



”Report on quantitative research findings on European consumers’ perception and valuation of EU food quality schemes as well as their confidence in such measures”.

Monika Hartmann, Ching-Hua Yeh, Virginie Amilien, Čeliković, Z., Peter Csillag, Jelena Filipovic, Georges Giraud, Matthew Gorton, Davide Menozzi, Steve Quarrie, et al.

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Strengthening European Food Chain Sustainability by Quality and Procurement Policy

Deliverable 8.1:

Report on quantitative research findings on European consumers' perception and valuation of EU food quality schemes as well as their confidence in such measures

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EXECUTIVE SUMMARY

In this report we first investigate the importance of different product and process attributes across seven countries (France, Germany, Hungary, Italy, Norway, Serbia and the UK) and for different products (cheese, fresh meat, processed meat, fresh fish, fresh vegetables, and processed vegetables). Each product was evaluated by at least two countries. In addition, consumers' perceptions and valuation of food quality schemes (FQS) promoting selected product and process attributes will be investigated across the same seven European countries. The analysis is based on online surveys. In each country about 800 consumers took part in the survey.

The main findings can be summarized as follows. First, 'taste' is of crucial importance in consumers' mind - for many products in most countries it represents the most important driver of food purchasing decisions. Second, in these countries and for the products considered in this study, 'knowledge of the producer' is generally of little importance to consumers. Third, our results demonstrate that the relevance of each attribute is product specific and varies across countries. More specifically, 'freshness' and 'best before date' are of special importance for fresh and thus perishable products such as fresh meat or fresh fruits and vegetables. However, not surprisingly, this attribute is of little relevance for processed products such as cheese, especially if we refer to hard cheese. Process specific attributes, such as country and region of origin, are particularly relevant for consumers in Italy and France when buying food but prove to be of minor importance in countries such as Serbia, the UK, Norway and Hungary. Considerable heterogeneity is also found on the attribute 'GMO free', which is one of the most important factors for consumers' food purchasing decisions in Serbia, while being of relatively low importance in countries such as the UK or Norway. Similarly, animal welfare-friendly products seem to play a minor role in Serbia and Hungary while being particularly important in Germany. An interesting finding concerns the ambiguous evaluation of the 'price' attribute, as in several countries, especially in Italy and France, there seems to be considerable heterogeneity in consumers' preferences with respect price.

Finally, for some countries more general conclusions can be drawn. For instance, regardless of the type of food product, the respondents from France are more sensitive to its hedonic attributes such as taste, freshness and traditional food-processing method, rather than more abstract and ethical values, such as animal welfare, environment friendly production, or fair trade.

In the second part of the report, consumers' recognition, use, barriers to use, perception and knowledge are investigated for four EU food quality labels (Organic, PGI, PDO, TSG) as well as 14 national/regional labels (two for each country). Our analysis has revealed both similarities and differences between the countries and labels considered.

Focusing first on the EU labels, we find that, on average, recognition for the EU organic label is the highest, closely followed by the PGI label. The PDO is much less recognized and the TSG label exhibits the lowest level of recognition. Moreover, recognition of EU labels varies considerably across countries. On average we find that national labels receive a higher level of recognition than the EU labels.

Our results also reveal that recognition is the crucial step to product use, as the majority (in general around 70%) of those consumers who recognize a quality label also indicate that they have made use of the same label, at least sometimes when doing their grocery shopping. This finding is of particular importance, as it clearly shows the market implications to improve consumer awareness towards food quality labels. There are various reasons for which consumers may not use a label despite their recognition, which may differ across product labels and countries – nonetheless, the key explanation seems to be the fact that consumers do not pay attention to quality labels while doing their grocery shopping. Other reasons mentioned include the fact that the products with such labels are too expensive and the lack of availability.

Overall, national labels receive a much better evaluation by the respondents compared to their EU counterparts. In particular, the EU organic label, despite being the most recognized, is the worst evaluated among labels, with the level of consumer trust being quite low. Consumers' knowledge of both EU and national/regional food quality labels is relatively low, with perceived knowledge of the label, though higher for those consumers recognising and using the same label, not always corresponding to factual knowledge.

From a policy perspective, our results point to the need for action in the food value chain. EU and national/regional FQS and their respective logos were introduced to serve as a quality cue for consumers, thereby reducing consumers' uncertainty with respect to desired experience and credence attributes such as taste or production methods. Awareness, knowledge and trust are sufficient conditions for a label to perform its function to serve as decision-aid supporting consumers in choosing food products according to their preferences. However, our results reveal a rather disappointing picture for many of the analysed labels especially regarding awareness and knowledge, and in some cases also with respect to trust. Well-designed

communication campaigns could thus serve as an important tool to raise awareness and consumer knowledge. Especially, for labels such as the EU organic one, which is far from self-explanatory, smart campaigns are needed. Communication campaigns that also provide information on the control system behind the label could help to increase confidence in the credibility and trust of the FQS.

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LIST OF ABBREVIATIONS AND ACRONYMS

AB	Agriculture biologique
BGB	Beskyttet Geografisk Betegnelse
BWS	Best Worst Scaling
DCE	Discrete Choice Experiment
DE	Germany
EB	Eurobarometer
EBRD	European Bank for Reconstruction and Development
EU	European Union
FAW	Farm Animal Welfare
FAO	Food and Agriculture Organization
FQS	Food quality schemes
FR	France
GMO	Genetically modified organisms
HU	Hungary
IT	Italy
NGO	Non-governmental organization
NO	Norway
PGI	Protected Geographical Indication
PDO	Protected Designation of Origin
PSFP	Public sector food procurement
QFH	Quality food from Hungary
RSPCA	Royal Society for the Prevention of Cruelty To Animals
RS	Serbia
SEM	Structural Equation Model
TFR	Traditions-Flavours-Regions
TSG	Traditional Speciality Guaranteed
UK	United Kingdom

1. INTRODUCTION AND OBJECTIVE

Consumers assess the quality of products based on characteristics that are extrinsically visible and those that cannot be easily observed. Among the latter are experience attributes such as taste as well as credence attributes such as the region or country of origin of the product and the production method. These credence characteristics are usually presented through labels. Besides a large and increasing number of private labels there exist also public food quality schemes (FQS) at the national and EU level. Those quality labels and their underlying standards aim at helping producers to market their products by highlighting the product and process qualities and tradition associated with registered/certified products. The objective of food quality labels is furthermore to serve as a quality cue for consumers, thereby reducing uncertainty associated with food purchases with respect to desired product and process characteristics. The focus of this report is on this second objective.

Thus, the aim of the report is to first provide insights into consumers' preferences for product and process attributes of food products. Second, consumers' perceptions and valuation of FQS promoting selected product and process attributes will be investigated across seven European countries (France, Germany, Hungary, Italy, Norway, Serbia and the UK) through quantitative research using online surveys. More precisely the aim is to gain insights into consumers' recognition, use, perception, and knowledge of selected EU/national/regional food quality labels and consumers' perceived barriers to buy products which are promoted by EU/national/regional quality schemes. Based on our findings conclusions are derived to what extent FQS serve their purpose in that they help consumers to make a choice more in accordance to their preferences.

This report contributes to the literature in two ways. Our research is the first to simultaneously investigate consumers' evaluation of different food product and process characteristics with respect to various food product categories across seven distinctive European countries using best-worst scaling approach. Second, so far no other study has compared consumers' recognition/ adoption/ perception/ knowledge of the four existing EU food quality labels (EU organic/ PGI/ PDO/ TSG labelling), associated with varied governmental regulated national and regional labels concurrently in a multi-country cross-sectional setting.

This report starts with a description of the methodological approach, including information on data collection. This section is followed by the presentation and discussion of the results

(chapter 3). The report closes with a summary and policy implications regarding the promotion of food quality labels.

2. DATA AND METHODS

2.1. Data

Data were collected via online surveys. For each country about 800 adult respondents were recruited through the market research company LiGHTSPEED.¹

The survey was conducted in autumn 2017. To reduce respondents' fatigue while at the same time being able to cover all four EU FQS labels as well as two national/regional labels per country, the survey was divided into two subgroups per country. Subgroups also differed regarding the products selected to investigate the relevance of different product characteristics.

All questionnaires were originally designed in English but translated by the participating researchers into their respective languages. To ensure that all surveys were identical independent of language we outsourced a back translation to a professional translation institute. Consistency to the original English survey was checked and in case of problems corrected before the questionnaire was pre-tested in the seven countries.

2.2. Methods

The consumer survey includes a so-called object-case (Flynn, 2010) best-worst scaling (BWS) experiment. BWS is an attribute-based methodology. It is used in this study to investigate the relevance consumers attach to different product and process characteristics when purchasing food from a specific product category. The BWS was originally introduced by Finn and Louviere (1992), and firstly implemented by Marley and Louviere (2005). According to Erdem and Rigby (2013), BWS is particularly advantageous in reducing the cognitive burden that often occurs, if people are asked to rank a large number of attributes. In the design process of a BWS experiment the selection of the BWS attributes is of central importance.

In the context of this research, a two-step procedure was taken:

First, each country selected three product categories. Selection criteria were the importance of the respective product category in consumers' diet in the respective country, the relevance of

¹ The surveys were programmed and hosted by the UBO team.

process characteristics and labels for the respective product category and the coverage of a diverse set of processed and fresh products over the seven countries included in the research. In addition, it was secured that each product category selected was considered by at least two countries. Cheese was determined to be the product category to be investigated in all countries.

As indicated above, two subgroups per country existed for this survey (see Table 1). Each respondent had to answer the best-worst questions for two product categories with one product category being considered in both subgroups. Our approach allows a comparison of product attribute importance for one product category between all countries and for all product categories between at least two countries. In addition, for each country the sample size is higher (800 instead of 400) for one product category allowing for a more robust analysis.

Table 1. Country-specific product categories used in the BWS

Country	Group 1		Group 2	
France	Cheese	Fresh meat	Fresh fruits	Fresh meat
Germany	Cheese	Processed vegetables	Processed vegetables	Fresh vegetables
Hungary	Cheese	Fresh vegetables	Fresh vegetables	Processed meat
Italy	Cheese	Fresh vegetables	Fresh vegetables	Processed meat
Norway	Cheese	Fresh fish	Fresh fruits	Fresh fish
Serbia	Cheese	Processed vegetables	Processed vegetables	Processed meat
UK	Cheese	Fresh meat	Fresh meat	Fresh fish

Second, 14 attributes (see Table 2) of special relevance in consumers' food purchase decisions were selected based on a review of the relevant literature and discussions in the project team. Food attributes were adjusted to be in accordance with the product category investigated if deemed necessary (e.g. "freshness of product" used for fresh produce and "Best before date" used for processed food).

The fourteen attributes were assigned to blocks using an orthogonal frequency balance design. Each version had six choice sets displaying five attributes at a time (see Figure 1). In each BWS task, respondents were asked to choose the attribute that they find most or least important when purchasing a product out of the specific product category.

Table 2. BWS attributes with respect to different product categories

BWS attributes for						
Cheese	Fresh vegetable	Processed vegetable	Fresh meat	Processed meat	Fresh fish	Fresh fruits
1. Product's country of origin (produced in XXX (country)/ in the EU / overseas)						
2. Visual appearance of the product (very appealing/ moderately appealing/ less appealing)						
3. Brand (branded product/ no name product)	3. Specific variety of the product (tomato/ potato/ onion and different cultivars, e.g. concerning tomato: cherry tomato, Roma tomato)	3. Brand (branded product/ no name product)	3. Specific variety of the product (beef, pork, poultry and different cuts, e.g. fillet and steak)	3. Brand (branded product/ no name product)	3. Specific variety of the product (fish variety A/ variety B and different part of fish e.g. fillet/ loin)	3. Specific variety of the product (apple/ pear/ blueberry and different cultivars, e.g. concerning apples: golden, gala, pink lady)
4. Best before date (best before date that is short term/ medium term/ longer term)	4. Freshness of products (very fresh/ fresh/ less fresh)	4. Best before date (best before date that is short term/ medium term/ longer term)	4. Freshness of products (very fresh/ fresh/ less fresh)	4. Best before date (best before date that is short term/ medium term/ longer term)	4. Freshness of products (very fresh/ fresh/ less fresh)	4. Freshness of products (very fresh/ fresh/ less fresh)
5. Price (high/ medium/ low)						
6. Nutritional value of the product (very good/ moderate/ less good nutritional value)						
7. Traditional methods used in the production/processing of the product (with/ without traditional methods involved)						
8. Animal welfare friendly production (Yes/ No)	8. Environmental friendly production (Yes/ No)	8. Environmental friendly production (Yes/ No)	8. Animal welfare friendly production (Yes/ No)	8. Animal welfare friendly production (Yes/ No)	8. Animal welfare friendly production (Yes/ No)	8. Environmental friendly production (Yes/ No)
9. Organic production (Yes/ No)						
10. GMO-free (Genetically modified organisms (GMO) not used in the production process / Genetically modified organisms (GMO) used in the production process)						
11. Taste of the product (highly/ medium/ less palatable)						
12. My knowledge of the producer (extensive/ to some extent/ none)						
13. Fair trade (yes/ no)						
14. Product's region of origin (specific region in your country/ in another country/ no specific region)						



2b. How important are the following criteria for you when buying ***fresh meat***?

From the following five criteria please indicate which one is the Least Important and which one is the Most Important for you? You may click on the criterion to obtain more information.

(1 of 6)

Least Important	Criteria	Most Important
<input type="radio"/>	My knowledge of the producer	<input type="radio"/>
<input type="radio"/>	Specific variety of the product	<input type="radio"/>
<input type="radio"/>	Product's region of origin	<input type="radio"/>
<input type="radio"/>	Fair trade	<input type="radio"/>
<input type="radio"/>	Nutritional value of the product	<input type="radio"/>

Figure 1. Example of BWS question

3. RESULTS

This section provides information on the sample structure and the results of the first consumer survey.

3.1. Sample structure

A total of 7444 consumers took part in the survey (see Table 3). Exclusion of those not living in the respective country and those not being at least partially responsible for their household food shopping leads to an overall valid sample size of 5688. The valid sample size per country varies between 799 for Italy to 839 for Germany being in each country about equally distributed between the two sub-groups (see Table 3).

The **French** sample is representative of the French population with respect to both age and gender. Participants are people with upper secondary education (36.2 % for group 1 and 38.1%

for group 2) and with university or college qualification below a degree (24.1% and 22% respectively). Their shopping location is supermarket (72.4% and 74%) and hypermarket (51.7% and 50%). The majority of participants lives in rural areas (53.2 % and 55.4%). This rural versus urban distribution is far from country level statistics (20.5% living in rural areas in France in 2016).

The **German** data consists of a random sample of both men and women which is representative of the entire population of Germany with respect to gender (Statistisches Bundesamt, 2017a) and average age (Statistisches Bundesamt, 2016a). Regarding the living area, respondents from cities are slightly underrepresented (35.66% in the census, 33.6% and 33.4% in the sample), while those from rural areas are overrepresented (22.78% in the census, 39.1% and 40.7% in the sample) (Statistisches Bundesamt, 2016b). In terms of education, the sample contains more respondents with a higher level of education; especially people with a Bachelor's degree are overrepresented (1.9% in the census, 10.9% and 11.3% in the sample) (Statistisches Bundesamt, 2016c). The household size in the sample is with an average of 2.3 people living in a household slightly higher compared to an average of 2.0 people per household in the German census statistics (Statistisches Bundesamt, 2015). Based on the census an average German household has 0.44 children (Statistisches Bundesamt, 2017b) that is less compared to the sample's numbers (0.59 and 0.57 children). Thus, we can conclude that the German sample is close to being representative in terms of gender and age, while respondents of the survey are less urban, more educated and have more children than the German average.

The **Hungarian** sample is representative for the whole Hungarian population with respect to gender, average age and household size (Hungarian Central Statistical Office Population Census, 2011). Regarding the living area, respondents from cities are overrepresented (37.82% in the census, 41.3% and 44% in the sample), while those from rural areas are underrepresented (30.52% in the census, 19.1% and 20.9% in the sample). In terms of education, the sample is heavily dominated by respondents with a higher level of education, especially people with upper secondary education are underrepresented (48.08% in the census, 10.6% and 12.8% in the sample). Based on the census an average Hungarian household has 1.06 children that is much more compared to the sample's numbers (0.65 and 0.68 children). Thus, we can conclude that the Hungarian sample is close to being representative in terms of gender and age, while respondents of the survey are more urban, more educated and have fewer children than the Hungarian average.

The average age of the **Italian** survey participants is 42.42 and 42.05 for Group 1 and 2, respectively. These figures are somewhat lower than the average age of Italian citizens in the 15 to 90 years of age range which, from inter-census data for the year 2011 from the Italian National Institute for Statistics (ISTAT, 2013), is 48.73. Roughly 47% of the sample respondents are male, which is almost exactly equal to the percentage calculated for the Italian citizens in the 15 to 90 years of age range for 2011 (ISTAT, 2013). Regarding the living area, respondents from urban areas are slightly overrepresented (33.3% in the census, 37.8% and 42.4% in the sample), those in intermediate areas are quite well represented, in particular in group 2 (42.4% in the census, 47.0% and 43.1% in the sample), while those from rural areas are underrepresented (24.3% in the census, 15.3% and 14.5% in the sample) (ISTAT, 2014). The distribution of the ISCED 2011 maximum levels of education attained by the Italian population of 25 to 64 years of age is as follows (Eurostat, 2016),: lower secondary education or below 39.9%, upper secondary education 41.5%, university or college qualification below a degree 0.9%, Bachelor's or equivalent level 3.6% and postgraduate with master or doctoral degree 14.1%. Therefore, it is apparent that there are sizeable differences in the distribution of educational attainment at the national and survey(s) level (see Table 3). The household size in the sample is with an average of 3 people living in a household, slightly higher compared to an average of 2.4 people per household in the Italian census statistics (ISTAT, 2017). Based on the census an average Italian household has 0.5 children (ISTAT, 2017) that is comparable to the sample's numbers, in particular for group 2 (0.64 and 0.55 children). Thus, we can conclude that the Italian sample is representative in terms of gender and persons living in intermediate areas, close to being representative in terms of age, household size, number of children and persons living in urban areas, while respondents of the survey are more educated than the Italian average and underrepresented in terms of persons living in rural contexts.

The **Norwegian** survey sample is representative of the population in terms of gender and age (Statistics Norway, 2016). Concerning living area, respondents from rural areas are slightly overrepresented (18.2% in the national census compared to 22.4% in group 1 and 21.2% in group 2 in the sample), while people from large cities and medium sized urban towns taken together² are slightly underrepresented (81.5% in the national census compared to a total of 77.6% and 78.9% in the sample). Regarding education level, the survey sample percentages are somewhat disproportionate from the national population. Specifically, people with a lower

² National statistical frequencies do not separate between urban medium towns and cities.

secondary education or below are rather absent from the survey (26.5% in the census compared to 2.4% and 5.8% in the sample). Respondents with upper secondary education (37.8% in the census, 26.7% and 25.1% in the sample) are also underrepresented. On the other hand, the survey sample is overrepresented among people with higher education. Namely, respondents holding a university or college qualification below a degree (2.8% in the census, 13.6% and 13.4% in the sample), bachelor's or equivalent level (23.4% in the census, 35.1% and 37.2% in the sample) and postgraduate level, including master's and doctoral degrees (9.5% in the census, 22.2% and 18.5% in the sample) are overrepresented. Given the average number of 1.62 children in Norwegian households, the number of children in the survey sample in both groups is lower (0.77 and 0.89). In summary, the Norwegian sample is representative of the Norwegian population in terms of gender and age. However, survey respondents are typically more rural, higher educated, and have fewer children compared to the average Norwegian population.

Gender and age distributions reflect the structure of the population in **Serbia**. However, the sample is skewed towards respondents coming from urban parts and those with higher educational levels. According to the 2011 census results³, about 40% of inhabitants in Serbia live in rural area compared to 12% in our sample, and 16% people have a higher education compared to 60% in our sample.

The **United Kingdom** sample broadly resembles the country's adult population in terms of the mean age (census 40.0; sample 42.8 years of age) and gender (census 49.1% of population male; sample 47.9%) (ONS, 2015). Regarding the living area, respondents from rural areas are overrepresented. In official statistics, for England and Wales the designation of rural and urban is based on a classification of output areas using 2011 Census data (ONS, 2013). This defines urban settlements as those with a population of 10,000 or more, with all smaller settlements labelled as rural (DEFRA, 2016). In Scotland and Northern Ireland slightly different approaches are taken; for instance in Scotland the threshold between urban and rural settlements is set at 3,000 inhabitants. Using the 10,000 settlement size threshold, latest official statistics for the UK suggest that 17% of the population live in rural areas. In the sample, the comparable figure is 28.9 per cent. There might be a degree of misclassification on the part of survey respondents regarding the nature of output areas and settlement size. Official statistics indicate that 27.2% of the UK population has a degree or equivalent or higher qualification (ONS, 2015). This suggests that the sample is slightly skewed to better educated individuals where 29.2% have a Bachelor's

³ 2011 Census of Population, Households and Dwellings of the Republic of Serbia

degree and 2.4% have a Master's degree or higher. The average household size in the UK is 2.3 people which is slightly less than the sample mean 2.6.

The exposition above indicates that the sample structure with respect to some characteristics deviates from the respective structure of the overall population in some countries. Accordingly, conclusions based on our analysis cannot in all cases be considered representative for the whole country.

