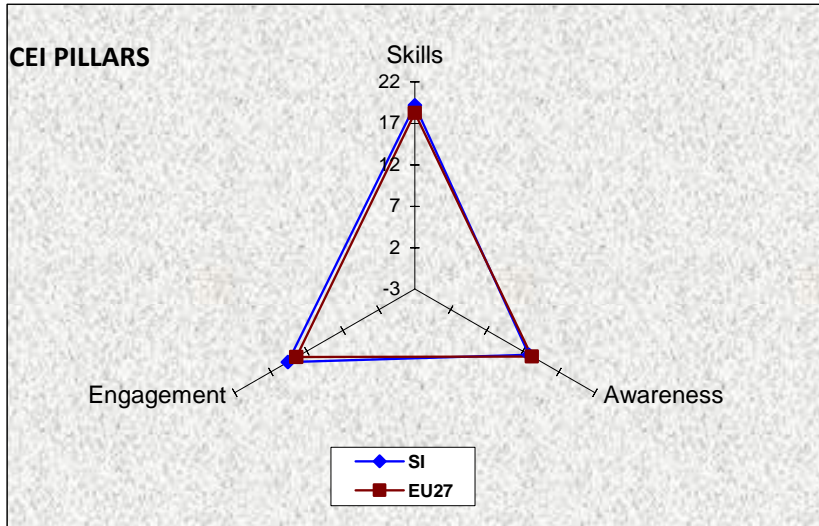|	score	rank	Do you feel confident, knowledgeable and protected?			
				Skills	Awareness	Engagement	CEI
EU27	**14.97**					
SI	15.57	12	No	14.42	10.02	11.68	12.07
min	11.05		Yes	20.48	13.41	15.45	16.47
max	17.89						