Table 3. Demographical statistics among seven countries

	FR		DE		HU		IT		NO		RS		UK		All
	Group 1	Group 2	Group 1	Group 2	Group 1	Group 2	Group 1	Group 2	Group 1	Group 2	Group 1	Group 2	Group 1	Group 2	
Total N	542	564	528	522	514	505	495	488	574	635	535	495	510	537	7444
Valid N	406	404	414	425	404	398	400	399	419	411	401	403	402	402	5688
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Gender															
Female (%)	49.8	50.5	48.3	49.4	50.5	51.0	53.3	53.1	51.6	52.1	49.4	50.4	49.8	54.5	50.9
Male (%)	50.2	49.5	51.7	50.6	49.5	49.0	46.8	46.9	48.4	47.9	50.6	49.6	50.2	45.5	49.1
Average age	41.3	41.13	42.83	42.0	40.9	42.79	42.429	42.1	42.3	41.8	41.9	41.5	42.4	43.3	42.1
Living area															
Rural area (%)	53.2	55.4	39.1	40.7	19.1	20.9	15.3	14.5	22.4	21.2	12.7	11.4	28.1	27.6	27.4
Urban medium town (%)	22.4	24.8	27.3	25.9	39.6	35.2	47.0	43.1	36.5	35.8	40.1	43.4	41.5	44.3	36.1
City (%)	24.4	19.8	33.6	33.4	41.3	44.0	37.8	42.4	41.1	43.1	47.1	45.2	30.3	28.1	36.5
Education															
Lower secondary/primary education or below (%)	5.7	4.2	19.6	22.8	2.5	2.5	6.3	8.8	2.4	5.8	0.2	0.2	20.6	24.1	9.0
Upper secondary education (%)	36.2	38.1	17.9	19.1	10.6	12.8	41.0	39.8	26.7	25.1	39.9	35.7	25.1	26.9	28.1
University or college entrance qualification (e.g. A-levels, vocational certificate, technical diploma,)(%)	24.1	22.0	40.3	34.1	41.6	46.5	17.5	14.3	13.6	13.4	17.7	19.1	20.9	18.2	24.5
Bachelor's degree or equivalent level (%)	18.2	19.1	10.9	11.3	31.4	27.9	16.3	17.8	35.1	37.2	32.2	36.0	25.1	22.9	24.3
Master, Postgraduate or doctoral degree (%)	15.8	16.6	11.4	12.7	13.9	10.3	19.0	19.3	22.2	18.5	10.0	8.9	8.2	8.0	13.9
HH size	2.60	2.55	2.34	2.33	2.87	2.85	2.98	2.97	2.5	2.59	3.38	3.34	2.55	2.73	2.75
Kids number	0.84	0.87	0.59	0.57	0.65	0.68	0.64	0.55	0.77	0.89	0.65	0.69	0.68	0.75	0.7

3.2. Relevance of product and process characteristics in consumers' purchase decision

In this section the importance of different product and process attributes is investigated based on the BWS method. Counting analysis is used to summarize respondents' preferences by dividing the frequency each attribute was chosen (most important or least important) by the number of times it was shown to the participants. In addition, information is provided on the net effect which is obtained by subtracting the share of least important counts from those of the most important counts.

3.2.1. Product analysis across countries: Cheese

Tables 4a and 4b show the results of the BWS for Cheese. The findings show that taste is by far of highest importance in all countries (highest share of most important counts, lowest share of least important counts and accordingly highest net effect). Also of high relevance in most countries is the price, though Italy ranked second or third if measured according to the most important counts and Serbian respondents seemed to care little about price. However, regarding this attribute there is also a high share of least important counts in France, Germany, Italy and Serbia, leading to relatively low net effects in those countries and in Italy even to a negative value (most < least). Table 4a also indicates that while some attributes are of relevance in some countries (e.g. Product's country/region of origin in Italy and France), they get considerably less attention in consumers' purchase decision in other countries (e.g. Hungary, Norway). These findings already demonstrate that similarities and differences exist amongst consumers' importance attached to the attributes of cheese in the countries considered in the analysis. Results are now summarized separately for each country.

In France, the most important attributes when choosing cheese are related to taste, traditional cheese-making method and price. The least important attributes when choosing cheese are brand, nutritional value and knowledge of the producer. France holds the world record for mature and ripened cheese consumption per capita (CNIEL, 2017). Consequently, consumers pay attention to taste and raw milk use, while branding is less important for them.

German participants also rate taste of the product as by far the most important criterion when purchasing cheese; a result which is in line with the findings of Buder et al. (2014). Price takes second place closely followed by GMO-free and animal-friendly production. In fact, considering the net effect, these two attributes achieve even higher scores than the attribute price. GMO as well as animal welfare are topics of high relevance in the public discussion in

Germany. Regarding animal welfare, the “Initiative Animal Welfare” (Initiative Tierwohl)⁴ was launched by all relevant actors in the German meat chain (production, processing and distribution) in 2015 to develop a joint effort measures to improve the welfare of animals in the pork and poultry sector. The initiative has gained considerable media attention, though not only positive as e.g. animal protection NGOs have shown that farmers participating in the initiative do not necessarily secure an acceptable level of animal welfare.⁵ Partly due to the perceived insufficiency of this initiative, the Federal Ministry of Food and Agriculture has announced the introduction of a farm animal welfare label which is planned to be launched in 2018.⁶ The high scepticism of German consumers regarding genetic modification has been shown in previous studies (e.g. Bredahl 2001; Christoph et al. 2008). Recently, the topic gained again considerable attention in Germany as all large food retailers increase the share of their own brand that they label GMO-free.⁷ The results of the BWS shows in addition, that brand and knowledge of the producers are the least important criteria for German consumers in their cheese purchase. This can be seen based on the high percentage of the least important counts (0.39 in both cases; see Table 4a) as well as of the high negative net effect for both attributes (see Table 4b).

For the Hungarian consumers, taste, price and best before date are by far the most important attributes when buying cheese products. This holds if we consider the most important values as well as the net effects. Personal knowledge of the producer on the other hand is of least importance. The latter might be explained by the fact that in Hungary the vast majority of cheese consumed comes from mass production (mainly trappista fresh cheese), the relevance of speciality cheese in contrast is of little importance.

For Italian consumers, best before date is after taste the second important attribute, indicating a significant sensitiveness of Italian consumers to the food safety and quality issue (Van Rijswijk et al., 2008). GMO-free product is the attribute with the third largest share of most important counts, but it also has a considerable share of least important counts; this confirms other studies indicating a low acceptance of GM food for large part of Italian consumers (Costa-Font and

⁴ The initiative is organized as follows (example pig, slightly different for poultry): Retailers pay into a fund depending on the amount of pork meat and meat products that they sell in their outlets. Different programmes and criteria that promote farm animal welfare are defined and controlled. Implementing any of those higher farm animal welfare standards at the farm level remains voluntary. However, those producers who put defined FAW measures into practice are rewarded by a payment that is independent of the price for pigs at the farm level. Prices for pig meat at the consumer level are as well not differentiated according to the different animal welfare standards in the programme (see Hartmann et al. 2014).

⁵ E.g. <https://www.agrarheute.com/land-leben/spiegel-kritisiert-initiative-tierwohl-qual-nutztierhaltung-534188>

⁶ <https://www.bmel.de/DE/Tier/Tierwohl/texte/Einfuehrung-Tierwohllabel.html>

⁷ <http://www.lebensmittelzeitung.net/handel/Eigenmarken-Handel-listet-Gentechnik-aus-127713>

Gil, 2009), whereas other consumer groups exhibit more positive attitude for these products. The fourth ranked attribute is animal welfare friendly production. Di Pasquale et al. (2016) identified a cluster of “sensible and aware consumers” of around 36%, indicating an important market segment for “animal friendly”. Brand and fair trade are the least important elements; the cheese market in Italy is strongly characterised by the Geographical Indications (e.g., Parmigiano Reggiano, Grana Padano, etc.) where companies’ brands are overwhelmed by the Consortium marks; however, still some brands have important market shares, in particular for some kind of cheese (e.g. Auricchio for provolone, Galbani for fresh cheese, etc.), which evidently were not considered by respondents.

Dairy products traditionally play a major role in Norwegian food habits, with a significant consumption of cheeses. Table 4a underlines several interesting characteristics of what is important for Norwegian consumers when buying cheese. Firstly, we find that taste followed with some distance by price are the two most important criteria of choice for cheese. Secondly, we notice a duality between brands, on the one hand and FQS such as organic or traditional production, on the other hand. While brand has almost the same shares for most important and least important counts, the least important shares are much higher than the most important shares for many sustainability attributes leading mainly to (high) negative net effects for those attributes. Thus, it seems that Norwegian consumers perceive this kind of quality as less relevant.

As with other countries, Serbian consumers mostly value the taste of cheese (58%). Surprisingly, being GMO-free closely follows in relevance. With 46% of the share of most important counts, this is much higher in Serbia than in any other country for this attribute. This could be because the topic of GMO products is widely discussed in national public debates as well as in the media⁸. In addition, the proportion of the sample with higher education and more people residing in urban areas is much higher than the national average, thus respondents in our sample might be more aware of GMO than holds for Serbia as a whole. Similarly best before date is a highly valued attribute by Serbian respondents. This can be explained by the fact that in Serbia, different from e.g. France and Germany, a large proportion of cheese is “young” soft cheese, which in general has a more limited shelf life than hard cheese. The least important

⁸ Radio television of Serbia (2017), Would GMO be allowed in Serbia?, <http://www.rts.rs/page/stories/sr/story/125/drustvo/2687089/da-li-ce-i-u-srbiji-biti-dozvoljen-promet-gmo-hrane-.html>; N1 info (2017), Serbia, a country without GMO – until what time?, <http://rs.n1info.com/a250192/Vesti/Vesti/GMO-u-Srbiji.html>

factor when purchasing cheese is brand, with 39% of the least important counts. Notably for Serbian consumers, the price of cheese is of little relevance (only Italians care less), despite the fact that they have the lowest purchasing power of the seven countries investigated. Given that previous research⁹ revealed both high brand and high price sensitivities of Serbian consumers, the results of the current study require further exploration. It is likely that, due to the sample structure (higher level of education leading to higher income), the average income of the sample participants is higher compared to the national average. In addition, in the present study consumers are forced to consider trade-offs and discriminate between attributes. Thus, the results do not imply that consumers do not care about prices and brands but that other attributes are more important to them.

For the UK, according to the results of the BWS method, the most important attributes for consumers are the taste of the product, price and best before date. Comparatively little importance is given to knowledge of the producer, the brand and organic production. Those results can be explained by the fact that cheese sales in the UK are dominated overwhelmingly by multiple retailers (supermarkets) with a mix of manufacturers' and own label products. Brand loyalty is relatively low, with a high degree of price sensitivity. While consumers are often aware of the main UK varieties of cheese (e.g. Cheddar, Double Gloucester) and some continental types (e.g. Camembert, Gouda, Roquefort), knowledge of individual producers is generally weak. GI protected cheeses are available but the main UK varieties of cheese are generic in nature (Blundel and Tregear, 2006). Organic's share of the cheese market is peripheral.

⁹ e.g. Stojanović, Ž., Dragutinović-Mitrović, R., & Ognjanov, G. (2013). Functional food market development in Serbia: Motivations and barriers. *Industrija*, 41(3), 25-38.

Table 4a. Count analysis of BWS data: Cheese (Most/Least Important Count Proportion) ¹

	FR		DE		HU		IT		NO		RS		UK	
Total Number of Respondents	391		396		397		387		412		394		382	
Label	Most	Least	Most	Least	Most	Least	Most	Least	Most	Least	Most	Least	Most	Least
	Important Count Proportion													
1.Product's country of origin	0.18	0.14	0.12	0.23	0.12	0.25	0.23	0.15	0.10	0.27	0.09	0.32	0.13	0.25
2.Visual appearance of the product	0.13	0.27	0.13	0.26	0.15	0.19	0.12	0.25	0.08	0.31	0.09	0.28	0.21	0.18
3.Brand	0.13	0.37	0.10	0.39	0.17	0.32	0.08	0.43	0.25	0.23	0.07	0.39	0.14	0.32
4.Best before date	0.15	0.26	0.14	0.26	0.36	0.08	0.30	0.13	0.16	0.17	0.27	0.05	0.29	0.14
5.Price	0.26	0.17	0.32	0.19	0.42	0.07	0.19	0.25	0.33	0.11	0.23	0.20	0.43	0.08
6.Nutritional value of the product	0.10	0.31	0.16	0.19	0.18	0.14	0.17	0.19	0.18	0.18	0.11	0.27	0.16	0.16
7.Traditional methods used in the production/processing of the product	0.27	0.14	0.14	0.19	0.20	0.16	0.23	0.11	0.13	0.25	0.26	0.10	0.11	0.23
8.Animal welfare friendly production	0.23	0.09	0.27	0.06	0.14	0.09	0.25	0.07	0.19	0.11	0.11	0.17	0.19	0.08
9.Organic production	0.15	0.18	0.19	0.14	0.08	0.25	0.18	0.19	0.09	0.32	0.25	0.09	0.09	0.32
10.GMO-free	0.22	0.14	0.31	0.11	0.23	0.18	0.26	0.21	0.18	0.24	0.46	0.09	0.11	0.28
11.Taste of the product	0.60	0.04	0.63	0.02	0.58	0.02	0.39	0.03	0.72	0.02	0.58	0.01	0.66	0.03
12.My knowledge of the producer	0.10	0.30	0.06	0.39	0.02	0.66	0.13	0.34	0.22	0.17	0.16	0.26	0.08	0.34
13.Fair trade	0.05	0.25	0.08	0.17	0.08	0.12	0.06	0.30	0.08	0.15	0.06	0.34	0.08	0.16
14.Product's region of origin	0.23	0.15	0.14	0.20	0.07	0.28	0.21	0.16	0.07	0.28	0.09	0.24	0.12	0.25

1) The count proportion is calculated by dividing the frequency each attribute was chosen (most important or least important) by the number of times it was shown to the participants.

Table 4b. Count analysis of BWS data: Cheese (Net effect) ¹

	FR	DE	HU	IT	NO	RS	UK
Total Number of Respondents	391	396	397	387	412	394	382
Label	Net effect						
1.Product's country of origin	0.04	-0.11	-0.13	0.08	-0.17	-0.23	-0.12
2.Visual appearance of the product	-0.14	-0.13	-0.04	-0.13	-0.23	-0.19	0.03
3.Brand	-0.24	-0.29	-0.15	-0.35	0.02	-0.32	-0.18
4.Best before date	-0.11	-0.12	0.28	0.17	-0.01	0.22	0.15
5.Price	0.09	0.13	0.35	-0.06	0.22	0.03	0.35
6.Nutritional value of the product	-0.21	-0.03	0.04	-0.02	0.00	-0.16	0.00
7.Traditional methods used in the production/processing of the product	0.13	-0.05	0.04	0.12	-0.12	0.16	-0.12
8.Animal welfare friendly production	0.14	0.21	0.05	0.18	0.08	-0.06	0.11
9.Organic production	-0.03	0.05	-0.17	-0.01	-0.23	0.16	-0.23
10.GMO-free	0.08	0.20	0.05	0.05	-0.06	0.37	-0.17
11.Taste of the product	0.56	0.61	0.56	0.36	0.70	0.57	0.63
12.My knowledge of the producer	-0.20	-0.33	-0.64	-0.21	0.05	-0.10	-0.26
13.Fair trade	-0.20	-0.09	-0.04	-0.24	-0.07	-0.28	-0.08
14.Product's region of origin	0.08	-0.06	-0.21	0.05	-0.21	-0.15	-0.13

1) The net effect is obtained by subtracting the share of least important counts from those of the most important counts.

3.2.2. Product analysis across countries: Fresh meat

Fresh meat has been considered in the French and the UK sample in both subgroups, respectively. Table 5 shows that although some differences exist between the two countries regarding the relevance consumers attach to various product attributes in their purchase decision, several similarities can be observed as well.

As expected, *freshness* and *taste* are the most important declared attributes for French consumers when choosing fresh meat (Sans et al., 2008). Process characteristics such as animal welfare friendly production and the product's country of origin prove to be also relevant and even more so than the attribute price. *Knowledge of the producer* and *fair trade* attributes are the least considered when choosing fresh meat in France.

In the UK, the most important attributes for consumers regarding meat are also freshness and taste; however, it is price that follows. Knowledge of the producer is, similar to the results from France, the least important attribute. Region of origin, GMO and organic production are also of relatively little importance. While consumer's interest in traceability has grown in recent years, most meat sold in supermarkets is not advertised as being from a particular farm or region of the UK (MINTEL, 2013). Organic sales remain modest, although having recovered slightly after a significant drop in demand following the 2007/8 financial crisis during which the major UK supermarkets dramatically reduced their shelf space given over to organic produce (MINTEL, 2012). Animal welfare labels are generally more prominent and cover greater sales volume for meat sold in the UK, in comparison with certified organic products. The UK market for fresh meat is very price sensitive with the consumption of red meat, particularly pork, in long term decline (MINTEL, 2017b).

Table 5. Count analysis of BWS data: Fresh meat¹

Total Number of Respondents	FR			UK		
	731			715		
Label	Best Count Proportion	Worst Count Proportion	Net effect	Best Count Proportion	Worst Count Proportion	Net effect
1.Product's country of origin	0.25	0.13	0.12	0.15	0.24	-0.09
2.Visual appearance of the product	0.18	0.2	-0.02	0.25	0.12	0.13
3.Specific variety of the product	0.10	0.25	-0.15	0.14	0.23	-0.09
4.Freshness of products	0.46	0.04	0.42	0.52	0.04	0.48
5.Price	0.24	0.21	0.03	0.38	0.14	0.24
6.Nutritional value of the product	0.08	0.33	-0.25	0.14	0.16	-0.02
7.Traditional methods used in the production/processing of the product	0.16	0.18	-0.02	0.10	0.22	-0.12
8.Animal welfare friendly production	0.27	0.08	0.19	0.25	0.08	0.17
9.Organic production	0.15	0.24	-0.09	0.08	0.34	-0.26
10.GMO-free	0.21	0.15	0.06	0.10	0.33	-0.23
11.Taste of the product	0.38	0.04	0.34	0.47	0.03	0.44
12.My knowledge of the producer	0.09	0.44	-0.35	0.08	0.35	-0.27
13.Fair trade	0.05	0.37	-0.32	0.06	0.22	-0.16
14.Product's region of origin	0.19	0.17	0.02	0.10	0.30	-0.20

- 1) The count proportion is calculated by dividing the frequency each attribute was chosen (most important or least important) by the number of times it was shown to the participants. The net effect is obtained by subtracting the share of least important counts from those of the most important counts.

3.2.3. *Product analysis across countries: Processed meat*

In Hungary, Italy and Serbia consumers were asked to provide information on the relevance of the 14 product and process attributes for processed meat (see Table 6).

Similar to cheese for the Hungarian consumers, taste matters the most when buying processed meat products. The best before date has a similar high importance, mainly because Hungarian consumers purchase many cold cuts with shorter expiry date, especially compared to aged and/or smoked salami and sausage products. Knowledge of the producer is by far the least important characteristic for consumers in Hungary when buying processed meat products. Also, brand and organic production prove to be of relative low relevance as the high shares of least important counts and high negative net effects reveal. The former might be considered surprising as the meat industry is highly concentrated in Hungary with only a few but well-known brands.

Similar to the cheese case, Italian consumers rank the taste, animal welfare and GMO-free attributes as the most important when buying processed meat. For processed meat, the country of origin characteristic is the third most important one. Again, similar to the cheese case, brand and fair trade attribute seem the least important. The Italian processed meat market is also characterised by the Geographical Indications (e.g., Parma ham, San Daniele ham, etc.); nevertheless, several processor brands have important market shares (e.g. Citterio, Fiorucci, Negroni, etc.), which evidently were not considered by respondents.

In line with the results obtained for cheese, Serbian consumers attach high value to the attribute GMO-free when buying processed meat. For processed meat, this characteristic is the most important one while taste only takes the second place. It appears that Serbian consumers give a much higher priority to GMO-free in their purchase decision compared to Hungary and Italy. Brand is the least important product characteristic; however, the sustainability characteristics fair trade, animal welfare friendly production and a product's country or region of origin play only minor roles, as well.

Table 6. Count analysis of BWS data: Processed meat¹

	HU			IT			RS		
Total Number of Respondents	381			258			389		
Label	Best Count Prop.	Worst Count Prop.	Net effect	Best Count Prop.	Worst Count Prop.	Net effect	Best Count Prop.	Worst Count Prop.	Net effect
1.Product's country of origin	0.16	0.21	-0.05	0.28	0.13	0.15	0.11	0.31	-0.20
2.Visual appearance of the product	0.19	0.15	0.04	0.21	0.15	0.06	0.11	0.24	-0.13
3.Brand	0.10	0.37	-0.27	0.07	0.45	-0.38	0.07	0.43	-0.36
4.Best before date	0.47	0.04	0.43	0.29	0.12	0.17	0.35	0.05	0.30
5.Price	0.33	0.11	0.22	0.17	0.24	-0.07	0.20	0.19	0.01
6.Nutritional value of the product	0.17	0.15	0.02	0.15	0.20	-0.05	0.11	0.24	-0.13
7.Traditional methods used in the production/processing of the product	0.21	0.17	0.04	0.24	0.19	0.05	0.25	0.12	0.13
8.Animal welfare friendly production	0.14	0.12	0.02	0.29	0.10	0.19	0.06	0.20	-0.14
9.Organic production	0.08	0.30	-0.22	0.15	0.18	-0.03	0.23	0.07	0.16
10.GMO-free	0.21	0.19	0.02	0.26	0.16	0.10	0.55	0.07	0.48
11.Taste of the product	0.49	0.02	0.47	0.31	0.05	0.26	0.47	0.02	0.45
12.My knowledge of the producer	0.04	0.61	-0.57	0.12	0.32	-0.20	0.19	0.22	-0.03
13.Fair trade	0.10	0.15	-0.05	0.06	0.33	-0.27	0.03	0.35	-0.32
14.Product's region of origin	0.13	0.21	-0.08	0.22	0.19	0.03	0.07	0.29	-0.22

1) The count proportion is calculated by dividing the frequency each attribute was chosen (most important or least important) by the number of times it was shown to the participants. The net effect is obtained by subtracting the share of least important counts from those of the most important counts.

3.2.4. Product analysis across countries: Fish

Table 7 shows the BWS results of fresh fish for Norway and the UK. Fish export is the second most important industry in Norway, after oil. Fish is not only a recent source of income due to aquaculture and fish farming, but already in the Viking time the export value of stockfish exceeded the national budget. In other words, Norway is a huge fish nation with its 103,000 km of coast (second largest in the world after Canada). Fish consumption amounts to about 46 kg per capita in 2017 (Helsedirektorat 2017) and is high in global terms, though quite low compared with other Nordic countries. Traditionally Norwegian citizens only ate fresh fish they caught themselves or got through the gift economy. Fish purchased in shops was traditionally more often salted, dried, fermented or smoked, as well as hermetic and frozen fish after the 1950s. The fresh fish market recently expanded, especially in the last 10 years, but is still relatively small, as it is a quite new market for Norwegian consumers. It is not surprising that freshness, as well as taste, are the most important characteristic for respondents when buying fresh fish (see Table 7). Organic production or product's origin are, in contrast, not very relevant in a country where consumers trust local fisheries and, to a certain extent, the pureness of nature.

Similar to Norway in the UK freshness and taste are the two most important attributes for consumers when buying fresh fish (see Table 7). Price seems also of relatively high importance, even though in both countries price takes an ambivalent position as it reveals not only a high share of most important but also a high share of least important counts. Many of the sustainability attributes (e.g. organic production), knowledge of the producer and product's region of origin are less important. In the UK most fish is sold through food supply chains which cannot be traced back to specific catching vessels or even ports and regions. There is a high degree of international trade in the UK's fishing sector (both exports and imports), with consumers used to internationally sourced offerings. Consumers remain, generally, price sensitive and there is a low degree of brand loyalty (MINTEL, 2017a). The relative lack of importance given to the specific variety of the product may be surprising. However, UK consumers' knowledge of fish species is relatively limited. The best selling white fish products in the UK remain processed products (pies, fish fingers) which often comprise multiple species (MINTEL, 2017a).

Table 7. Count analysis of BWS data: Fresh fish¹

Total Number of Respondents	NO			UK		
	527			223		
Label	Best Count Proportion	Worst Count Proportion	Net effect	Best Count Proportion	Worst Count Proportion	Net effect
1.Product's country of origin	0.12	0.26	-0.14	0.12	0.25	-0.13
2.Visual appearance of the product	0.17	0.19	-0.02	0.24	0.13	0.11
3.Specific variety of the product	0.22	0.22	0.00	0.17	0.22	-0.05
4.Freshness of products	0.60	0.02	0.58	0.53	0.05	0.48
5.Price	0.27	0.18	0.09	0.36	0.18	0.18
6.Nutritional value of the product	0.16	0.15	0.01	0.15	0.16	-0.01
7.Traditional methods used in the production/processing of the product	0.07	0.30	-0.23	0.13	0.17	-0.04
8.Animal welfare friendly production	0.15	0.12	0.03	0.23	0.10	0.13
9.Organic production	0.08	0.35	-0.27	0.09	0.34	-0.25
10.GMO-free	0.22	0.21	0.01	0.12	0.33	-0.21
11.Taste of the product	0.50	0.03	0.47	0.41	0.05	0.36
12.My knowledge of the producer	0.10	0.28	-0.18	0.07	0.33	-0.26
13.Fair trade	0.07	0.23	-0.16	0.07	0.23	-0.16
14.Product's region of origin	0.07	0.28	-0.21	0.11	0.28	-0.17

- 1) The count proportion is calculated by dividing the frequency each attribute was chosen (most important or least important) by the number of times it was shown to the participants. The net effect is obtained by subtracting the share of least important counts from those of the most important count.

3.2.5. Product analysis across countries: Fresh Vegetables

Fresh vegetables is the product category investigated by one subgroup of the survey in Germany and by both subgroups of the surveys in Hungary and Italy (see Table 8). For this product category freshness is the attribute perceived to be most important by consumers in all three countries. This results is not surprising as fresh vegetables are a highly perishable product category and the freshness of the products determines to some extent the visual appearance, the nutritional value and the taste of a product. Similarly, Zander et al. (2015) found that ‘freshness’ is the most important attribute of a food product. The three countries investigated are consistent regarding the least important attribute. Knowledge of the producers seems to be of little relevance for consumers in their purchase decision for fresh vegetables.

Despite those similarities between German, Hungarian and Italian consumers regarding the importance (or lack of importance) of attributes in their purchase decisions, differences also exist. A product’s country of origin is again (see expositions above) of much greater relevance in Italy compared with Germany and Hungary. However, fair trade plays a much lower role in a consumer's purchase decision in Italy compared with the other two countries. The low relevance of fair trade for Italian respondents was also found for cheese and processed meat. The results also indicate that price is a decisive attribute for Hungarian consumers when purchasing fresh vegetables while it has an ambiguous role in the other two countries. As with cheese, GMO free is especially important for German consumers.

Table 8. Count analysis of BWS data: Fresh vegetable¹

	DE			HU			IT		
Total Number of Respondents	425			802			799		
Label	Best Count Prop.	Worst Count Prop.	Net effect	Best Count Prop.	Worst Count Prop.	Net effect	Best Count Prop.	Worst Count Prop.	Net effect
1.Product's country of origin	0.13	0.23	-0.10	0.17	0.21	-0.04	0.26	0.16	0.10
2.Visual appearance of the product	0.19	0.18	0.01	0.16	0.19	-0.03	0.15	0.28	-0.13
3.Specific variety of the product	0.11	0.29	-0.18	0.02	0.45	-0.43	0.09	0.30	-0.21
4.Freshness of products	0.54	0.04	0.50	0.58	0.02	0.56	0.55	0.02	0.53
5.Price	0.26	0.20	0.06	0.33	0.09	0.24	0.19	0.26	-0.07
6.Nutritional value of the product	0.11	0.24	-0.13	0.19	0.15	0.04	0.14	0.23	-0.09
7.Traditional methods used in the production/processing of the product	0.10	0.29	-0.19	0.17	0.20	-0.03	0.17	0.17	0.00
8.Environmental friendly production	0.14	0.09	0.05	0.13	0.08	0.05	0.17	0.08	0.09
9.Organic production	0.19	0.16	0.03	0.10	0.27	-0.17	0.17	0.19	-0.02
10.GMO free	0.31	0.13	0.18	0.23	0.18	0.05	0.28	0.17	0.11
11.Taste of the product	0.45	0.03	0.42	0.43	0.02	0.41	0.26	0.07	0.19
12.My knowledge of the producer	0.04	0.54	-0.50	0.05	0.59	-0.54	0.09	0.38	-0.29
13.Fair trade	0.08	0.15	-0.07	0.10	0.13	-0.03	0.06	0.31	-0.25
14.Product's region of origin	0.14	0.23	-0.09	0.14	0.22	-0.08	0.20	0.20	0.00

1) The count proportion is calculated by dividing the frequency each attribute was chosen (most important or least important) by the number of times it was shown to the participants. The net effect is obtained by subtracting the share of least important counts from those of the most important counts.

3.2.6. Product analysis across countries: Processed Vegetables

For German consumers of processed vegetables, taste of the product is considered to be the most important criterion followed by GMO free and price. Brand and knowledge of producers have the least relevance for consumers when buying processed vegetables.

Also for Serbian consumers brand is the least important attribute. Besides taste, the attribute GMO free is of high relevance in Serbian consumers' purchase decision of processed vegetables. This is in line with the results for cheese and processed meat presented above.

Table 9. Count analysis of BWS data: Processed vegetable¹

Total Number of Respondents	DE			RS		
	839			804		
Label	Best Count Proportion	Worst Count Proportion	Net effect	Best Count Proportion	Worst Count Proportion	Net effect
1.Product's country of origin	0.13	0.19	-0.06	0.09	0.31	-0.22
2.Visual appearance of the product	0.15	0.28	-0.13	0.08	0.34	-0.26
3.Brand	0.10	0.42	-0.32	0.05	0.44	-0.39
4.Best before date	0.13	0.26	-0.13	0.29	0.07	0.22
5.Price	0.34	0.15	0.19	0.25	0.16	0.09
6.Nutritional value of the product	0.19	0.17	0.02	0.13	0.26	-0.13
7.Traditional methods used in the production/processing of the product	0.15	0.25	-0.10	0.24	0.13	0.11
8.Environmental friendly production	0.16	0.08	0.08	0.19	0.09	0.10
9.Organic production	0.20	0.14	0.06	0.24	0.09	0.15
10.GMO free	0.34	0.11	0.23	0.51	0.07	0.44
11.Taste of the product	0.60	0.04	0.56	0.47	0.02	0.45
12.My knowledge of the producer	0.06	0.40	-0.34	0.14	0.26	-0.12
13.Fair trade	0.10	0.11	-0.01	0.05	0.30	-0.25
14.Product's region of origin	0.15	0.20	-0.05	0.08	0.28	-0.20

- 1) The count proportion is calculated by dividing the frequency each attribute was chosen (most important or least important) by the number of times it was shown to the participants. The net effect is obtained by subtracting the share of least important counts from those of the most important counts.

3.2.7. Product analysis across countries: Fresh fruits

The last product category considered in the BWS analysis is fresh fruits which was selected for one subgroup of the French and Norwegian survey. Both countries differ in the relevance of fresh fruits in the country's agricultural production and for its consumption. While most of the fresh fruits consumed in Norway is imported (over 90%) (Helsedirektoraret, 2017), domestic production is the main source of fruits consumed in France.

Table 10 shows that *freshness* and *taste* are by far the most important attributes when choosing fresh fruits in Norway as well as in France, while knowledge of the producer is of little relevance in consumers' purchase decision of fresh fruits in both countries. In Norway, however, a product's region and country of origin are also in general not considered when buying fresh fruits.

Table 10. Count analysis of BWS data: Fresh fruits¹

Total Number of Respondents	FR			NO		
	404			411		
Label	Best Count Proportion	Worst Count Proportion	Net effect	Best Count Proportion	Worst Count Proportion	Net effect
1.Product's country of origin	0.20	0.17	0.03	0.07	0.35	-0.28
2.Visual appearance of the product	0.16	0.37	-0.21	0.22	0.25	-0.03
3.Specific variety of the product	0.12	0.26	-0.14	0.17	0.19	-0.02
4.Freshness of products	0.41	0.03	0.38	0.53	0.03	0.50
5.Price	0.29	0.15	0.14	0.29	0.11	0.18
6.Nutritional value of the product	0.10	0.26	-0.16	0.17	0.15	0.02
7.Traditional methods used in the production/processing of the product	0.13	0.21	-0.08	0.07	0.26	-0.19
8.Environmental friendly production	0.21	0.08	0.13	0.14	0.12	0.02
9.Organic production	0.19	0.21	-0.02	0.10	0.28	-0.18
10.GMO free	0.28	0.12	0.16	0.22	0.20	0.02
11.Taste of the product	0.41	0.03	0.38	0.58	0.02	0.56
12.My knowledge of the producer	0.08	0.47	-0.39	0.07	0.36	-0.29
13.Fair trade	0.05	0.25	-0.20	0.12	0.13	-0.01
14.Product's region of origin	0.17	0.20	-0.03	0.06	0.36	-0.30

- 1) The count proportion is calculated by dividing the frequency each attribute was chosen (most important or least important) by the number of times it was shown to the participants. The net effect is obtained by subtracting the share of least important counts from those of the most important counts.

3.2.8. Summary and conclusions

Based on the explanations above, the main findings can be summarized as follows. First, taste is of crucial importance in consumers' food purchase decision. For many products in most countries it is the major or among the major attributes that influence food purchase. Second, knowing the producer is in general of little importance to consumers in the countries and for the products considered in this study.

Third, our results reveal that besides those similarities across countries and products consumers' preferences depend on the product type and the country. By and large freshness/best before date is the most important attribute for fresh and thus perishable products such as fresh meat or fresh fruits and vegetables. However, not surprisingly, this attribute is of little relevance for processed products such as cheese, especially if we refer to hard cheese. Tables 4a and 4b, however, reveals that best before dates are of higher importance in Hungary and Serbia compared to the other countries. This can be explained by the fact that in those two countries different from e.g. France and Germany a large proportion of cheese is "young" soft cheese, which in general has a more limited shelf life than hard cheese. Country and region of origin are process attributes with a relative high relevance for consumers in Italy and France when buying food but prove to be of minor relevance in countries such as Serbia, UK, Norway and Hungary. Considerable heterogeneity also exist regarding the attribute GMO free which is one of the most important attribute in consumers' food purchase decision in Serbia while being of relative low importance in countries such as the UK or Norway. The same holds for animal welfare friendly products which plays a minor role in Serbia and Hungary and is especially of high relevance in Germany. For some countries more general conclusions can be drawn. Whatever the food product is, the respondents from France are more sensitive to its hedonic attributes such as taste, freshness and traditional food-processing method, rather than more abstract and ethical ones, such as animal welfare, environment friendly production, or fair trade.

Finally, the price attribute is an interesting case as in most countries and for most products its share in the most important counts is relative high but in countries such as France its share in the least important counts is similarly high leading to a low positive or in some cases even to a negative net value. This result indicates that there is considerable heterogeneity in the sample in consumers' preferences.

3.3. Consumers' recognition, perception, use and knowledge with respect to labels

The quantity of food labels in grocery stores of many European countries has considerably increased over the past decade. Following this, the term 'labelling jungle' has been introduced, relating to how consumers are struggling to find a trail in the heaps of labels available in the stores. There is a suspicion that too many different labels confuse the consumers and do not help them, as originally meant, to obtain information that eases their purchase decision and leads to shopping choices more in accordance with their preferences. A report from Heidenstrøm, Jacobsen and Borgen (2011) on consumers' perceptions of labels, found two potential ways that consumers use to manoeuvre in the label jungle; through selection and ignorance. If consumers have already decided what to look for and buy before going shopping, the labels may serve as a useful tool for finding those products. These consumers have required the information usually due to a specific interest and thus they know what to look for. The other category indicates a tendency to ignore the labels. Thus, if consumers have difficulties finding labels they trust, understand and appreciate, they tend to generally ignore them.

To prevent label ignorance it is important that a label covers those characteristics important to consumers. For this reason, in the following we try to identify first those characteristics of special relevance for consumers with respect to labels (section 3.3.1) and second the level of consumers' recognition, use, impediments to use, perception and knowledge of different EU, national and regional labels (sections 3.3.2 and 3.3.3). Regarding label perception we also investigate the extent to which the four major EU food quality labels (Organic, PGI, PDO, TSG) as well as domestic labels (two for each country) cover those characteristics important to consumers. The chapter closes with a comparison of the obtained results (section 3.3.4).

3.3.1. Importance of label characteristics for consumers

Table 11 shows the results from asking respondents the question: "How important to you is it that a label has the following characteristics." Respondents were asked to indicate their opinion on a scale from 1 to 5, with 1 implying extremely unimportant and 5 extremely important. The results show for most of the countries a rather homogeneous picture regarding what characteristics of a label are perceived to be important. Trustworthiness is considered as the most important characteristic in five of the seven countries considered, namely in France, Germany, Hungary, Norway and the UK. In Italy trust is of similar importance to the ease with which a label can be understood and only in Serbia does trustworthiness receive a much lower rating than the characteristic easiness to understand the label. Thus, based on the results given

in Table 11, it can be concluded that Serbian consumers appreciate simplicity and clarity of the labels. However, label characteristics that make it easy to understand the label are also of relatively high importance to consumers in the other countries (rated around or above 4 on a scale 1 – 5 in the seven countries). Surprisingly, aspects of labels that are supposed to facilitate consumers making an informed choice received only medium ratings. In all countries except Hungary, the attractiveness of the label is considered to be least important followed by the statement that products with a label should have similar prices. In Hungary, the sequence is vice versa, which might be surprising given the high price sensitivity of Hungarian consumers.

The results summarized in Table 11 also show that the general perception of label characteristics does not seem very discriminant between the different proposed items. This is especially true for France where the perception varies only between 3.21 for the statement the label is attractive to 4.00 for the statement the label is trustworthy. It holds to a lesser extent for Italy where the range is wider and varies from 2.92 to 4.27.

Table 11. Consumers' general perception on the importance of label characteristics¹

Country	FR		DE		HU		IT		NO		RS		UK		All	
N	810		839		802		799		830		804		804		5688	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
The label is easy to understand	3.82	1.03	3.97	1.10	3.94	1.10	4.27	0.92	3.92	1.09	4.11	1.12	4.05	1.04	4.01	1.07
The label has a clear logo/symbol	3.77	1.02	3.86	1.09	3.92	1.04	4.00	0.92	3.84	1.07	3.95	1.10	3.81	1.07	3.88	1.05
The label is trustworthy	4.00	1.03	4.14	1.08	4.08	1.03	4.25	0.90	4.19	1.06	3.68	1.19	4.19	0.97	4.08	1.06
The label helps me to make an informed choice	3.61	1.05	3.69	1.08	3.93	0.99	4.11	0.89	3.71	1.07	3.50	1.19	3.94	0.98	3.78	1.06
Products with this label have similar prices to other products without this label	3.49	1.06	3.39	1.09	3.37	1.10	3.59	1.05	3.59	1.05	3.17	1.17	3.69	1.06	3.47	1.10
The label is more than just a means of advertising	3.50	1.09	3.81	1.18	3.77	1.12	3.71	1.06	3.82	1.12	3.39	1.22	3.92	1.05	3.70	1.14
The label is attractive	3.21	1.12	3.24	1.11	3.48	1.11	2.92	1.17	3.29	1.09	3.09	1.24	3.07	1.13	3.19	1.15

1) How important to you is that a label has the following characteristics? Please indicate on a scale from 1 to 5 your opinion on the following statements, 1 being "extremely unimportant" and 5 being "extremely important".

3.3.2. *Analysis of EU food quality labels across countries*

In this section consumers' recognition, use and knowledge of the four EU quality labels as well as of selected national labels will be presented.

3.3.2.1. **EU Organic Label**



Figure 2. EU Organic Label

The EU organic logo was implemented in 2010 under Council Regulation (EC) No 834/2007 and Commission Regulation (EC) No 889/2008. It is a compulsory label for all pre-packaged, organically produced food types. For processed products the logo indicates that at least 95% of the ingredients are organic.

3.3.2.1.1. **Recognition of the EU organic label**

A label that is not recognized by consumers cannot serve its purpose, i.e. reduce information asymmetry on the side of consumers and help consumers to make an informed choice. In this respect the survey provides a disappointing picture. Only about a third of respondents of the survey recognized the EU organic logo. This share is higher in France (52%), Germany (50%) and Italy (47%) but considerable lower in all other countries. Recognition is especially low in the UK. A reason could be that retailers' own organic labels are nowadays prevalent in UK supermarkets and more easily understood compared to the EU organic label as retailers' own organic labels in general include the word 'organic'.¹⁰ Thus, consumers might not look for a certification. Those who do, seem mainly to rely on the certification of the organic soil organization (Soil Association, 2011) and secondly on the organic farmers' and growers' label (<http://ofgorganic.org/>). This might explain why respondents in the UK survey very rarely

¹⁰

https://www.google.co.uk/search?q=organic+tesco&rlz=1C1GGRV_enGB752GB752&source=lnms&tbn=isch&sa=X&ved=0ahUKEwi7hu6-u7nZAhUGa8AKHUcNBNsQ_AUICygC&biw=1396&bih=778;
https://www.google.co.uk/search?rlz=1C1GGRV_enGB752GB752&biw=1396&bih=778&tbn=isch&sa=1&ei=v6-OWpTsM4ycgAa5052wBA&q=organic+sainsburys&oq=organic+sain&gs_l=psy-ab.1.1.0i8i30k1j0i24k1l2.5660.7255.0.9267.4.4.0.0.0.55.200.4.4.0...0...1c.1.64.psy-ab.0.4.197...0.0.EA6kjbN-Aj4

recognize the EU leaf symbol. Also in several other countries (e.g. Germany, Hungary) national organic labels exist that, though not mandatory, are still used by producers and are often more meaningful than the leaf without any text.

Comparing our results with those of the Special Eurobarometer (EB) 473¹¹ (European Commission 2018) reveals similar results for the UK (EB 14%, our study 16%) a higher level of recognition in our study for Germany, France and Hungary (EB 41%, 40% and 14%, respectively; our study 50%, 52%, and 24%, respectively) and a much higher level of recognition in our study for Italy (46% compared to 16%).

Neither Norway nor Serbia was included in the Special Eurobarometer 473 (European Commission 2018). The low recognition of the EU organic label for the former country can be explained by the fact that this logo is not the primary label for organic food products in Norway, and limited to imported products. The national Ø-label used by Norwegian producers is the most commonly known organic label. This label was recognized by more than 80 % of the respondents in a national survey in 2010. In the same survey less than 10 % recognized the EU organic label. This was not surprising given the fact that the EU label was first introduced into the Norwegian market in 2010 and thus in the year the survey took place (Heidenstrøm et al., 2011). Regarding Serbia, it can be assumed that the 24.1% recognition of the EU organic logo is an overestimation given that our sample is skewed toward more educated citizens with a higher income.

¹¹ The wording of the question in the Special Eurobarometer 473 (European Commission 2018) was slightly different. Consumers saw a number of logos (EU organic logo, PDO, PGI, TSG and Fairtrade) and were asked ‘Which of the logos on this card are you aware of?’ In the survey of the present study respondents saw a label and were asked ‘Do you recognize this label’?