CEI PILLARS

CEI SUB-PILLARS

CEI rescaled for average EU27
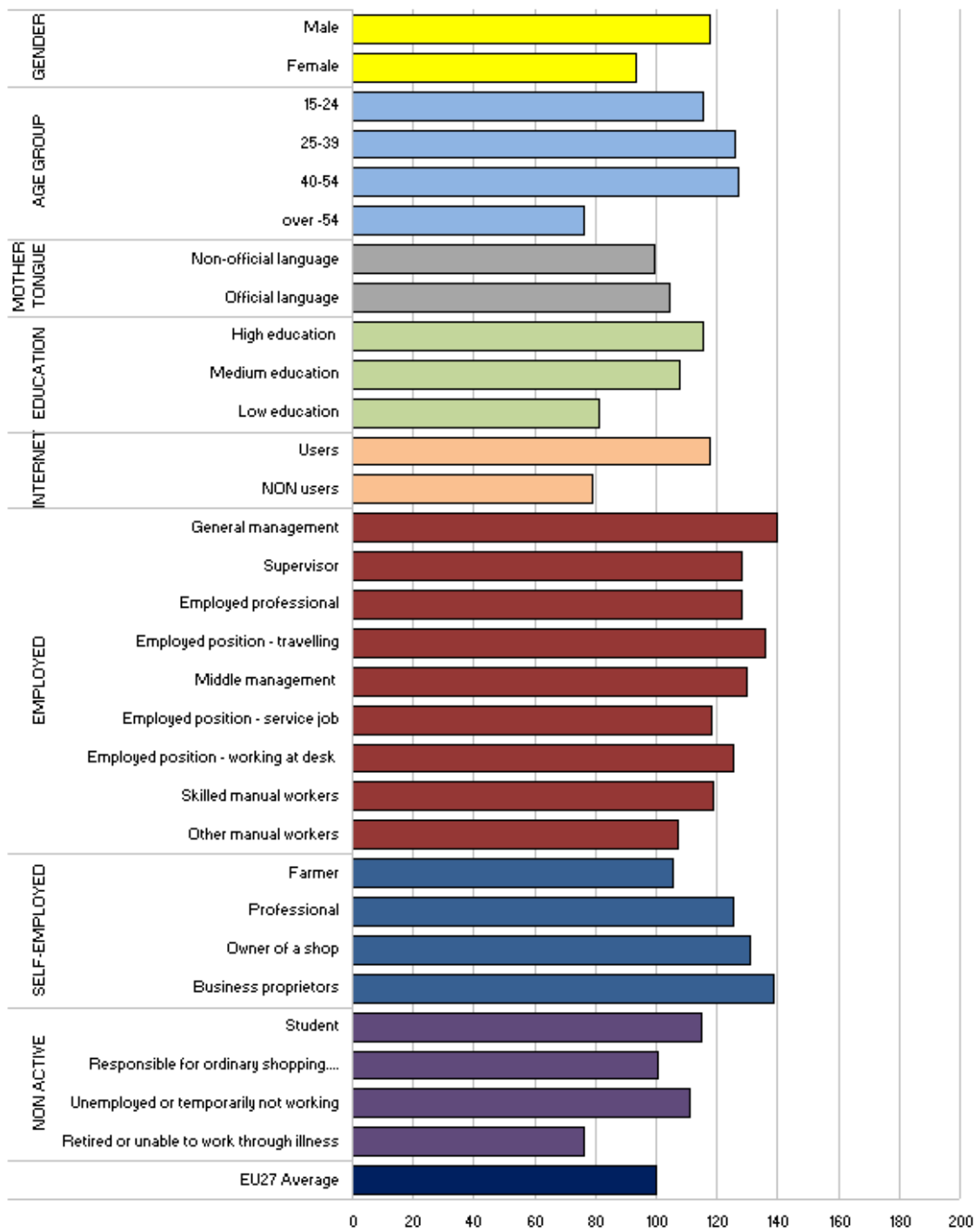
Slovakia

Consumer Empowerment Index

	score	rank	Do you feel confident, knowledgeable and protected?			
				Skills	Awareness	Engagement	CEI
EU27	14.97					
SK	15.86	11	No	17.01	13.27	12.72	14.31
min	11.05		Yes	19.96	15.13	14.80	16.61
max	17.89					

CEI PILLARS

CEI SUB-PILLARS

CEI rescaled for average EU27

	Category	Value
GENDER	Male	~112
	Female	~100
AGE GROUP	15-24	~146
	25-39	~107
	40-54	~95
	over -54	~97
MOTHER TONGUE	Non-official language	~101
	Official language	~106
EDUCATION	High education	~107
	Medium education	~106
	Low education	~104
INTERNET	Users	~112
	NON users	~91
EMPLOYED	General management	~104
	Supervisor	~101
	Employed professional	~112
	Employed position - travelling	~106
	Middle management	~106
	Employed position - service job	~105
	Employed position - working at desk	~107
	Skilled manual workers	~100
	Other manual workers	~91
SELF-EMPLOYED	Farmer	~101
	Professional	~120
	Owner of a shop	~110
	Business proprietors	~106
NON ACTIVE	Student	~148
	Responsible for ordinary shopping....	~98
	Unemployed or temporarily not working	~98
	Retired or unable to work through illness	~95
	EU27 Average	~100

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Finland

Consumer Empowerment Index

	score	rank	*Do you feel confident, knowledgeable and protected?*			
				Skills	*Awareness*	*Engagement*	*CEI*
EU27	**14.97**					
FI	17.50	2	*No*	*15.70*	*13.35*	*12.32*	*13.76*
min	11.05		*Yes*	*22.68*	*17.44*	*15.46*	*18.46*
max	17.89					

CEI PILLARS

CEI SUB-PILLARS

CEI rescaled for average EU27

Category	Subgroup	Value
GENDER	Male	
	Female	
AGE GROUP	15-24	214.43
	25-39	
	40-54	
	over -54	
MOTHER TONGUE	Non-official language	
	Official language	
EDUCATION	High education	
	Medium education	
	Low education	
INTERNET	Users	
	NON users	
EMPLOYED	General management	
	Supervisor	
	Employed professional	
	Employed position - travelling	
	Middle management	
	Employed position - service job	
	Employed position - working at desk	
	Skilled manual workers	
	Other manual workers	
SELF-EMPLOYED	Farmer	
	Professional	
	Owner of a shop	
	Business proprietors	
NON ACTIVE	Student	200.82
	Responsible for ordinary shopping....	
	Unemployed or temporarily not working	
	Retired or unable to work through illness	
	EU27 Average	