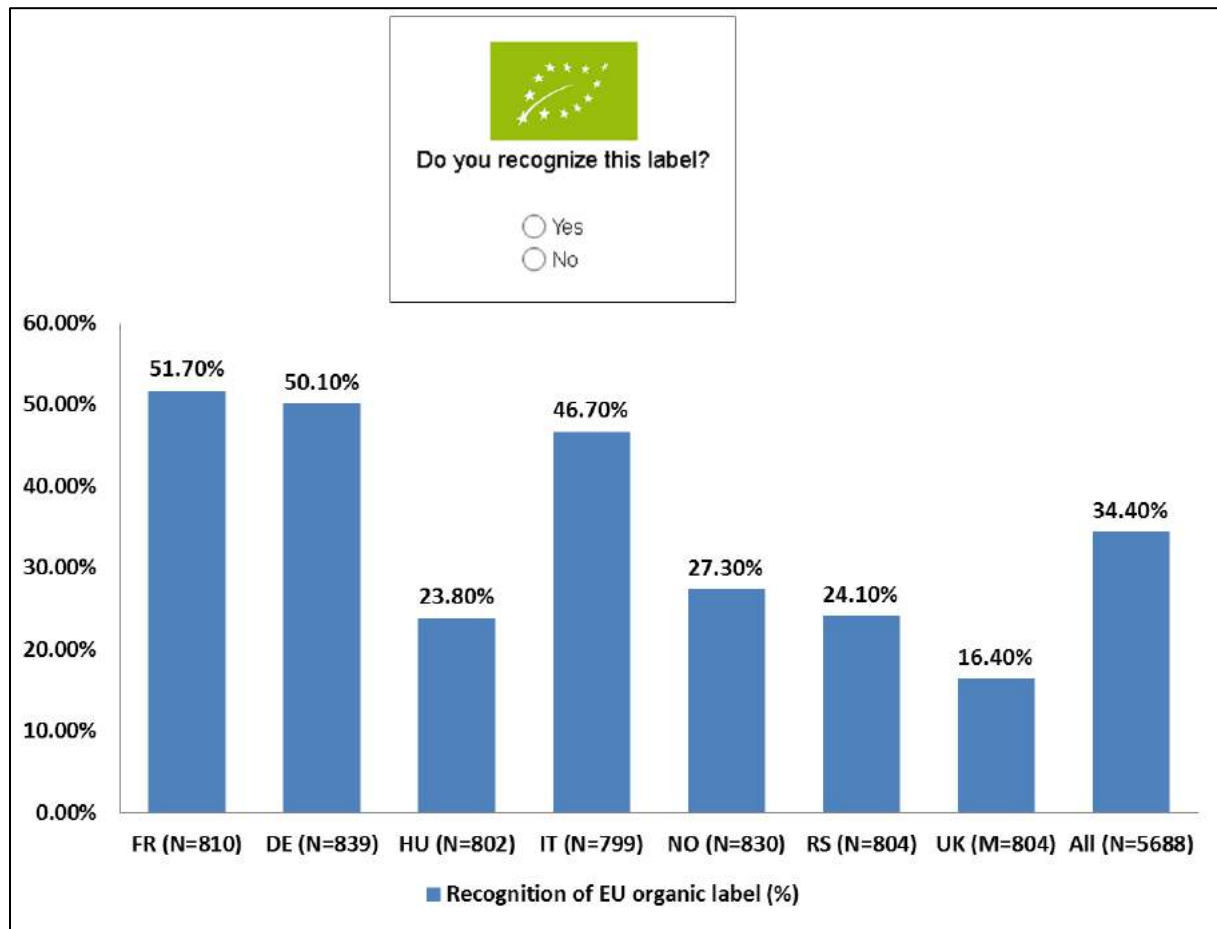


Figure 3. Percentage recognition of the EU organic label

3.3.2.1.2. EU organic label: Use and barriers to use

Without awareness (recognition), a particular brand will not have associations and its use in consumer decision making will be limited (Keller, 1993). This holds accordingly for a label such as the EU organic logo. We consider “use of the label” if consumers states that they sometimes, almost every time or every time take the label into account when doing their grocery shopping.

Figure 4 shows that the level of use of the EU’s organic label is consistent with data on the level of recognition. In fact, figure 5 reveals that in general about 70 % of those being aware of the EU organic label also make use of it. In particular, in Italy the share is high (78%), likely because there is no other public certification or logo for organic products. This share is lower in Norway. This low figure may be explained by the fact that there are few products with this European label on the Norwegian market. It is the national Ø-label which is the most commonly known organic label and the one considered by consumers in their purchase decision. In a national representative survey from 2017 45 % of the respondents stated that they had bought

organic food within the last four weeks (Vittersø & Laitala, 2017), while in a national representative survey from 2013 consumers said that they sometimes (40 %), often (13 %) or always (2 %) buy organic food (Vittersø & Tangeland 2015). Despite growth in sales of organic food in recent years, it represents only 1.5 % of the total turnover in the Norwegian food market (Virke Dagligvare 2015). Organic agriculture is certified according to a governmental regulation which is harmonized with the regulation of organic food in EU. Thus, the content behind the Norwegian Ø-label and the EU organic label is the same.

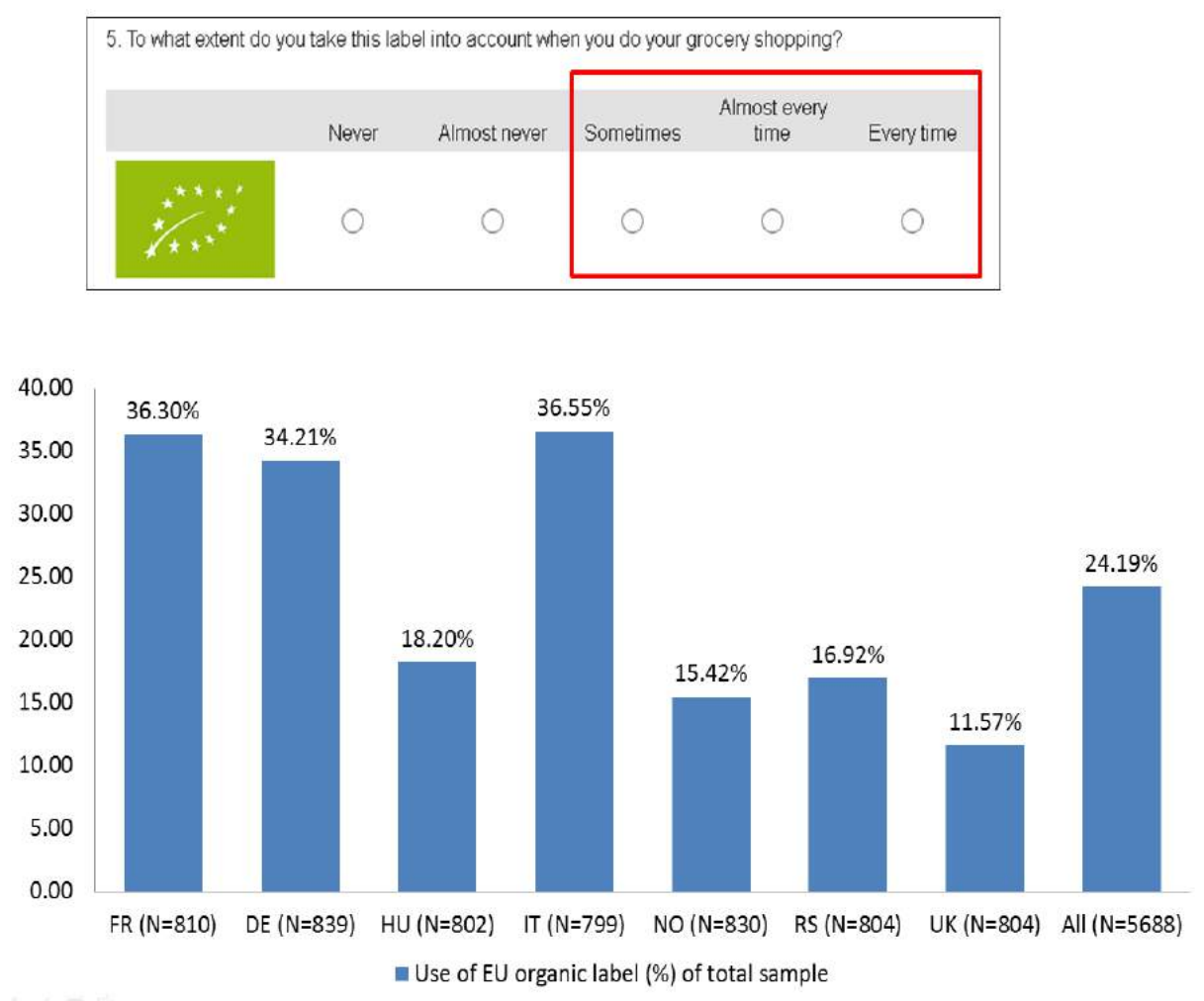


Figure 4. Percentage of consumers taking the EU organic label into account when doing their grocery shopping (out of the total sample)

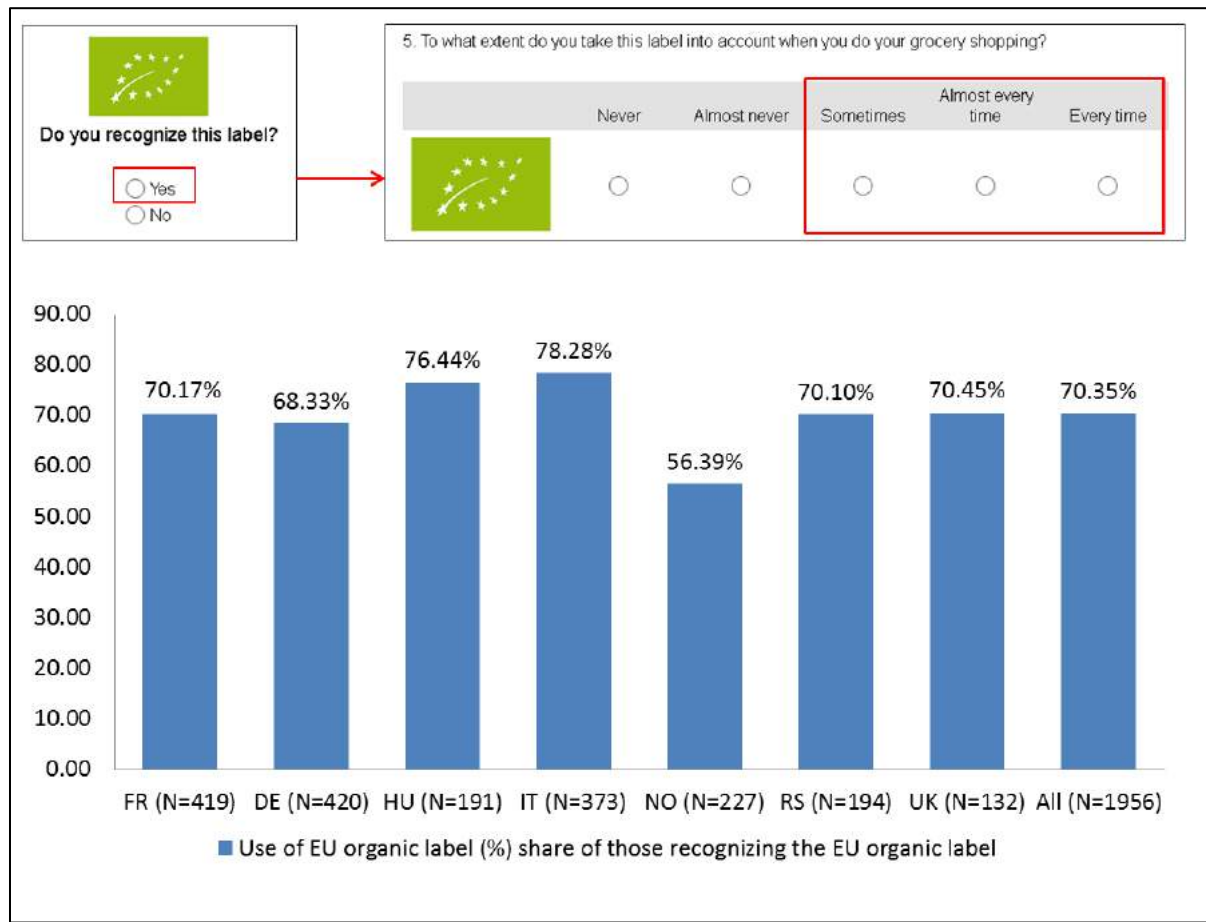


Figure 5. Consumers taking the EU organic label into account when doing their grocery shopping (share of those recognizing the EU organic label)

To better understand why those consumers recognizing the label do not buy products promoted by the EU organic logo we investigated possible barriers and reasons (Table 12). From a list of 15 potential barriers, respondents could tick up to 3 that prevent them from taking the label into account when doing their grocery shopping. The results (Table 12) reveal that ‘I rarely pay attention to product labels while doing grocery shopping’ is for most countries by far the most important reason. This is in accordance with the findings by Grunert (2011) as well as Heidenstrøm et al. (2011) that much information on and around products is ignored by consumers, or at least not consciously perceived when shopping. Other reasons mentioned by a considerable share of respondents in the seven countries are “Products with this label are too expensive” and “Products with or without this label taste the same”. This is in line with the results in section 3.2 that taste and price are important attributes in consumers’ purchase decision. Furthermore a lack of time is an impediment preventing consumers to pay attention to labels.

Though there are considerable similarities, there are also some differences between countries regarding the reasons preventing them from using the organic label when deciding on their purchases. For example, only 8.9 % of Hungarian consumers taking part in the survey mention the price of organic products as a reason for not buying organic products while this share is considerably higher (16.5% to 26.4%) in the other countries. This is surprising. As purchasing power is lower in Hungary than in all other countries except Serbia, it might be that Hungarian respondents are not aware of the higher prices for those labelled products. The barrier 'lack of trust in labels' is highest in Serbia.

The results for Norway are to some extent surprising. Although the statement 'I don't know where to find products with this label' has greater relevance in Norway than in all other countries except Serbia, this does not hold for the statement 'There are only few varieties of products with this label in stores where I do my grocery shopping'. Vittersø & Tangeland (2015) found, however, that the most important barriers to buying organic food for Norwegian consumers are that these foods are not sufficiently available in food stores, that they are perceived as more expensive than conventional food products and that consumers lack sufficient information about organic food. According to Vittersø & Tangeland (2015), there also seemed to be an increasing distrust in the organic Ø-label. Some consumers also questioned the benefits from buying organic food (Vittersø & Tangeland 2015).

Table 12. Barriers to taking the EU organic label into account when making a purchasing decision¹

	FR (N=125)	DE (N=133)	HU (N=45)	IT (N=81)	NO (N=99)	RS (N=58)	UK (N=39)
1 Products with this label are too expensive	33 (26.4%)	22 (16.5%)	4 (8.9%)	20 (24.7%)	19 (19.2%)	13 (22.4%)	8 (20.5%)
2 I do not trust this label	7 (5.6%)	10 (7.5%)	2 (4.4%)	2 (2.5%)	1 (1.0%)	9 (15.5%)	1 (2.6%)
3 I do not trust labels in general	15 (12.0%)	29 (21.8%)	4 (8.9%)	5 (6.2%)	9 (9.1%)	20 (34.5%)	0 (0.0%)
4 Products with or without this label taste the same	15 (12.0%)	25 (18.8%)	1 (2.2%)	14 (17.3%)	29 (29.3%)	11 (19.0%)	3 (7.7%)
5 I rarely pay attention to product labels while doing grocery shopping	46 (36.8%)	57 (42.9%)	25 (55.6%)	20 (24.7%)	42 (42.4%)	21 (36.2%)	12 (30.8%)
6 There are only few varieties of products with this label in stores where I do my grocery shopping	12 (9.6%)	6 (4.5%)	6 (13.3%)	17 (21.0%)	10 (10.1%)	7 (12.1%)	3 (7.7%)
7 I have no time to consider labels while doing my grocery shopping	16 (12.8%)	16 (12.0%)	15 (33.3%)	8 (9.9%)	14 (14.1%)	10 (17.2%)	4 (10.3%)
8 The issue advertised on this label is not important to me	8 (6.4%)	7 (5.3%)	6 (13.3%)	8 (9.9%)	11 (11.1%)	7 (12.1%)	1 (2.6%)
9 I don't know where to find products with this label	6 (4.8%)	6 (4.5%)	6 (13.3%)	7 (8.6%)	15 (15.2%)	9 (15.5%)	1 (2.6%)
10 I am not interested in buying labeled products	10 (8.0%)	14 (10.5%)	3 (6.7%)	6 (7.4%)	3 (3.0%)	4 (6.9%)	4 (10.3%)
11 I don't buy products with this label because the label is just a marketing tool	12 (9.6%)	14 (10.5%)	4 (8.9%)	5 (6.2%)	7 (7.1%)	10 (17.2%)	3 (7.7%)
12 Products with this label do not look good	1 (0.8%)	1 (0.8%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
13 I don't like the taste of products with this label	0 (0.0%)	0 (0.0%)	1 (2.2%)	0 (0.0%)	1 (1.0%)	1 (1.7%)	0 (0.0%)
14 Lack of opportunity in the last 2 weeks	9 (7.2%)	1 (0.8%)	2 (4.4%)	6 (7.4%)	4 (4.0%)	9 (15.5%)	2 (5.1%)
15 None of those reasons	11 (8.8%)	15 (11.3%)	3 (6.7%)	9 (11.1%)	14 (14.1%)	2 (3.4%)	9 (23.1%)

1) From the list of 15 potential barriers respondents could tick up to 3 that prevent them from taking the label into account when doing their grocery shopping.

3.3.2.1.3. Perception of the EU organic label

In section 3.3.1 findings were presented regarding those label characteristics perceived to be important. In this section we investigated the extent to which the European organic logo meets those characteristics. We differentiate between consumers' perception of the EU organic label considering the whole sample (Table 13), only those participants recognizing the label (Table 14) and finally only those using the label (Table 15). As indicated above we consider use of the label if consumers state that they sometimes, almost every time or every time takes the label into account when doing their grocery shopping.

The results in Table 13 indicate that evaluation of the EU organic logo is rather neutral, implying that consumers neither agree nor disagree with most of the statements in all seven countries. On average, evaluation of the EU organic logo is especially low (tendency to disagree) for Norway and Serbia, the two countries in our study that are not part of the European Union.

The following two statements on average received the lowest scores: 'The label helps me to make an informed choice' and 'Products with this label have similar prices to other products'. The latter reflects the reality for organic products in the market and supports the findings in the Eurobarometer 473 (European Commission 2018). The former statement, however, is important, as helping to make more informed choices is what the introduction of labels is all about. Note, though, that the results in Table 13 refer to all participants and thus also those not recognizing the label.

The findings in section 3.3.1 indicate that consumers in all countries except Serbia perceive the trustworthiness of a label as the most important characteristic of a label. Thus, a closer look is necessary to the extent to which the EU organic logo is perceived as trustworthy. Table 13 indicates that trustworthiness of the EU organic logo reflects a mean across countries very close to 3 (average over all countries: 3.12) and thus, consumers neither agree nor disagree with the statement that the EU organic label is trustworthy, with higher values especially in Italy (3.5) and France (3.4). The Norwegian consumers together with the Serbian participants scored lowest on trustworthiness of the label. This finding is in line with scepticism among Norwegian consumers towards the national organic Ø-label (Vittersø & Tangeland 2015).

That analysis of consumers' perception of the organic label considered all respondents irrespective of whether they recognize or use the label. Table 14 shows European consumers' perception of the EU organic labels considering only those who recognize it while Table 15

focuses only on those who, in addition, take the label at least sometimes into account when grocery shopping.

Comparing Tables 13, 14 and 15 reveals the following pattern: the perception of the label improves and the variance in the responses declines from Table 13 to Table 15. For those who recognise the EU's organic label, the degree of understanding is, not surprisingly, higher and views are more positively. Those who recognise the EU's organic label are more likely to see it as trustworthy, attractive and helping them make more informed choices. Recognition of the EU quality label is therefore linked with more positive assessments of it (increasing over all countries and statements by 0.56 from 2.98 to 3.54). The two statements 'The label is easy to understand' and 'The label helps me to make an informed choice' show an above average increase in the mean. At the country level, we can see higher scores especially for the UK, Norway and Serbia and thus those countries with an especially low recognition of the label.

Those who use the EU's organic label (Table 15) are by and large more positive than those who merely recognise it and record the highest degree of agreement with statements that the label is trustworthy, easy to understand and not a means merely for advertising. This group of consumers is most likely to see the EU's organic label as facilitating them to make informed choices.

Table 13. Perception of the EU organic label (total sample) ¹

	FR			DE			HU			IT			NO			RS			UK		
	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.
The label is easy to understand	773	2.93	1.39	784	2.70	1.35	728	2.83	1.34	770	3.04	1.36	710	2.40	1.32	766	2.65	1.40	766	2.37	1.38
The label has a clear logo/symbol	779	3.20	1.31	797	3.35	1.29	736	2.81	1.29	778	3.37	1.27	716	2.71	1.35	762	3.16	1.40	773	3.48	1.26
The label is trustworthy	710	3.36	1.15	780	3.16	1.13	668	3.25	1.12	737	3.50	1.15	618	2.96	1.23	741	2.60	1.23	710	3.00	1.15
The label helps me to make an informed choice	743	3.03	1.36	766	2.78	1.33	711	3.02	1.28	745	3.24	1.33	646	2.55	1.31	747	2.42	1.30	731	2.55	1.34
Products with this label have similar prices to other products without this label	693	2.91	1.24	745	2.92	1.12	649	2.95	1.10	715	2.96	1.16	559	2.83	1.15	691	2.45	1.13	693	2.83	1.15
The label is more than just a means of advertising	720	3.23	1.24	758	3.12	1.21	701	3.18	1.24	744	3.40	1.18	585	2.95	1.20	726	2.87	1.25	708	2.97	1.20
The label is attractive	747	3.16	1.26	792	3.24	1.21	732	3.17	1.28	770	3.18	1.25	668	2.99	1.22	755	3.12	1.27	772	3.11	1.18

- 1) Here are several statements concerning your perception of the label above. Please indicate on a scale from 1 to 5 your opinion on the following statements, 1 being “don’t agree at all” and 5 being “completely agree”. Respondents could also indicate ‘Does not apply’. Respondents who ticked ‘Does not apply’ were not considered in the following analysis which explains that the N differs by statement.

Table 14. Perception of the EU organic label (participants who recognize the label) ¹

	FR			DE			HU			IT			NO			RS			UK		
	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.
The label is easy to understand	409	3.49	1.27	406	3.19	1.27	190	3.49	1.22	364	3.65	1.18	225	3.18	1.26	193	3.57	1.34	128	3.49	1.39
The label has a clear logo/symbol	411	3.70	1.11	409	3.72	1.17	189	3.53	1.06	366	3.87	1.08	225	3.39	1.23	193	3.78	1.28	129	3.94	1.09
The label is trustworthy	394	3.78	1.00	405	3.55	1.04	183	3.87	0.95	361	3.99	0.96	215	3.63	0.96	190	3.46	1.16	127	3.90	1.00
The label helps me to make an informed choice	399	3.58	1.17	400	3.30	1.22	186	3.61	1.09	361	3.86	1.05	218	3.33	1.18	189	3.22	1.22	127	3.69	1.09
Products with this label have similar prices to other products without this label	395	3.14	1.23	400	3.09	1.06	182	3.16	1.02	366	3.14	1.17	202	3.15	1.00	188	2.68	1.18	127	3.36	1.15
The label is more than just a means of advertising	393	3.60	1.14	399	3.50	1.13	184	3.63	1.05	360	3.76	1.02	208	3.46	1.08	190	3.33	1.23	129	3.78	0.98
The label is attractive	399	3.55	1.12	406	3.65	1.06	186	3.59	1.12	362	3.51	1.15	220	3.50	1.02	190	3.45	1.18	130	3.69	1.08

- 1) Here are several statements concerning your perception of the label above. Please indicate on a scale from 1 to 5 your opinion on the following statements, 1 being “don’t agree at all” and 5 being “completely agree”. Respondents could also indicate ‘Does not apply’. Respondents who ticked ‘Does not apply’ were not considered in the following analysis which explains that the N differs by statement.

Table 15. Perception of the EU organic label (participants who use the label)¹

	FR			DE			HU			IT			NO			RS			UK		
	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.
The label is easy to understand	287	3.72	1.19	279	3.48	1.20	145	3.61	1.18	284	3.81	1.12	128	3.64	1.14	136	3.76	1.24	90	3.73	1.29
The label has a clear logo/symbol	288	3.86	1.07	279	3.94	1.04	145	3.62	1.01	285	3.98	1.00	128	3.75	1.11	135	4.02	1.14	91	3.90	1.12
The label is trustworthy	283	3.96	0.95	277	3.86	0.87	142	3.99	0.91	282	4.11	0.92	124	3.93	0.87	133	3.83	1.00	88	4.06	0.95
The label helps me to make an informed choice	285	3.84	1.04	275	3.65	1.06	144	3.76	1.03	281	4.03	1.00	125	3.79	1.01	132	3.52	1.10	89	3.87	0.93
Products with this label have similar prices to other products without this label	284	3.44	1.16	275	3.23	1.04	141	3.33	0.98	286	3.25	1.17	117	3.38	1.06	133	2.87	1.17	90	3.40	1.21
The label is more than just a means of advertising	280	3.78	1.09	274	3.77	1.03	143	3.81	0.99	281	3.86	0.98	119	3.75	0.97	132	3.53	1.14	92	3.80	0.99
The label is attractive	283	3.78	1.05	279	3.93	0.90	142	3.70	1.10	282	3.62	1.13	125	3.84	0.88	132	3.62	1.14	91	3.76	1.08

1) Here are several statements concerning your perception of the label above. Please indicate on a scale from 1 to 5 your opinion on the following statements, 1 being “don’t agree at all” and 5 being “completely agree”. Respondents could also indicate ‘Does not apply’. Respondents who ticked ‘Does not apply’ were not considered in the following analysis which explains that the N differs by statement.

3.3.2.1.4. Knowledge of the EU organic label

A label can especially help consumers to make an informed choice if consumers have some knowledge about the label. To obtain insights with respect to consumers' knowledge we showed consumers 10 statements and asked them which of those statements apply to food products with the organic label (see Table 16). Consumers were asked to select all that apply. They could also indicate that none of the statements applies or that they do not know. The results in Tables 16, 17 and 18 refer to all respondents, who recognize the label and those considering the label when doing their grocery shopping, respectively. Four of the 10 statements clearly refer to the organic label. Those are written in bold letters.

Considering all respondents Table 16 reveals that overall understanding of the EU's organic label is very poor. More than half of Norwegian consumers (54.9%) have no knowledge of the EU-label. This percentage is somewhat lower, though still very high, for the other countries. However, it is not surprising that respondents not recognizing a label are not knowledgeable about a label especially if in the case of the EU organic logo the label is not self-explaining

Focusing on respondents stating that they recognize the label reveals that only a minority selected the statement indicating that they do not know what the label stands for (1.6% in Hungary to 21.1% in Norway; Table 17). The number of respondents ticking this last statement in the list declines even further if considering only those who also make use of the label (0.7% in Hungary to 12.5% in Germany; see Table 18).

However, this does not imply that those latter two groups are indeed knowledgeable with respect to the label. Only approximately 50% of respondents recognizing the EU organic label are aware that the green leaf label is an EU label (see Table 17). The share is somewhat higher for those using the label (see Table 18). An even lower number of respondents is aware that the logo implies that the product carrying this label is produced according to the EU organic guidelines (see Tables 17 and 18). These shares further decline regarding the statement a product with this label 'is certified by a body independent of the producer and retailer'. Finally, the last correct statement 'in case of livestock products, higher animal welfare standards

apply’¹² is much less frequently ticked than several of the statements that are wrong in the sense that the EU organic label does not stand for what is mentioned in the statement.¹³

Though knowledge is in generally moderate to low, differences exist between countries. Overall, our findings reveal confusion regarding what the EU organic logo stands for also in the sub-samples of those who recognise and those who recognize and use the EU’s organic label in their decision making.

¹² In the Special Eurobarometer 473 consumers were asked the following question: Do you agree or not with the following statement about food products coming from ‘organic’ agriculture? *They respect higher animal welfare standards than other food products*. Consumers could tick ‘Totally agree’, ‘Tend to agree’, ‘Tend to disagree’, ‘Totally disagree’ and ‘Don’t know’. The share of those consumers totally agreeing is 18% for France, 32% for Germany, 28% for Hungary, 30% for Italy and 19% for the UK. Those shares are higher compared to the percentage of respondents in our study who correctly indicate that the statement regarding higher animal welfare applies to the organic label. However, the way the question is asked differs considerable and thus results are not comparable.

¹³ Another study has shown that consumers associate the attributes “minimum use of fertilizers” (28%), “absence of GMOs” (28%), and for animal welfare (14.5%) with the EU organic certification (Aprile et al., 2009).

Table 16. Knowledge of EU organic label (total sample)¹

		FR (N=810)	DE (N=839)	HU (N=802)	IT (N=799)	NO (N=830)	RS (N=804)	UK (N=804)
1	the product has been produced, processed and prepared in a specific geographical area that defines significantly its quality or properties	90 (11.1%)	105 (12.5%)	113 (14.1%)	105 (13.1%)	58 (7.0%)	126 (15.7%)	68 (8.5%)
2	at least one of the stages of production, processing or preparation takes place in a determined geographical area that influences the quality or a specific property of the product	86 (10.6%)	93 (11.1%)	64 (8.0%)	83 (10.4%)	41 (4.9%)	63 (7.8%)	74 (9.2%)
3	the product is of specific character in that either its raw materials, production method or processing is traditional	82 (10.1%)	67 (8.0%)	83 (10.3%)	106 (13.3%)	46 (5.5%)	75 (9.3%)	60 (7.5%)
4	it is certified by a body independent of the producer and retailer	104 (12.8%)	65 (7.7%)	67 (8.4%)	85 (10.6%)	55 (6.6%)	88 (10.9%)	62(7.7%)
5	it is an EU label	320 (39.5%)	279 (33.3%)	362 (45.1%)	345 (43.2%)	197 (23.7%)	254 (31.6%)	202 (25.1%)
6	this product is produced according to the EU organic guidelines	212 (26.2%)	217 (25.9%)	232 (28.9%)	264 (33.0%)	165 (19.9%)	356 (44.3%)	124 (15.4%)
7	stricter rules than the minimum required by law have been followed regarding food safety	<i>76 (9.4%)</i>	<i>111 (13.2%)</i>	<i>78 (9.7%)</i>	<i>77 (9.6%)</i>	<i>52 (6.3%)</i>	<i>120 (14.9%)</i>	<i>34 (4.2%)</i>
8	this is a product of superior nutritional value	43 (5.3%)	18 (2.1%)	23 (2.9%)	34 (4.3%)	32 (3.9%)	42 (5.2%)	36 (4.5%)
9	the region where the product is produced/processed is specified	50 (6.2%)	39 (4.6%)	61 (7.6%)	34 (4.3%)	22 (2.7%)	33 (4.1%)	22 (2.7%)
10	in case of livestock products higher animal welfare standards apply	63 (7.8%)	49 (5.8%)	34 (4.2%)	37 (4.6%)	28 (3.4%)	45 (5.6%)	31 (3.9%)
11	None of the above	25 (3.1%)	62 (7.4%)	20 (2.5%)	28 (3.5%)	50 (6.0%)	21 (2.6%)	72 (9.0%)
12	I do not know	283 (34.9%)	293 (34.9%)	251 (31.3%)	196 (24.5%)	456 (54.9%)	230 (28.6%)	375 (46.6%)

1) The question was as follows: Below are several statements. Which of the following do you think apply to food products with this label? Please select all that apply. Those statements applying to food product with the respective label are bold. The statements in italics can be interpreted heterogeneously and are considered as neither right nor wrong.

Table 17. Knowledge of EU organic label (participants who recognize the label) ¹

		FR (N=419)	DE (N=420)	HU (N=191)	IT (N=373)	NO (N=227)	RS (N=194)	UK (N=132)
1	the product has been produced, processed and prepared in a specific geographical area that defines significantly its quality or properties	66 (15.8%)	63 (15.0%)	49 (25.7%)	71 (19.0%)	34 (15.0%)	44 (22.7%)	29 (22.0%)
2	at least one of the stages of production, processing or preparation takes place in a determined geographical area that influences the quality or a specific property of the product	56 (13.4%)	57 (13.6%)	23 (12.0%)	51 (13.7%)	20 (8.8%)	29 (14.9%)	39 (29.5%)
3	the product is of specific character in that either its raw materials, production method or processing is traditional	62 (14.8%)	40 (9.5%)	34 (17.8%)	70 (18.8%)	27 (11.9%)	25 (12.9%)	24 (18.2%)
4	it is certified by a body independent of the producer and retailer	83 (19.8%)	50 (11.9%)	30 (15.7%)	57 (15.3%)	27 (11.9%)	34 (17.5%)	27 (20.5%)
5	it is an EU label	234 (55.8%)	184 (43.8%)	131 (68.6%)	193 (51.7%)	99 (43.6%)	81 (41.8%)	48 (36.4%)
6	this product is produced according to the EU organic guidelines	169 (40.3%)	161 (38.3%)	97 (50.8%)	183 (49.1%)	107 (47.1%)	122 (62.9%)	47 (35.6%)
7	stricter rules than the minimum required by law have been followed regarding food safety	<i>62 (14.8%)</i>	<i>88 (21.0%)</i>	<i>40 (20.9%)</i>	<i>48 (12.9%)</i>	<i>31 (13.7%)</i>	<i>52 (26.8%)</i>	<i>18 (13.6%)</i>
8	this is a product of superior nutritional value	33 (7.9%)	11 (2.6%)	9 (4.7%)	18 (4.8%)	15 (6.6%)	16 (8.2%)	15 (11.4%)
9	the region where the product is produced/processed is specified	36 (8.6%)	22 (5.2%)	22 (11.5%)	22 (5.9%)	12 (5.3%)	8 (4.1%)	7 (5.3%)
10	in case of livestock products higher animal welfare standards apply	53 (12.6%)	39 (9.3%)	17 (8.9%)	24 (6.4%)	18 (7.9%)	18 (9.3%)	11 (8.3%)
11	None of the above	4 (1.0%)	13 (3.1%)	4 (2.1%)	2 (0.5%)	10 (4.4%)	4 (2.1%)	2 (1.5%)
12	I do not know	61 (14.6%)	87 (20.7%)	3 (1.6%)	28 (7.5%)	48 (21.1%)	9 (4.6%)	19 (14.4%)

1) The question was as follows: Below are several statements. Which of the following do you think apply to food products with this label? Please select all that apply. Those statements applying to food product with the respective label are bold. The statements in italics can be interpreted heterogeneously and are considered as neither right nor wrong.

Table 18. Knowledge of EU organic label (participants who use the label) ¹

		FR (N=294)	DE (N=287)	HU (N=146)	IT (N=292)	NO (N=128)	RS (N=136)	UK (N=93)
1	the product has been produced, processed and prepared in a specific geographical area that defines significantly its quality or properties	51 (17.3%)	48 (16.7%)	43 (29.5%)	59 (20.2%)	25 (19.5%)	33 (24.3%)	25 (26.9%)
2	at least one of the stages of production, processing or preparation takes place in a determined geographical area that influences the quality or a specific property of the product	46 (15.6%)	48 (16.7%)	19 (13.0%)	41 (14.0%)	14 (10.9%)	22 (16.2%)	31 (33.3%)
3	the product is of specific character in that either its raw materials, production method or processing is traditional	45 (15.3%)	33 (11.5%)	31 (21.2%)	62 (21.2%)	20 (15.6%)	21 (15.4%)	20 (21.5%)
4	it is certified by a body independent of the producer and retailer	65 (22.1%)	46 (16.0%)	25 (17.1%)	48 (16.4%)	19 (14.8%)	29 (21.3%)	23 (24.7%)
5	it is an EU label	170 (57.8%)	136 (47.4%)	102 (69.9%)	151 (51.7%)	56 (43.8%)	52 (38.2%)	35 (37.6%)
6	this product is produced according to the EU organic guidelines	126 (42.9%)	122 (42.5%)	71 (48.6%)	141 (48.3%)	65 (50.8%)	91 (66.9%)	34 (36.6%)
7	stricter rules than the minimum required by law have been followed regarding food safety	47 (16.0%)	68 (23.7%)	34 (23.3%)	40 (13.7%)	23 (18.0%)	38 (27.9%)	16 (17.2%)
8	this is a product of superior nutritional value	29 (9.9%)	11 (3.8%)	9 (6.2%)	14 (4.8%)	13 (10.2%)	13 (9.6%)	11 (11.8%)
9	the region where the product is produced/processed is specified	27 (9.2%)	17 (5.9%)	16 (11.0%)	17 (5.8%)	7 (5.5%)	7 (5.1%)	6 (6.5%)
10	in case of livestock products higher animal welfare standards apply	45 (15.3%)	37 (12.9%)	15 (10.3%)	20 (6.8%)	13 (10.2%)	14 (10.3%)	8 (8.6%)
11	None of the above	3 (1.0%)	6 (2.1%)	3 (2.1%)	1 (0.3%)	6 (4.7%)	3 (2.2%)	2 (2.2%)
12	I do not know	30 (10.2%)	36 (12.5%)	1 (0.7%)	23 (7.9%)	15 (11.7%)	5 (3.7%)	8 (8.6%)

- 1) The question was as follows: Below are several statements. Which of the following do you think apply to food products with this label? Please select all that apply. Those statements applying to food product with the respective label are bold. The statements in italics can be interpreted heterogeneously and are considered as neither right nor wrong.

3.3.2.2. EU PGI label



Figure 6. EU PGI Label

“The Protected Geographical Indication (PGI) logo underlines the local know how and the close link between a product and the place or region. For registered products, at least one of the stages of production, processing or preparation takes place in the region, but for example the ingredients need not necessarily come from that geographical area.”¹⁴ The standards which have to be met are written down in the EU regulation no. 1151/2012.

3.3.2.2.1. Recognition of the EU PGI label

As for the EU organic label (section 3.3.2.1.1) we first investigate consumers' recognition of the PGI label. Figure 7 reveals that recognition varies considerably, from a low of 7.2% in Norway to a high share of 69.3% in Italy. The poor recognition of the PGI label in Norway is not surprising as these labels are quite seldom present on the Norwegian food market. Compared with the Special Eurobarometer 473 (European Commission 2018)¹⁵, recognition is (considerably) higher in our survey for all countries covered in the EB 473 2012 survey^{16,17} Norway and Serbia were not considered in the Special Eurobarometer 473. Currently, the UK has 40 registered PGI products, the most important of which in terms of sales are Yorkshire

¹⁴ (https://ec.europa.eu/agriculture/quality/schemes/foodstuff_en , last access: 05.02.18)

¹⁵ The wording of the question in the Special Eurobarometer 473 (European Commission 2018) was slightly different. Consumers saw a number of logos (EU organic logo, PDO, PGI, TSG and Fairtrade) and were asked ‘Which of the logos on this card are you aware of?’ In the survey of the present study respondents saw a label and were asked ‘Do you recognize this label?’

¹⁶ The results of Teuber et al. (2011) also point to a low awareness of the EU PDO and PGI logos by German consumers.

¹⁷ Recognition according to the Special Eurobarometer 473: France 38%, Germany 12%, Hungary 31%, Italy 33%, UK 8% (European Commission 2018).

Wensleydale Cheese, Welsh Lamb, Welsh Beef, Scottish Beef and Scottish Lamb as well as Cornish Pasties and Melton Mowbray Pork Pie. In Germany, the number of registered PGI products is higher (77). Recognition of the PGI label is especially high in Italy and France. This is in accordance with the larger number of products registered with this label in both countries (Italy 126; France 141). Currently, there are 126 registered PGI products in Italy, in particular fruits and vegetables (75), processed meat products (20), and bread products (10).¹⁸

34.7% of Serbian respondents state awareness of the EU PGI Label, which is above the seven country average of 32.2%. This result is surprising as so far no registered Serbian PGI product exists on the market. Thus, recognition can only be based on imported products with the PGI label.

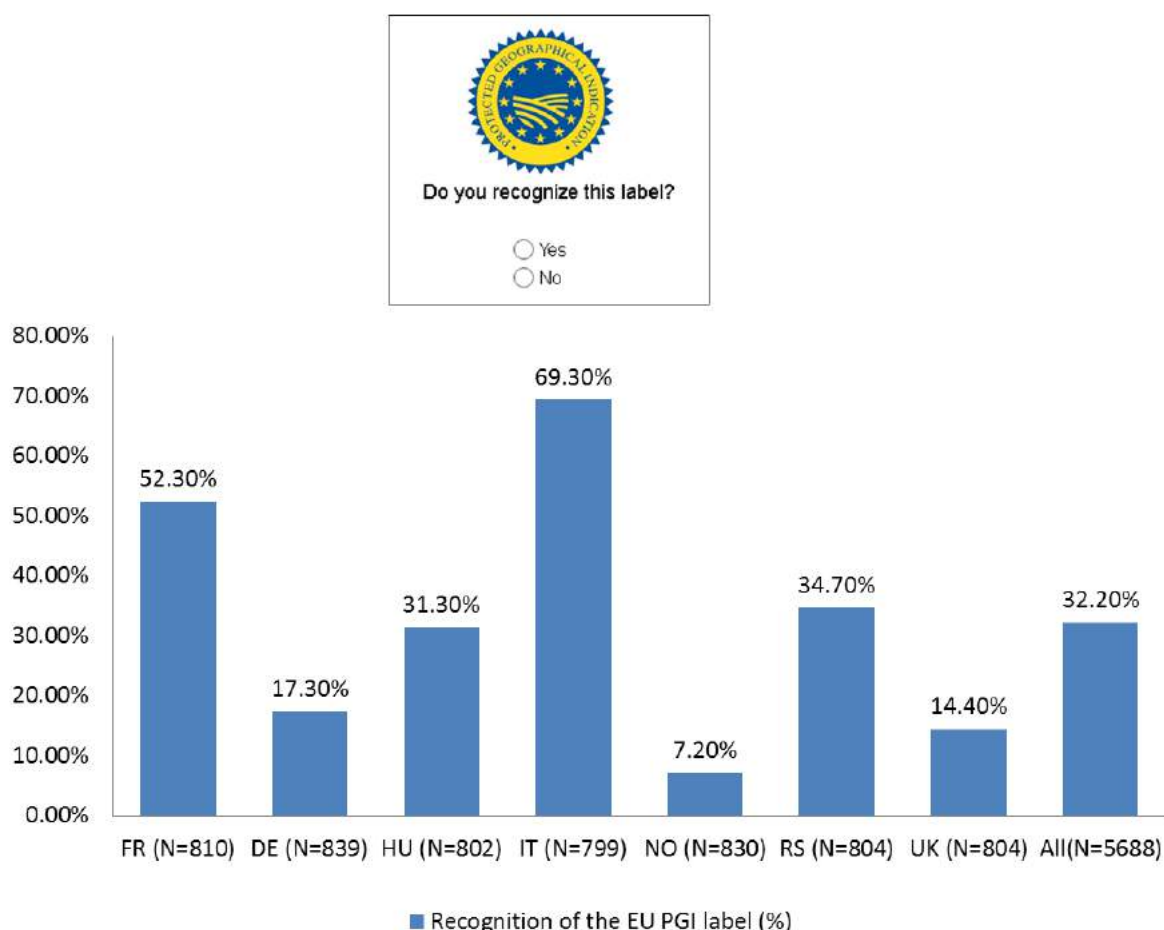


Figure 7. Percentage recognition of the EU PGI label

¹⁸ DOOR Database <http://ec.europa.eu/agriculture/quality/door/list.html>

3.3.2.2.2. PGI label: Use and barriers to use

Figure 8 shows that the level of use of the EU’s PGI label is consistent with data on the level of recognition. In fact, Figure 9 reveals that between 61% in Serbia to 84% in Italy of respondents recognizing the PGI label take it into account when purchasing food. These results are similar to those for the organic label in that the large majority of those recognizing a label may at least sometimes use it.¹⁹ Taking the label into account when doing grocery shopping, however, is only possible when products with those labels are on the supermarket’s shelves. Given the larger number of PGI-registered products in Italy and France this would be more the case in these two countries while especially in Serbia, with no PGI-registered products of its own and only imported PGI products available, a lower percentage of use would be expected, even among respondents recognizing the label.