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Sweden

Consumer Empowerment Index

	score	rank	Do you feel confident, knowledgeable and protected?			
				Skills	Awareness	Engagement	CEI
EU27	**14.97**					
SE	16.96	6	No	12.59	10.18	11.10	11.31
min	11.05		Yes	22.06	15.30	14.78	17.34
max	17.89					

CEI PILLARS

CEI SUB-PILLARS

CEI rescaled for average EU27

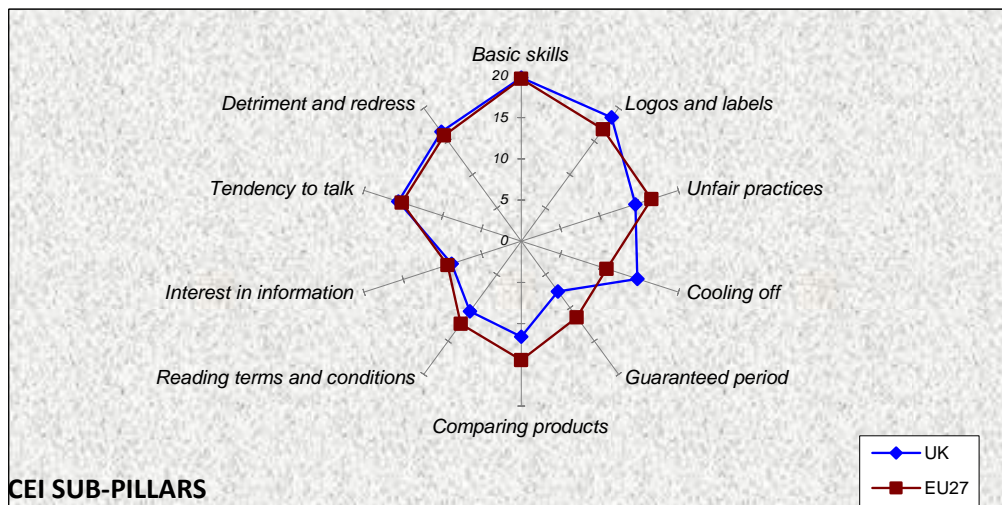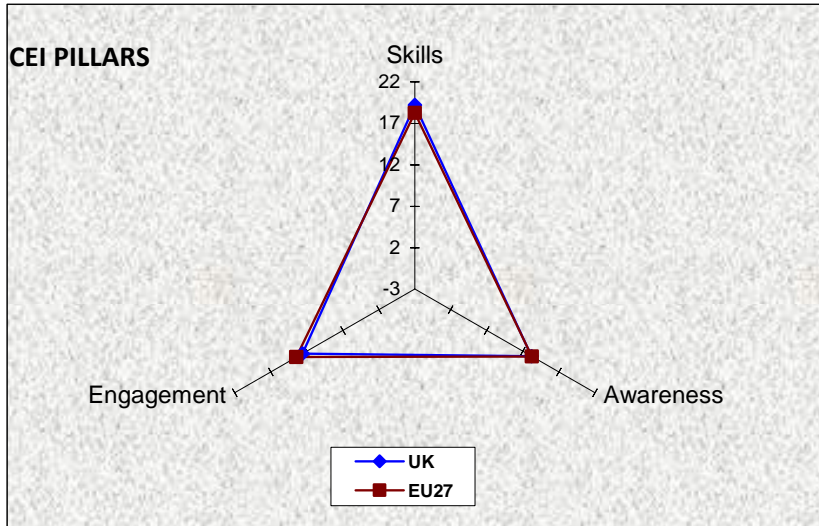| Category	Subcategory	Value
GENDER	Male	
	Female	
AGE GROUP	15-24	255.20
	25-39	
	40-54	
	over -54	
MOTHER TONGUE	Non-official language	
	Official language	
EDUCATION	High education	
	Medium education	
	Low education	
INTERNET	Users	
	NON users	
EMPLOYED	General management	
	Supervisor	
	Employed professional	
	Employed position - travelling	
	Middle management	
	Employed position - service job	
	Employed position - working at desk	
	Skilled manual workers	
	Other manual workers	
SELF-EMPLOYED	Farmer	
	Professional	
	Owner of a shop	
	Business proprietors	
NON ACTIVE	Student	231.13
	Responsible for ordinary shopping....	
	Unemployed or temporarily not working	
	Retired or unable to work through illness	
	EU27 Average	