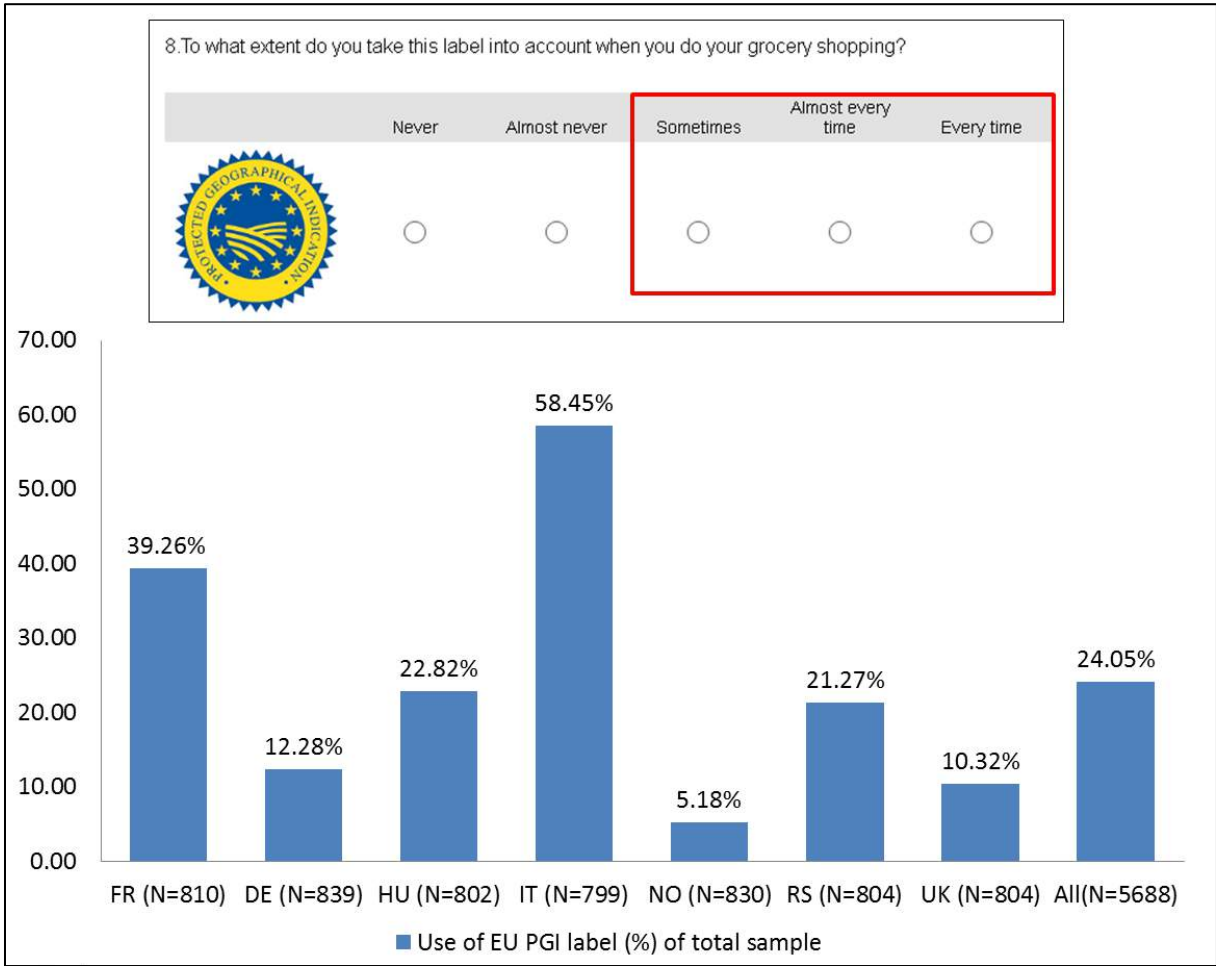


Figure 8. Percentage of consumers taking the EU PGI label into account when doing their grocery shopping (out of the total sample)

¹⁹ We consider “use of the label” if the consumer states that (s)he sometimes, almost every time or every time takes the label into account when doing her/his grocery shopping.

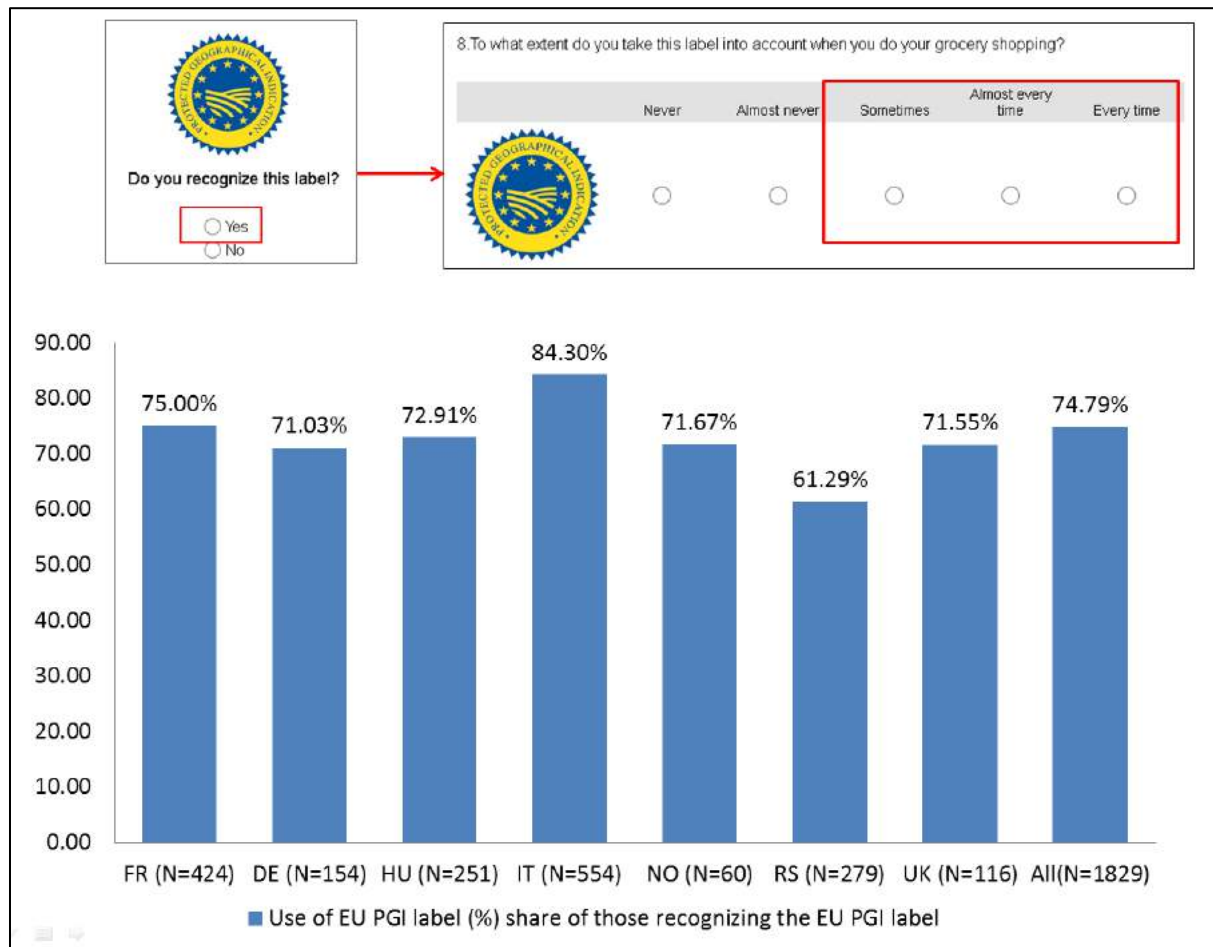


Figure 9. Consumers taking the EU PGI label into account when doing their grocery shopping (share of those recognizing the EU PGI label)

To better understand why consumers who recognize the label do not buy products promoted by the EU PGI²⁰, we investigated barriers and reasons for this (see Table 19). From a list of 15 potential barriers respondents could tick up to 3 that prevent them from taking the label into account when doing their grocery shopping. In fact, the majority of respondents ticked either 1 or 2 reasons (average 1.5 in the UK to 2.1 in Serbia). The results (Table 19) reveal a similar picture as for the EU organic label (see section 3.3.2.1.2 and Table 12). The statement 'I rarely pay attention to product labels while doing grocery shopping' is again the most important reason (see discussion in 3.3.2.1.2). Other reasons mentioned by a considerable percentage of respondents in the seven countries are 'Products with or without this label taste the same', 'Products with this label are too expensive', 'There are only a few varieties of products with this label in stores where I do my grocery shopping' and 'I have no time to consider labels while

²⁰ Those consumers were asked who stated that they never or almost never buy products with the EU PGI label.

doing my grocery shopping'. As indicated for organic products, besides similarities we also find some differences between countries regarding the reasons preventing consumers from using the PGI label when doing their purchase decision. For example the statement 'Products with this label are too expensive' were especially ticked by respondents from France (22.6) and Italy (25.3%) and thus the two countries in which many respective products are already on the market and thus a higher familiarity with those products can be assumed. We also see that the general trust in labels differs considerably between countries, with a high percentage of consumers in Germany (21.4%) and Serbia (20.4%) and a low share of respondents in the UK (3%) indicating this as a reason for not buying products with a PGI label. However, it should be noted that the absolute numbers of those answering this question²¹ is rather low in some countries, e.g. only 17 in Norway. Thus, for those countries the respective results should be treated with caution.

²¹ only those recognizing but not using the label

Table 19. Barriers to taking the PGI label into account when making a purchasing decision¹

	FR (N=106)	DE (N=42)	HU (N=68)	IT (N=87)	NO (N=17)	RS (N=108)	UK (N=33)
1 Products with this label are too expensive	24 (22.6%)	4 (9.5%)	9 (13.2%)	22 (25.3%)	3 (17.6%)	16(14.8%)	6 (18.2%)
2 I do not trust this label	1 (0.9%)	3 (7.1%)	2 (2.9%)	1 (1.1%)	0 (0.0%)	10 (9.3%)	0 (0.0%)
3 I do not trust labels in general	9 (8.5%)	9 (21.4%)	10 (14.7%)	12 (13.8%)	3 (17.6%)	22 (20.4%)	1 (3.0%)
4 Products with or without this label taste the same	15 (14.2%)	7 (16.7%)	12 (17.6%)	13 (14.9%)	5 (29.4%)	15 (13.9%)	6 (18.2%)
5 I rarely pay attention to product labels while doing grocery shopping	34 (32.1%)	20 (47.6%)	22 (32.4%)	29 (33.3%)	6 (35.3%)	47 (43.5%)	10 (30.3%)
6 There are only few varieties of products with this label in stores where I do my grocery shopping	15 (14.2%)	5 (11.9%)	20 (29.4%)	19 (21.8%)	2 (11.8%)	22 (20.4%)	8 (24.2%)
7 I have no time to consider labels while doing my grocery shopping	14 (13.2%)	4 (9.5%)	12 (17.6%)	9 (10.3%)	0 (0.0%)	23 (21.3%)	3 (9.1%)
8 The issue advertised on this label is not important to me	7 (6.6%)	8 (19.0%)	7 (10.3%)	9 (10.3%)	3 (17.6%)	20 (18.5%)	5 (15.2%)
9 I don't know where to find products with this label	5 (4.7%)	2 (4.8%)	12 (17.6%)	5 (5.7%)	0 (0.0%)	18 (16.7%)	1 (3.0%)
10 I am not interested in buying labeled products	6 (5.7%)	5 (11.9%)	9 (13.2%)	9 (10.3%)	1 (5.9%)	6 (5.6%)	3 (9.1%)
11 I don't buy products with this label because the label is just a marketing tool	7 (6.6%)	4 (9.5%)	9 (13.2%)	3 (3.4%)	1 (5.9%)	9 (8.3%)	1 (3.0%)
12 Products with this label do not look good	1 (0.9%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
13 I don't like the taste of products with this label	0 (0.0%)	1 (2.4%)	0 (0.0%)	0 (0.0%)	2 (11.8%)	0 (0.0%)	0 (0.0%)
14 Lack of opportunity in the last 2 weeks	15 (14.2%)	4 (9.5%)	5 (7.4%)	14 (16.1%)	4 (23.5%)	15 (13.9%)	1 (3.0%)
15 None of those reasons	12 (11.3%)	2 (4.8%)	5 (7.4%)	7 (8.0%)	1 (5.9%)	5 (4.6%)	3 (9.1%)

1) From the list of 15 potential barriers respondents could tick up to 3 that prevent them from taking the label into account when doing their grocery shopping.

In section 3.3.1 findings were presented regarding the label characteristics perceived to be important. Here we investigate the extent to which the European PGI label meets those characteristics. We differentiate between consumers' perceptions of the EU PGI label considering the whole sample (Table 20), only the participants recognizing the label (Table 21) and finally only those using the label (Table 22). As indicated above, we consider use of the label if consumer state that they sometimes, almost every time or every time take the label into account when doing their grocery shopping.

The results in Table 20 (total sample) indicate that evaluation of the EU PGI is slightly positive, on a scale from 1 to 5, with 1 being "don't agree at all" and 5 being "completely agree", the average score over all countries and statements was slightly above the mid-point: 3.26. Heterogeneity exists amongst the countries with a rather positive overall evaluation in Italy (3.77) and France (3.51) and a slightly negative one in Norway (2.77). According to all respondents (average over all countries), clarity is a strength of the label; indeed, the label is easy to understand (3.38) and the label has a clear logo (3.47) were the most agreed items. The scores for the Italian respondents were especially high for the two items at 4.11 and 3.87, respectively. Respondents agreed least with the statement that products with this label have similar prices if compared to similar non-labelled products (average 2.99), with especially low scores in Serbia (2.65) and Norway (2.74). Trustworthiness, the characteristic of a label respondents perceive overall to be most important (see section 3.3.1) receives only a slightly positive evaluation over all countries (3.31) with, however, considerable differences amongst countries, being close to 4 in Italy but below 3 in Norway and Serbia.

Considering only the respondents recognizing (Table 21) or recognizing and using (Table 22) the PGI label leads to a more positive perception (over all countries and statements 3.76 and 3.92, respectively). This holds true for all statements in all countries. Again, however, it is notable that in some countries the groups recognizing and especially those recognizing and using the label are rather small.

Overall the PGI label is more positively evaluated than the EU organic label. Consumers especially perceive the PGI label to be more easily understandable than the EU organic logo. In addition, they agree to a greater extent that the label helps them to make an informed choice. One reason for the different perception could be that the EU organic label is complicated by several national organic schemes in the countries under investigation (e.g. UK), that do not exist in most of the analysed countries regarding a national PGI or PDO schemes.

Table 20. Perception of the EU PGI label (total sample) ¹

	FR			DE			HU			IT			NO			RS			UK		
	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.
The label is easy to understand	781	3.72	1.16	791	3.09	1.29	764	3.57	1.26	788	4.11	1.01	670	2.62	1.30	768	3.47	1.39	771	3.05	1.30
The label has a clear logo/symbol	778	3.65	1.11	797	3.26	1.22	761	3.53	1.23	787	3.97	1.04	669	2.72	1.26	772	3.55	1.28	779	3.61	1.10
The label is trustworthy	733	3.63	1.09	766	3.09	1.10	714	3.48	1.05	770	3.93	0.96	584	2.81	1.19	741	2.92	1.25	721	3.31	1.07
The label helps me to make an informed choice	757	3.52	1.14	767	2.96	1.20	749	3.55	1.15	781	3.98	1.00	606	2.76	1.26	746	2.94	1.27	754	3.10	1.21
Products with this label have similar prices to other products without this label	718	3.17	1.15	722	2.93	1.02	671	3.13	1.05	758	3.23	1.13	486	2.74	1.12	708	2.65	1.15	704	3.10	1.06
The label is more than just a means of advertising	746	3.49	1.16	756	3.08	1.15	722	3.51	1.12	778	3.74	1.05	546	2.88	1.17	738	2.98	1.22	733	3.26	1.11
The label is attractive	757	3.38	1.13	789	3.01	1.14	745	3.37	1.15	779	3.41	1.14	615	2.74	1.15	762	3.05	1.25	773	3.14	1.12

1) Here are several statements concerning your perception of the label above. Please indicate on a scale from 1 to 5 your opinion on the following statements, 1 being “don’t agree at all” and 5 being “completely agree”.

Table 21. Perception of the EU PGI label (participants who recognize the label) ¹

	FR			DE			HU			IT			NO			RS			UK		
	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.
The label is easy to understand	421	4.08	0.99	144	4.01	1.08	248	3.97	1.12	550	4.31	0.84	56	3.88	1.05	274	4.14	1.09	113	3.86	1.20
The label has a clear logo/symbol	418	4.00	0.96	144	3.96	1.04	247	3.94	1.12	548	4.16	0.91	57	3.81	1.03	277	4.12	1.04	116	4.20	0.84
The label is trustworthy	409	4.04	0.93	143	3.87	1.01	245	3.87	0.96	546	4.12	0.87	56	3.70	0.95	272	3.53	1.12	111	4.05	0.93
The label helps me to make an informed choice	412	3.93	0.98	141	3.80	1.08	245	3.87	1.02	547	4.15	0.89	55	3.65	1.14	271	3.46	1.20	115	3.87	1.04
Products with this label have similar prices to other products without this label	407	3.36	1.16	136	3.38	1.05	234	3.21	1.09	538	3.32	1.16	52	3.44	1.06	268	2.90	1.18	108	3.68	1.09
The label is more than just a means of advertising	412	3.73	1.12	140	3.74	1.21	242	3.73	1.06	547	3.87	1.02	53	3.43	1.10	271	3.25	1.21	111	3.91	1.06
The label is attractive	411	3.70	1.05	142	3.66	1.12	245	3.67	1.07	546	3.53	1.10	55	3.40	1.18	276	3.42	1.20	115	3.68	1.06

- 1) Here are several statements concerning your perception of the label above. Please indicate on a scale from 1 to 5 your opinion on the following statements, 1 being “don’t agree at all” and 5 being “completely agree”.

Table 22. Perception of the EU PGI label (participants who use the label) ¹

	FR			DE			HU			IT			NO			RS			UK		
	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.
The label is easy to understand	316	4.18	0.91	102	4.24	0.90	181	4.06	1.00	464	4.38	0.76	41	3.83	1.02	169	4.34	0.93	82	4.12	1.01
The label has a clear logo/symbol	314	4.14	0.90	102	4.19	0.88	181	4.10	0.93	462	4.22	0.87	41	3.78	0.96	171	4.26	0.93	83	4.20	0.85
The label is trustworthy	309	4.18	0.86	101	4.09	0.88	180	4.03	0.89	461	4.22	0.79	41	3.76	0.77	168	3.86	0.99	81	4.20	0.84
The label helps me to make an informed choice	311	4.11	0.89	100	4.10	0.88	179	4.07	0.88	462	4.23	0.83	41	3.78	1.01	167	3.77	1.02	82	4.13	0.90
Products with this label have similar prices to other products without this label	311	3.48	1.15	96	3.59	1.02	172	3.38	1.08	455	3.40	1.13	40	3.55	0.96	168	3.08	1.19	79	3.87	0.99
The label is more than just a means of advertising	310	3.82	1.13	98	3.99	1.06	176	3.93	0.96	461	3.95	1.00	38	3.66	0.88	168	3.45	1.21	80	4.09	0.96
The label is attractive	308	3.84	1.02	100	3.95	0.96	179	3.85	0.97	461	3.62	1.09	40	3.63	0.98	170	3.65	1.15	82	3.79	1.04

1) Here are several statements concerning your perception of the label above. Please indicate on a scale from 1 to 5 your opinion on the following statements, 1 being “don’t agree at all” and 5 being “completely agree”.

3.3.2.2.3. Knowledge of the EU PGI label

Consumers' knowledge was also investigated with respect to the PGI label by showing consumers the same 10 statements as in the case of the organic label and asking them which of the statements apply to food products with the PGI label (see Table 23). Consumers were asked to select all that apply. They could also indicate that none of the statements apply or that they do not know. The results in Tables 23, 24 and 25 refer, respectively, to all respondents, who recognize the label and those considering the label when doing their grocery shopping. Three of the 10 statements clearly refer to the PGI label. Those are shown in bold letters.

Considering all respondents, Table 23 shows that overall understanding of the PGI label is very poor. More than half of Norwegian consumers (56.0%) have no knowledge of the PGI label. This percentage is somewhat lower in the UK (32.5%), Germany (29.8%) and Hungary (25.2%). Only in Italy is the share of respondents indicating that they do not know what the label means below 10%. As it is not surprising that those not recognizing a label are not knowledgeable about a label we take a closer look at the results for respondents recognizing (Table 24) and recognizing as well as using the label (Table 25).

Focusing on respondents who stated to recognize/recognize and use the label reveals that in all countries the percentage of those indicating that they do not know what the label means does not exceed 10.0%. However, our results show that subjective knowledge considerably differs from factual knowledge.

The data in Tables 24 and 25 demonstrate that there is evidently a high degree of confusion between PDO and PGI labels in all countries as the majority of respondents think that the PDO criteria (statement 1 in Tables 24 and 25) define the PGI label, rather than the correct PGI rule (statement 2 in the respective Tables). A much smaller share of respondents (between 25% and 45% depending on the country and whether we consider recognition or recognition and use) correctly indicated that at least one of the stages of production, processing or preparation takes place in a determined geographical area. Regarding the other 'true' statements (it is certified by a body independent of the producer and retailer; it is an EU label) the respective percentage of correct answers is even considerably lower. Aprile et al. (2009) showed for Italy that although respondents were habitual consumers of food products protected by European PDO or PGI designations, they had little awareness of the meaning of those labels.

Though knowledge is in generally moderate to low, differences exist between countries. Overall, our findings reveal a lack of clarity regarding what the EU PGI stands for. This holds also in the sub-samples of those who recognise and those who recognize and use the PGI label in their decision making.

Table 23. Knowledge of EU PGI label (total sample) ¹

		FR (N=810)		DE (N=839)		HU (N=802)		IT (N=799)		NO (N=830)		RS (N=804)		UK (N=804)	
1	the product has been produced, processed and prepared in a specific geographical area that defines significantly its quality or properties	378	(46.7%)	331	(39.5%)	314	(39.2%)	441	(55.2%)	178	(21.4%)	470	(58.5%)	288	(35.8%)
2	at least one of the stages of production, processing or preparation takes place in a determined geographical area that influences the quality or a specific property of the product	215	(26.5%)	193	(23.0%)	189	(23.6%)	223	(27.9%)	98	(11.8%)	243	(30.2%)	167	(20.8%)
3	the product is of specific character in that either its raw materials, production method or processing is traditional	109	(13.5%)	57	(6.8%)	100	(12.5%)	123	(15.4%)	52	(6.3%)	101	(12.6%)	64	(8.0%)
4	it is certified by a body independent of the producer and retailer	123	(15.2%)	53	(6.3%)	86	(10.7%)	101	(12.6%)	39	(4.7%)	95	(11.8%)	82	(10.2%)
5	it is an EU label	136	(16.8%)	128	(15.3%)	161	(20.1%)	161	(20.2%)	98	(11.8%)	168	(20.9%)	151	(18.8%)
6	this product is produced according to the EU organic guidelines	51	(6.3%)	51	(6.1%)	77	(9.6%)	64	(8.0%)	35	(4.2%)	105	(13.1%)	56	(7.0%)
7	stricter rules than the minimum required by law have been followed regarding food safety	59	(7.3%)	53	(6.3%)	82	(10.2%)	70	(8.8%)	26	(3.1%)	82	(10.2%)	51	(6.3%)
8	this is a product of superior nutritional value	39	(4.8%)	21	(2.5%)	24	(3.0%)	42	(5.3%)	17	(2.0%)	26	(3.2%)	29	(3.6%)
9	<i>the region where the product is produced/processed is specified</i>	200	(24.7%)	136	(16.2%)	174	(21.7%)	158	(19.8%)	67	(8.1%)	107	(13.3%)	83	(10.3%)
10	in case of livestock products higher animal welfare standards apply	43	(5.3%)	11	(1.3%)	35	(4.4%)	33	(4.1%)	15	(1.8%)	28	(3.5%)	18	(2.2%)
11	None of the above	16	(2.0%)	43	(5.1%)	14	(1.7%)	11	(1.4%)	34	(4.1%)	22	(2.7%)	34	(4.2%)
12	I do not know	158	(19.5%)	250	(29.8%)	202	(25.2%)	74	(9.3%)	465	(56.0%)	149	(18.5%)	261	(32.5%)

1) The question was as follows: Below are several statements. Which of the following do you think apply to food products with this label? Please select all that apply. Those statements applying to food product with the respective label are bold. The statements in italics can be interpreted heterogeneously and are considered as neither right nor wrong.

Table 24. Knowledge of EU PGI label (participants who recognize the label) ¹

		FR (N=424)		DE (N=145)		HU (N=251)		IT (N=554)		NO (N=60)		RS (N=279)		UK (N=116)	
1	the product has been produced, processed and prepared in a specific geographical area that defines significantly its quality or properties	260	(61.3%)	78	(53.8%)	144	(57.4%)	334	(60.3%)	26	(43.3%)	204	(73.1%)	67	(57.8%)
2	at least one of the stages of production, processing or preparation takes place in a determined geographical area that influences the quality or a specific property of the product	128	(30.2%)	64	(44.1%)	85	(33.9%)	169	(30.5%)	18	(30.0%)	110	(39.4%)	36	(31.0%)
3	the product is of specific character in that either its raw materials, production method or processing is traditional	77	(18.2%)	25	(17.2%)	46	(18.3%)	94	(17.0%)	16	(26.7%)	53	(19.0%)	20	(17.2%)
4	it is certified by a body independent of the producer and retailer	92	(21.7%)	18	(12.4%)	36	(14.3%)	81	(14.6%)	10	(16.7%)	40	(14.3%)	22	(19.0%)
5	it is an EU label	85	(20.0%)	40	(27.6%)	62	(24.7%)	109	(19.7%)	19	(31.7%)	68	(24.4%)	30	(25.9%)
6	this product is produced according to the EU organic guidelines	29	(6.8%)	17	(11.7%)	30	(12.0%)	42	(7.6%)	7	(11.7%)	51	(18.3%)	14	(12.1%)
7	stricter rules than the minimum required by law have been followed regarding food safety	38	(9.0%)	17	(11.7%)	36	(14.3%)	54	(9.7%)	5	(8.3%)	40	(14.3%)	16	(13.8%)
8	this is a product of superior nutritional value	27	(6.4%)	5	(3.4%)	11	(4.4%)	28	(5.1%)	4	(6.7%)	14	(5.0%)	8	(6.9%)
9	<i>the region where the product is produced/processed is specified</i>	<i>142</i>	<i>(33.5%)</i>	<i>43</i>	<i>(29.7%)</i>	<i>78</i>	<i>(31.1%)</i>	<i>130</i>	<i>(23.5%)</i>	<i>13</i>	<i>(21.7%)</i>	<i>51</i>	<i>(18.3%)</i>	<i>20</i>	<i>(17.2%)</i>
10	in case of livestock products higher animal welfare standards apply	28	(6.6%)	5	(3.4%)	16	(6.4%)	26	(4.7%)	3	(5.0%)	18	(6.5%)	5	(4.3%)
11	None of the above	4	(0.9%)	2	(1.4%)	1	(0.4%)	4	(0.7%)	1	(1.7%)	0	(0.0%)	0	(0.0%)
12	I do not know	25	(5.9%)	7	(4.8%)	12	(4.8%)	23	(4.2%)	6	(10.0%)	13	(4.7%)	10	(8.6%)

1) The question was as follows: Below are several statements. Which of the following do you think apply to food products with this label? Please select all that apply. In Table 24 those statements applying to food product with the respective label are bold. The statements in italics can be interpreted heterogeneously and are considered as neither right nor wrong.

Table 25. Knowledge of EU PGI label (participants who use the label)

		FR (N=318)		DE (N=103)		HU (N=183)		IT (N=467)		NO (N=43)		RS (N=171)		UK (N=83)	
1	the product has been produced, processed and prepared in a specific geographical area that defines significantly its quality or properties	197	(61.9%)	58	(56.3%)	104	(56.8%)	280	(60.0%)	18	(41.9%)	126	(73.7%)	51	(61.4%)
2	at least one of the stages of production, processing or preparation takes place in a determined geographical area that influences the quality or a specific property of the product	100	(31.4%)	43	(41.7%)	63	(34.4%)	148	(31.7%)	11	(25.6%)	67	(39.2%)	32	(38.6%)
3	the product is of specific character in that either its raw materials, production method or processing is traditional	61	(19.2%)	21	(20.4%)	41	(22.4%)	83	(17.8%)	14	(32.6%)	35	(20.5%)	15	(18.1%)
4	it is certified by a body independent of the producer and retailer	78	(24.5%)	14	(13.6%)	31	(16.9%)	73	(15.6%)	9	(20.9%)	30	(17.5%)	17	(20.5%)
5	it is an EU label	67	(21.1%)	33	(32.0%)	46	(25.1%)	98	(21.0%)	14	(32.6%)	41	(24.0%)	21	(25.3%)
6	this product is produced according to the EU organic guidelines	23	(7.2%)	14	(13.6%)	20	(10.9%)	36	(7.7%)	6	(14.0%)	34	(19.9%)	12	(14.5%)
7	stricter rules than the minimum required by law have been followed regarding food safety	31	(9.7%)	13	(12.6%)	29	(15.8%)	48	(10.3%)	3	(7.0%)	30	(17.5%)	14	(16.9%)
8	this is a product of superior nutritional value	21	(6.6%)	4	(3.9%)	8	(4.4%)	27	(5.8%)	4	(9.3%)	12	(7.0%)	8	(9.6%)
9	<i>the region where the product is produced/processed is specified</i>	<i>114</i>	<i>(35.8%)</i>	<i>30</i>	<i>(29.1%)</i>	<i>52</i>	<i>(28.4%)</i>	<i>113</i>	<i>(24.2%)</i>	<i>11</i>	<i>(25.6%)</i>	<i>35</i>	<i>(20.5%)</i>	<i>14</i>	<i>(16.9%)</i>
10	in case of livestock products higher animal welfare standards apply	24	(7.5%)	3	(2.9%)	13	(7.1%)	23	(4.9%)	3	(7.0%)	15	(8.8%)	5	(6.0%)
11	None of the above	3	(0.9%)	1	(1.0%)	0	(0.0%)	2	(0.4%)	1	(2.3%)	0	(0.0%)	0	(0.0%)
12	I do not know	13	(4.1%)	3	(2.9%)	8	(4.4%)	17	(3.6%)	4	(9.3%)	7	(4.1%)	5	(6.0%)
1)	The question was as follows: Below are several statements. Which of the following do you think apply to food products with this label? Please select all that apply. In Table 25 those statements applying to food product with the respective label are bold. The statements in italics can be interpreted heterogeneously and are considered as neither right nor wrong.														

3.3.2.3. EU PDO label



Figure 10. EU PDO Label

The protected designation of origin (PDO) identifies an agricultural product, raw or processed, whose quality, reputation or other characteristics are linked to its geographical origin. To be eligible for obtaining this official label, all the stages among production, transformation and packaging of this product must take place in the defined geographical area (inao.gouv.fr). A PDO food product must be produced AND processed AND prepared/packed in its area of origin. PDO is a guarantee of origin. The PDO logo is the EU logo which underlines the strongest link to the territory. The certified product must fulfil the requirements of the regulation (EU) No1151/2012. The regulation was implemented in November 2012.²²

The relevance of registered PDO products considerably differs between the countries considered in our study amounting in 2017 to 103 in France, 12 in Germany, 6 in Hungary, 167 in Italy, and 25 in the UK. No PDO product is registered in Norway or Serbia.²³

3.3.2.3.1. Recognition of the EU PDO label

Recognition of the PDO label again varies amongst countries and shows a structure similar to the case of the PGI label. Thus, it is again Norway which has the lowest percentage of respondents who recognize the label (6.7%) while Italy has the highest share (52.3%). France and Italy show a level of recognition considerably above average. In general, recognition of the PDO label (Figure 11) is lower than recognition of the PGI label (Figure 7). That holds for all countries. Compared with the Special Eurobarometer 473²⁴, recognition of the PDO is higher

²² <https://ec.europa.eu/agriculture/quality/schemes/foodstuff>, last access: 05/02/18

²³ DOOR Database <http://ec.europa.eu/agriculture/quality/door/list.html>

²⁴ The wording of the question in the Special Eurobarometer 473 (European Commission 2018) was slightly different. Consumers saw a number of logos (EU organic logo, PDO, PGI, TSG and Fairtrade) and were asked 'Which of the logos on this card are you aware of?' In the survey of the present study respondents saw a label and were asked 'Do you recognize this label'?

in our survey for Italy (EB 32%), Hungary (EB 13%) and the UK (EB 5%) while it is slightly lower for Germany (EB 12%) and France (EB 41%) (European Commission 2018).

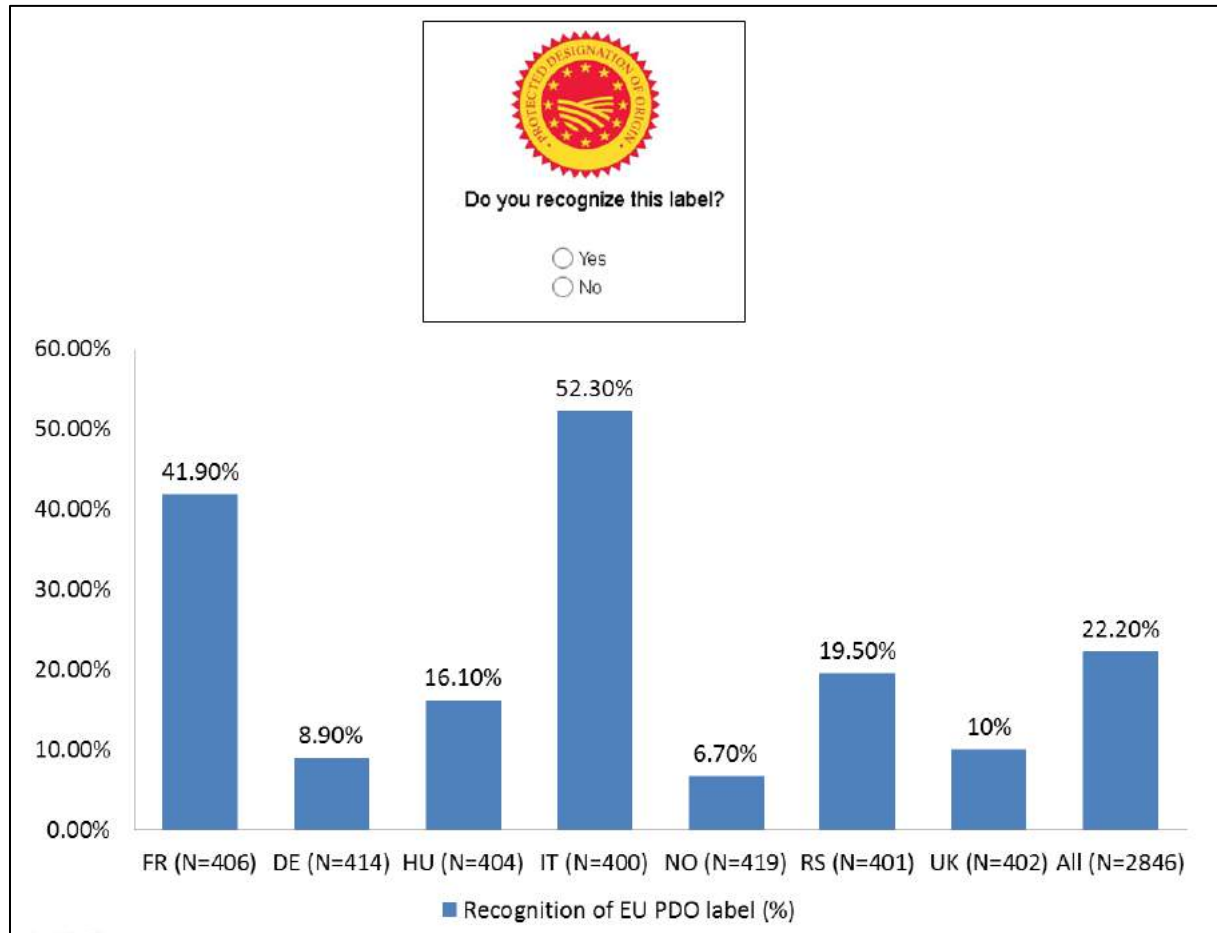


Figure 11. Percentage recognition of the EU PDO label

3.3.2.3.2. PDO label: Use and barriers to use

Figure 12 shows that not all respondents recognizing the label take it at least sometimes into account while grocery shopping.²⁵ In fact, the respective share is about 75% and very similar in the seven countries investigated.

²⁵ We consider “use of the label” if the consumer states that (s)he sometimes, almost every time or every time takes the label into account when doing her/his grocery shopping.

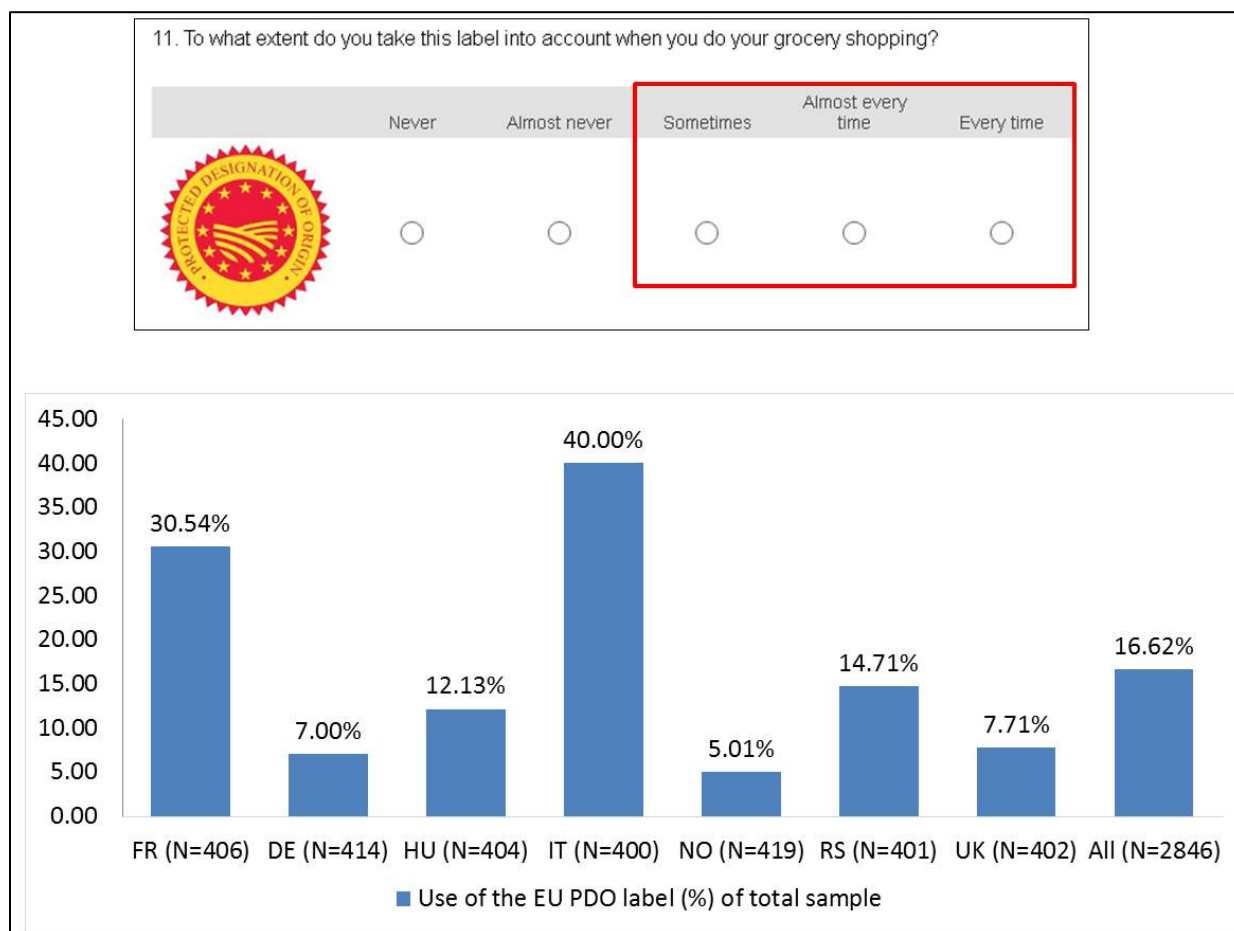


Figure 12. Percentage of consumers taking the PDO label into when doing their grocery shopping (out of the total sample)

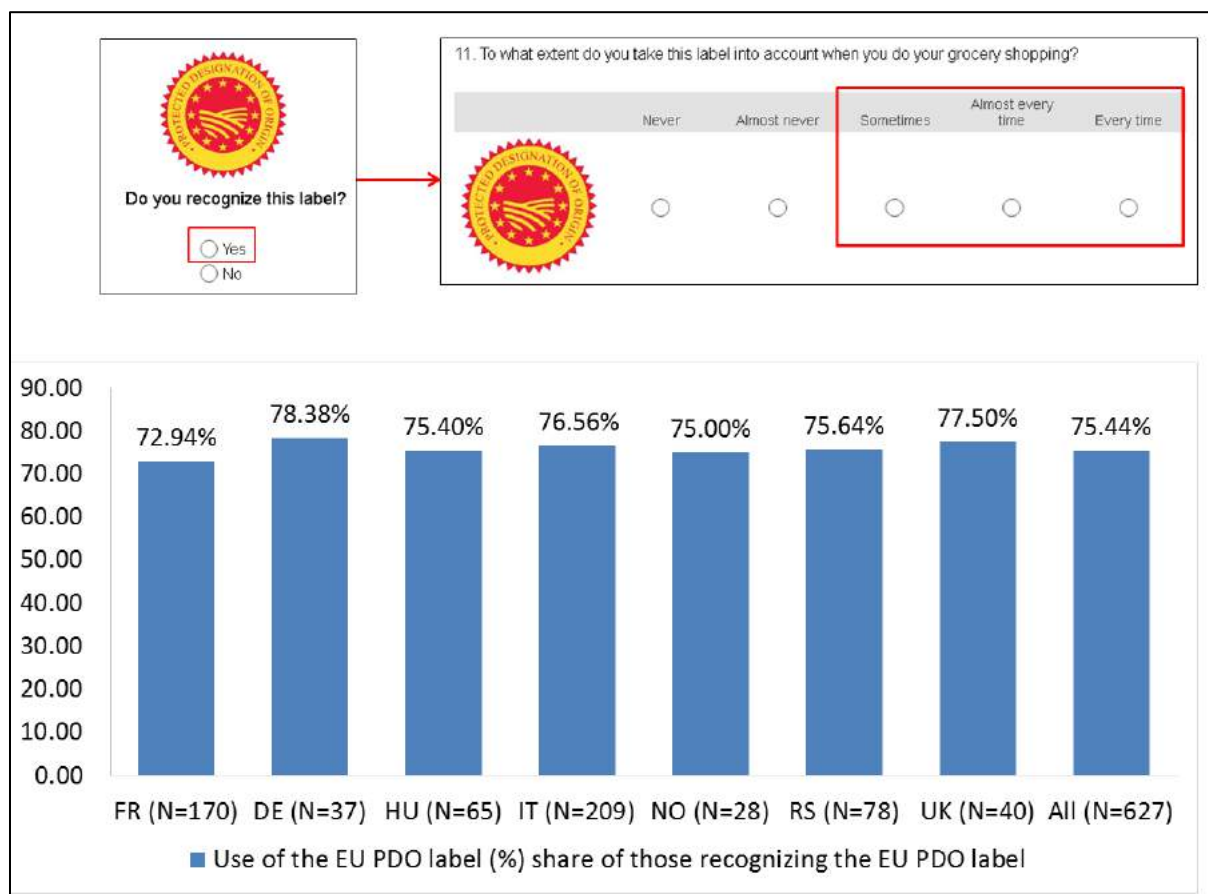


Figure 13. Consumers taking the EU PDO label into account when doing their grocery shopping (share of those recognizing the EU PDO label)

The reasons why respondents do not use the PDO label are similar to those explaining why they abstain from making use of the PGI and the organic label (see Table 26)²⁶: Again the statement ‘I rarely pay attention to product labels (doing) grocery shopping’ is the most important reason. Also, the high price is stated as an impediment to use the label. Given the small numbers, it is difficult to draw firm conclusions from the sample regarding barriers. This holds true for all countries except France and Italy.