United Kingdom

Consumer Empowerment Index

	score	rank	Do you feel confident, knowledgeable and protected?			
				Skills	Awareness	Engagement	CEI
EU27	**14.97**					
UK	14.98	16	No	13.33	10.87	8.14	10.71
min	11.05		Yes	21.33	14.29	13.86	16.46
max	17.89					

CEI PILLARS

CEI SUB-PILLARS

CEI rescaled for average EU27

Category	Subcategory	Value
GENDER	Male	~111
	Female	~90
AGE GROUP	15-24	~127
	25-39	~118
	40-54	~123
	over -54	~72
MOTHER TONGUE	Non-official language	~122
	Official language	~97
EDUCATION	High education	~120
	Medium education	~100
	Low education	~63
INTERNET	Users	~114
	NON users	~65
EMPLOYED	General management	~170
	Supervisor	~122
	Employed professional	~149
	Employed position - travelling	~129
	Middle management	~129
	Employed position - service job	~118
	Employed position - working at desk	~121
	Skilled manual workers	~120
	Other manual workers	~102
SELF-EMPLOYED	Farmer	~76
	Professional	~131
	Owner of a shop	~117
	Business proprietors	~119
NON ACTIVE	Student	~135
	Responsible for ordinary shopping....	~90
	Unemployed or temporarily not working	~103
	Retired or unable to work through illness	~68
	EU27 Average	~100

Iceland

Consumer Empowerment Index

	score	rank	Do you feel confident, knowledgeable and protected?			
				Skills	Awareness	Engagement	CEI
EU27	**14.97**					
IS	15.96	9	No	20.68	14.90	13.23	16.21
min	11.05		Yes	22.57	14.27	13.24	16.64
max	17.89					
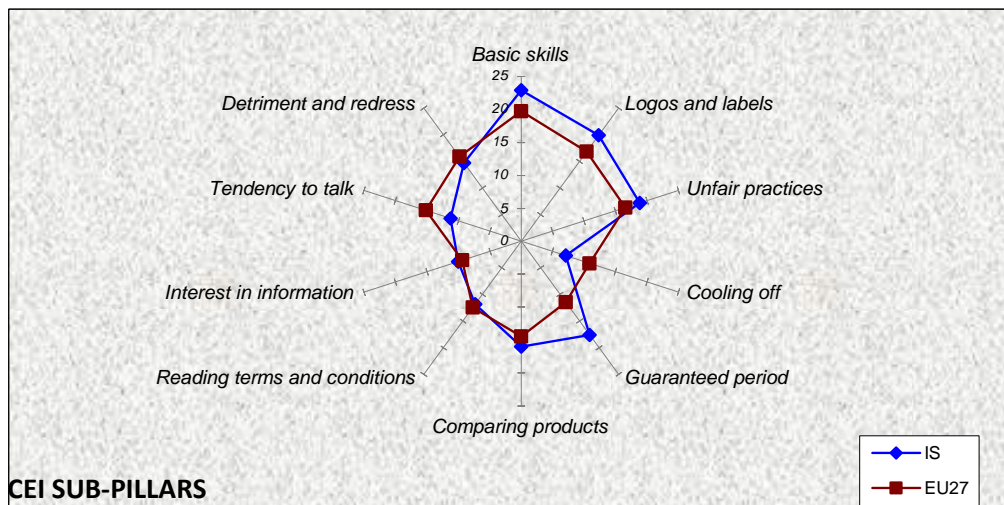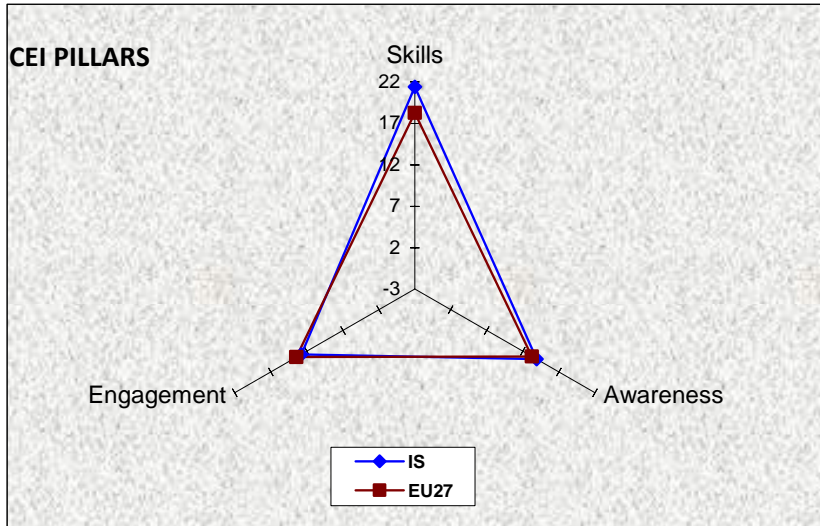
CEI rescaled for average EU27
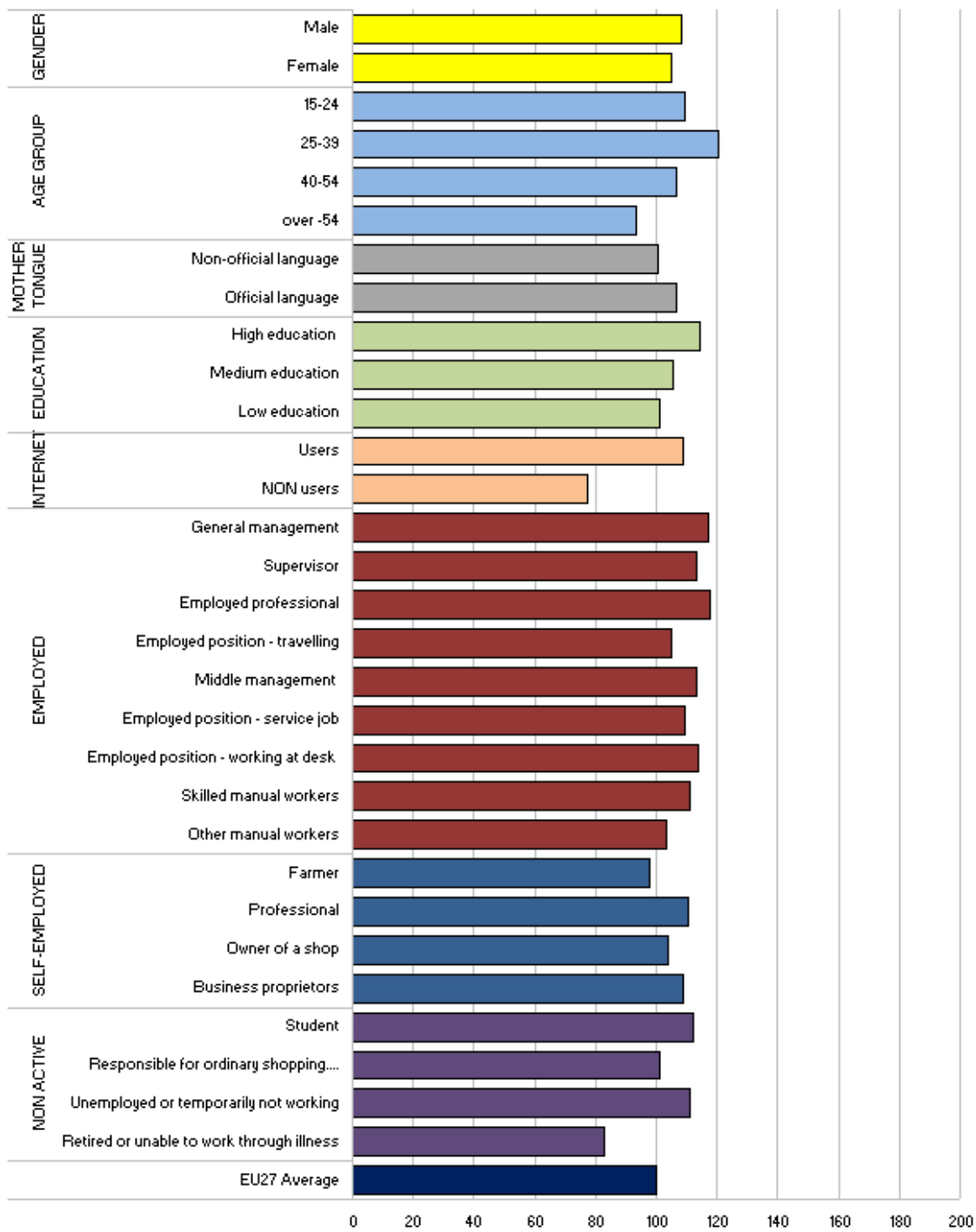
Norway

Consumer Empowerment Index

	score	rank	Do you feel confident, knowledgeable and protected?			
				Skills	Awareness	Engagement	CEI
EU27	14.97					
NO	17.89	1	No	16.97	16.97	12.69	15.44
min	11.05		Yes	22.83	19.14	12.66	18.04
max	17.89					

CEI PILLARS

CEI SUB-PILLARS

CEI rescaled for average EU27

		CEI value
GENDER	Male	
	Female	
AGE GROUP	15-24	214.33
	25-39	
	40-54	
	over -54	
MOTHER TONGUE	Non-official language	
	Official language	
EDUCATION	High education	
	Medium education	
	Low education	
INTERNET	Users	
	NON users	
EMPLOYED	General management	
	Supervisor	
	Employed professional	
	Employed position - travelling	
	Middle management	
	Employed position - service job	
	Employed position - working at desk	
	Skilled manual workers	
	Other manual workers	
SELF-EMPLOYED	Farmer	
	Professional	
	Owner of a shop	
	Business proprietors	
NON ACTIVE	Student	
	Responsible for ordinary shopping....	
	Unemployed or temporarily not working	
	Retired or unable to work through illness	
	EU27 Average	

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European Commission

Abstract

The 2007-2013 EU Consumer Policy Strategy emphasizes the importance of a better understanding of how consumers behave and sets as a main objective "to empower EU consumers". A thorough knowledge of the capacities, information and assertiveness of consumers is considered crucial for being able to design and develop policies for consumer protection. Using the special Eurobarometer Survey n. 342, the DG Joint Research Center (together with DG Health and Consumers) constructed a composite measure of consumer empowerment encompassing the plurality of aspects implied by the EU policy Strategy. The resulting Consumer Empowerment Index describes consumer empowerment along three main dimensions: Consumer skills, Awareness of consumer legislation and Consumer engagement. The Index covers all 27 European countries plus Iceland and Norway. This report illustrates the different steps on the construction of the Index: the quantification of survey questions, the univariate and multivariate analysis of the dataset, the definition of an operational framework as well the selection of weights. Robustness analysis against alternative methodological choices is included. The relationship between socio economic characteristics of respondents and their level of empowerment is also presented with the aim of characterising the most crucial socio-economic determinants of empowerment and foster the debate on consumer protection.

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