²⁶ From a list of 15 potential barriers, respondents could tick up to 3 that prevent them from taking the label into account when doing their grocery shopping.

Table 26. Barriers to taking the PDO label into account when making a purchasing decision

	FR (N=47)	DE (N=9)	HU (N=16)	IT (N=52)	NO (N=7)	RS (N=20)	UK (N=9)
1 Products with this label are too expensive	9 (19.1%)	0 (0.0%)	1 (6.3%)	13 (25.0%)	1 (14.3%)	3 (15.0%)	2 (22.2%)
2 I do not trust this label	1 (2.1%)	0 (0.0%)	0 (0.0%)	4 (7.7%)	2 (28.6%)	4 (20.0%)	0 (0.0%)
3 I do not trust labels in general	2 (4.3%)	2 (22.2%)	4 (25.0%)	6 (11.5%)	0 (0.0%)	5 (25.0%)	0 (0.0%)
4 Products with or without this label taste the same	6 (12.8%)	2 (22.2%)	4 (25.0%)	8 (15.4%)	0 (0.0%)	2 (10.0%)	2 (22.2%)
5 I rarely pay attention to product labels while doing grocery shopping	22 (46.8%)	4 (44.4%)	5 (31.3%)	11 (21.2%)	4 (57.1%)	4 (20.0%)	5 (55.6%)
6 There are only few varieties of products with this label in stores where I do my grocery shopping	4 (8.5%)	2 (22.2%)	1 (6.3%)	8 (15.4%)	1 (14.3%)	4 (20.0%)	1 (11.1%)
7 I have no time to consider labels while doing my grocery shopping	5 (10.6%)	0 (0.0%)	6 (37.5%)	5 (9.6%)	0 (0.0%)	1 (5.0%)	0 (0.0%)
8 The issue advertised on this label is not important to me	5 (10.6%)	1 (11.1%)	3 (18.8%)	4 (7.7%)	0 (0.0%)	1 (5.0%)	2 (22.2%)
9 I don't know where to find products with this label	3 (6.4%)	1 (11.1%)	3 (18.8%)	3 (5.8%)	0 (0.0%)	4 (20.0%)	1 (11.1%)
10 I am not interested in buying labeled products	8 (17.0%)	0 (0.0%)	0 (0.0%)	4 (7.7%)	0 (0.0%)	2 (10.0%)	0 (0.0%)
11 I don't buy products with this label because the label is just a marketing tool	1 (2.1%)	1 (11.1%)	3 (18.8%)	1 (1.9%)	1 (14.3%)	2 (10.0%)	0 (0.0%)
12 Products with this label do not look good	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
13 I don't like the taste of products with this label	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
14 Lack of opportunity in the last 2 weeks	7 (14.9%)	0 (0.0%)	2 (12.5%)	6 (11.5%)	2 (28.6%)	4 (20.0%)	2 (22.2%)
15 None of those reasons	4 (8.5%)	1 (11.1%)	2 (12.5%)	8 (15.4%)	0 (0.0%)	1 (5.0%)	1 (11.1%)

1) From the list of 15 potential barriers respondents could tick up to 3 that prevent them from taking the label into account when doing their grocery shopping.

3.3.2.3.1. Perception of the EU PDO label

In section 3.3.1 findings were presented regarding what label characteristics consumers perceive to be important. In this section we investigate the extent to which the European PDO label meets those characteristics. We differentiate between consumers' perception of the EU PDO label considering the whole sample (Table 27), only participants recognizing the label (Table 28) and finally only those using the label (Table 29). As previously mentioned, we consider use of the label if consumers state that they sometimes, almost every time or every time take the label into account when doing their grocery shopping.

The results in Table 27 (total sample) indicate that the overall evaluation of the EU PDO is slightly positive. On a scale from 1 to 5, with 1 being “don't agree at all” and 5 being “completely agree”, the average score over all countries and statements was slightly above the mid-point, namely 3.21. Heterogeneity exists amongst the countries with the highest positive overall evaluation in Italy (3.77) and a slightly negative one in Norway (2.71) and Serbia (2.89). Comparing Table 27 for the PDO with the respective Table for PGI (Table 20) reveals a high level of similarity implying that the perception of the two labels does not differ to a great extent. Accordingly, clarity is evaluated again as a strength of the label. Also in line with the results for the PGI label, respondents least agreed with the statement that products with this label have similar prices if compared with similar non-labelled products (average 2.93, with especially low scores of 2.54 and 2.66 again in Serbia and Norway, respectively). Also trustworthiness, the most important label characteristic for respondents, obtains a score of only 3.26 if measured over all countries. As in the case of the PGI, it is by far the lowest in Norway and Serbia and highest in Italy. As for the PGI label, the PDO label is also more positively evaluated than the EU organic label.

Compared with all respondents (Table 27), those recognizing (Table 28) or recognizing and using (Table 29) the PDO label leads to a more positive perception (over all countries and statements: 3.81 and 3.96, respectively). This holds for all statements in all countries. Again, however, note that in some countries (especially Norway and Germany) the groups recognizing and, even more, those recognizing and using the label are rather small.

Table 27. Perception of the EU PDO label (total sample)

	FR			DE			HU			IT			NO			RS			UK		
	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.
The label is easy to understand	395	3.63	1.21	390	3.02	1.28	390	3.66	1.20	393	4.07	1.07	320	2.59	1.31	380	3.21	1.39	386	3.16	1.27
The label has a clear logo/symbol	391	3.62	1.15	389	3.18	1.21	391	3.55	1.22	394	3.99	1.05	320	2.78	1.28	379	3.26	1.35	388	3.56	1.13
The label is trustworthy	378	3.59	1.14	377	3.03	1.12	369	3.54	1.06	384	3.92	0.97	260	2.75	1.18	360	2.74	1.22	360	3.26	1.07
The label helps me to make an informed choice	382	3.43	1.14	371	2.90	1.15	382	3.55	1.09	390	3.97	1.01	264	2.70	1.21	362	2.72	1.25	370	3.19	1.19
Products with this label have similar prices to other products without this label	369	3.08	1.13	360	2.84	0.98	349	3.14	1.10	372	3.20	1.10	220	2.66	1.11	342	2.54	1.12	355	3.05	1.05
The label is more than just a means of advertising	373	3.38	1.11	373	3.02	1.13	376	3.45	1.10	390	3.74	1.10	245	2.82	1.15	359	2.82	1.22	368	3.26	1.12
The label is attractive	379	3.36	1.13	385	2.95	1.16	384	3.38	1.15	391	3.51	1.12	286	2.67	1.16	376	2.91	1.23	384	3.13	1.15

1) Here are several statements concerning your perception of the label above. Please indicate on a scale from 1 to 5 your opinion on the following statements, 1 being “don’t agree at all” and 5 being “completely agree”.

Table 28. Perception of the EU PDO label (participants who recognize the label)

	FR			DE			HU			IT			NO			RS			UK		
	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.
The label is easy to understand	170	4.13	0.99	37	4.11	1.22	65	4.15	1.03	209	4.38	0.84	27	3.67	1.11	78	4.19	0.98	40	3.93	1.10
The label has a clear logo/symbol	168	4.05	1.02	36	4.06	1.17	65	3.98	1.15	209	4.30	0.88	27	3.70	0.95	77	4.05	1.02	40	4.03	1.10
The label is trustworthy	166	4.07	1.01	37	4.00	1.08	65	4.06	0.93	204	4.19	0.83	26	3.46	1.10	78	3.68	0.93	40	3.85	1.00
The label helps me to make an informed choice	166	3.89	0.99	36	3.92	1.02	65	3.92	0.89	207	4.23	0.84	26	3.50	0.95	77	3.66	1.10	40	4.08	0.86
Products with this label have similar prices to other products without this label	164	3.30	1.18	35	3.34	0.97	64	3.58	1.07	200	3.27	1.15	26	3.27	0.92	76	2.86	1.26	39	3.49	1.10
The label is more than just a means of advertising	164	3.66	1.05	36	4.19	0.86	64	3.81	1.04	208	3.96	1.03	27	3.48	1.16	76	3.25	1.20	40	3.88	0.88
The label is attractive	166	3.78	1.04	36	3.94	0.98	65	3.86	1.09	207	3.69	1.06	27	3.22	1.05	76	3.67	1.14	40	3.93	0.89

1) Here are several statements concerning your perception of the label above. Please indicate on a scale from 1 to 5 your opinion on the following statements, 1 being “don’t agree at all” and 5 being “completely agree”.

Table 29. Perception of the EU PDO label (participants who use the label)

	FR			DE			HU			IT			NO			RS			UK		
	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.
The label is easy to understand	124	4.30	0.86	29	4.31	1.04	49	4.24	0.97	160	4.53	0.70	20	3.60	0.99	59	4.27	0.93	31	4.00	1.10
The label has a clear logo/symbol	124	4.23	0.91	28	4.29	1.01	49	4.14	1.08	160	4.39	0.79	20	3.70	0.80	59	4.15	0.98	31	4.06	1.06
The label is trustworthy	124	4.33	0.89	29	4.28	0.92	49	4.24	0.85	157	4.33	0.69	19	3.74	0.87	59	3.90	0.82	31	3.81	0.91
The label helps me to make an informed choice	122	4.15	0.89	28	4.18	0.90	49	4.20	0.71	160	4.34	0.74	19	3.74	0.65	58	3.90	1.02	31	4.00	0.89
Products with this label have similar prices to other products without this label	123	3.59	1.10	27	3.30	1.07	49	3.76	0.90	155	3.44	1.13	20	3.25	0.79	58	3.03	1.30	30	3.67	1.09
The label is more than just a means of advertising	121	3.79	1.06	28	4.32	0.86	49	4.00	0.94	160	4.07	1.00	20	3.70	0.73	57	3.44	1.17	31	3.87	0.92
The label is attractive	122	4.02	0.95	28	4.18	0.82	49	4.06	1.01	158	3.82	1.03	20	3.45	0.89	58	3.86	1.12	31	3.90	0.94

1) Here are several statements concerning your perception of the label above. Please indicate on a scale from 1 to 5 your opinion on the following statements, 1 being “don’t agree at all” and 5 being “completely agree”.

3.3.2.3.2. Knowledge of the EU PDO label

What do consumers know about the PDO label? To gain insights into this aspect consumers saw 10 statements, the same as in the case of the EU organic and the PGI label and were asked to indicate which of those statements apply to food products with the PDO label (see Table 30). Consumers were asked to select all that apply. They could also indicate that none of the statements apply or that they do not know. Three of the 10 statements clearly refer to the PDO label. Those are written in bold letters.

Table 30, which summarizes results for the total sample reveals that the overall understanding of the PDO label is extremely limited. Almost two thirds of Norwegian consumers (62.8%) state that they do not know what the PDO label stands for. Percentages for this statement were also very high (around 40%) in the UK and Germany. Only in Italy was the proportion of those indicating that they do not know what the label means low (only 12.5%). Those not recognizing a label cannot be expected to be knowledgeable about a label. Thus, of greater interest is knowledge of those recognizing (Table 31) and recognizing as well as using the label (Table 32).

Concentrating on the latter two groups shows that the percentage of those indicating that they do not know what the label means sharply drops in general far below 10% in all countries except Norway (14.3%). A closer look, however, reveals in all countries some discrepancy between subjective knowledge and factual knowledge.

The most frequently chosen statement is the first one, which is one of the ‘true’ statements. In fact the majority of respondents in France and Italy know that a product with a PDO label has been produced, processed and prepared in a specific geographical area that defines significantly its quality or properties. This statement is also gets a relatively high percentage (around 40%) in the other countries. However, surprisingly the proportion of respondents ticking this statement is lower in the case of the PDO label (where it is correct) than in the case of the PGI label (where it was not correct). This confirms the findings from section 3.3.2.1.2 regarding consumers’ confusion between PDO and PGI labels. Regarding the other statements that apply to the PDO label, only a minority knows that the label is certified by a body independent of the producer and retailer and that it is an EU label.

Table 30. Knowledge of EU PDO label (total sample)

		FR (N=406)		DE (N=414)		HU (N=404)		IT (N=400)		NO (N=419)		RS (N=401)		UK (N=402)	
1	the product has been produced, processed and prepared in a specific geographical area that defines significantly its quality or properties	152	(37.4%)	97	(23.4%)	106	(26.2%)	172	(43.0%)	68	(16.2%)	116	(28.9%)	109	(27.1%)
2	at least one of the stages of production, processing or preparation takes place in a determined geographical area that influences the quality or a specific property of the product	93	(22.9%)	87	(21.0%)	97	(24.0%)	116	(29.0%)	50	(11.9%)	84	(20.9%)	75	(18.7%)
3	the product is of specific character in that either its raw materials, production method or processing is traditional	94	(23.2%)	47	(11.4%)	94	(23.3%)	103	(25.8%)	29	(6.9%)	92	(22.9%)	37	(9.2%)
4	it is certified by a body independent of the producer and retailer	73	(18.0%)	19	(4.6%)	60	(14.9%)	62	(15.5%)	21	(5.0%)	49	(12.2%)	35	(8.7%)
5	it is an EU label	61	(15.0%)	49	(11.8%)	79	(19.6%)	68	(17.0%)	46	(11.0%)	58	(14.5%)	58	(14.4%)
6	this product is produced according to the EU organic guidelines	30	(7.4%)	24	(5.8%)	44	(10.9%)	17	(4.3%)	19	(4.5%)	51	(12.7%)	30	(7.5%)
7	stricter rules than the minimum required by law have been followed regarding food safety	52	(12.8%)	27	(6.5%)	44	(10.9%)	44	(11.0%)	13	(3.1%)	38	(9.5%)	22	(5.5%)
8	this is a product of superior nutritional value	22	(5.4%)	3	(0.7%)	19	(4.7%)	24	(6.0%)	7	(1.7%)	19	(4.7%)	15	(3.7%)
9	<i>the region where the product is produced/processed is specified</i>	99	(24.4%)	65	(15.7%)	83	(20.5%)	66	(16.5%)	33	(7.9%)	52	(13.0%)	40	(10.0%)
10	in case of livestock products higher animal welfare standards apply	29	(7.1%)	7	(1.7%)	26	(6.4%)	25	(6.3%)	8	(1.9%)	9	(2.2%)	10	(2.5%)
11	None of the above	6	(1.5%)	18	(4.3%)	7	(1.7%)	5	(1.3%)	15	(3.6%)	9	(2.2%)	13	(3.2%)
12	I do not know	90	(22.2%)	166	(40.1%)	109	(27.0%)	50	(12.5%)	263	(62.8%)	126	(31.4%)	153	(38.1%)
1) The question was as follows: Below are several statements. Which of the following do you think apply to food products with this label? Please select all that apply. In Table 30 those statements applying to food product with the respective label are bold. The statements in italics can be interpreted heterogeneously and are considered as neither right nor wrong.															

Table 31. Knowledge of EU PDO label (participants who recognize the label)

		FR (N=170)		DE (N=37)		HU (N=65)		IT (N=209)		NO (N=28)		RS (N=78)		UK (N=40)	
1	the product has been produced, processed and prepared in a specific geographical area that defines significantly its quality or properties	89	(52.4%)	15	(40.5%)	25	(38.5%)	109	(52.2%)	11	(39.3%)	36	(46.2%)	17	(42.5%)
2	<i>at least one of the stages of production, processing or preparation takes place in a determined geographical area that influences the quality or a specific property of the product</i>	55	(32.4%)	14	(37.8%)	24	(36.9%)	71	(34.0%)	10	(35.7%)	26	(33.3%)	15	(37.5%)
3	the product is of specific character in that either its raw materials, production method or processing is traditional	54	(31.8%)	11	(29.7%)	22	(33.8%)	63	(30.1%)	3	(10.7%)	26	(33.3%)	8	(20.0%)
4	it is certified by a body independent of the producer and retailer	47	(27.6%)	2	(5.4%)	12	(18.5%)	38	(18.2%)	7	(25.0%)	17	(21.8%)	6	(15.0%)
5	it is an EU label	32	(18.8%)	9	(24.3%)	20	(30.8%)	41	(19.6%)	6	(21.4%)	15	(19.2%)	10	(25.0%)
6	this product is produced according to the EU organic guidelines	13	(7.6%)	6	(16.2%)	7	(10.8%)	9	(4.3%)	5	(17.9%)	17	(21.8%)	6	(15.0%)
7	stricter rules than the minimum required by law have been followed regarding food safety	31	(18.2%)	9	(24.3%)	15	(23.1%)	26	(12.4%)	4	(14.3%)	16	(20.5%)	9	(22.5%)
8	this is a product of superior nutritional value	14	(8.2%)	1	(2.7%)	7	(10.8%)	16	(7.7%)	3	(10.7%)	8	(10.3%)	5	(12.5%)
9	<i>the region where the product is produced/processed is specified</i>	59	(34.7%)	11	(29.7%)	24	(36.9%)	48	(23.0%)	7	(25.0%)	13	(16.7%)	6	(15.0%)
10	in case of livestock products higher animal welfare standards apply	13	(7.6%)	3	(8.1%)	4	(6.2%)	12	(5.7%)	3	(10.7%)	4	(5.1%)	1	(2.5%)
11	None of the above	1	(0.6%)	0	(0.0%)	0	(0.0%)	3	(1.4%)	0	(0.0%)	0	(0.0%)	1	(2.5%)
12	I do not know	11	(6.5%)	1	(2.7%)	4	(6.2%)	7	(3.3%)	4	(14.3%)	5	(6.4%)	2	(5.0%)

- 1) The question was as follows: Below are several statements. Which of the following do you think apply to food products with this label? Please select all that apply. In Table 31 those statements applying to food product with the respective label are bold. The statements in italics can be interpreted heterogeneously and are considered as neither right nor wrong.

Table 32. Knowledge of EU PDO label (participants who use the label)

		FR (N=124)		DE (N=29)		HU (N=49)		IT (N=160)		NO (N=21)		RS (N=59)		UK (N=31)	
1	the product has been produced, processed and prepared in a specific geographical area that defines significantly its quality or properties	63	(50.8%)	11	(37.9%)	20	(40.8%)	84	(52.5%)	10	(47.6%)	26	(44.1%)	13	(41.9%)
2	<i>at least one of the stages of production, processing or preparation takes place in a determined geographical area that influences the quality or a specific property of the product</i>	43	(34.7%)	11	(37.9%)	17	(34.7%)	53	(33.1%)	6	(28.6%)	21	(35.6%)	14	(45.2%)
3	the product is of specific character in that either its raw materials, production method or processing is traditional	40	(32.3%)	9	(31.0%)	18	(36.7%)	54	(33.8%)	2	(9.5%)	22	(37.3%)	6	(19.4%)
4	it is certified by a body independent of the producer and retailer	38	(30.6%)	1	(3.4%)	11	(22.4%)	36	(22.5%)	6	(28.6%)	14	(23.7%)	5	(16.1%)
5	it is an EU label	26	(21.0%)	8	(27.6%)	16	(32.7%)	36	(22.5%)	5	(23.8%)	10	(16.9%)	9	(29.0%)
6	this product is produced according to the EU organic guidelines	11	(8.9%)	5	(17.2%)	5	(10.2%)	8	(5.0%)	5	(23.8%)	10	(16.9%)	5	(16.1%)
7	stricter rules than the minimum required by law have been followed regarding food safety	27	(21.8%)	7	(24.1%)	10	(20.4%)	24	(15.0%)	3	(14.3%)	10	(16.9%)	7	(22.6%)
8	this is a product of superior nutritional value	11	(8.9%)	1	(3.4%)	6	(12.2%)	15	(9.4%)	1	(4.8%)	7	(11.9%)	5	(16.1%)
9	<i>the region where the product is produced/processed is specified</i>	44	(35.5%)	5	(17.2%)	20	(40.8%)	41	(25.6%)	6	(28.6%)	10	(16.9%)	3	(9.7%)
10	in case of livestock products higher animal welfare standards apply	9	(7.3%)	2	(6.9%)	3	(6.1%)	11	(6.9%)	3	(14.3%)	3	(5.1%)	0	(0.0%)
11	None of the above	1	(0.8%)	0	(0.0%)	0	(0.0%)	1	(0.6%)	0	(0.0%)	0	(0.0%)	0	(0.0%)
12	I do not know	7	(5.6%)	1	(3.4%)	3	(6.1%)	4	(2.5%)	3	(14.3%)	4	(6.8%)	2	(6.5%)
1)	The question was as follows: Below are several statements. Which of the following do you think apply to food products with this label? Please select all that apply. In Table 32 those statements applying to food product with the respective label are bold. The statements in italics can be interpreted heterogeneously and are considered as neither right nor wrong.														

3.3.2.4. EU TSG label



Figure 14. EU TSG Label

The Traditional Speciality Guaranteed (TSG) logo highlights the traditional production method or composition of a product, handed down from generation to generation, without necessarily being linked to a specific geographical area.”²⁷ The standards which have to be met are written down in an EU regulation/2012. The regulation was prescribed at the end of 2012. TSG-registered products are much less common in all countries studied. In the UK four, in Italy two and in France and Hungary one product are registered as TSG. No product has been registered in Germany, Norway or Serbia as a TSG product.²⁸

3.3.2.4.1. Recognition of the EU TSG label

Recognition of the TSG label is, both on average across all countries and for four of the seven countries (France, Italy, Norway, UK), the lowest among the four EU food quality labels (18.11% compared with 22.20% for PDO, 32.20% for PGI and 34.40 % for the EU organic label). Awareness again varies amongst countries but shows a quite different structure from awareness for the other EU quality labels. Respondents from Serbia (29.80%), Italy (29.10%) and Hungary (25.90%) show the highest levels of recognition, while recognition in France is only about equal to the average over all countries (18.11%). As in the case of the PGI and PDO labels it is Norway again that shows the lowest level of recognition (3.60%). Compared with

²⁷ (https://ec.europa.eu/agriculture/quality/schemes/foodstuff_en. Last access: 06.02.18)

²⁸ DOOR Database <http://ec.europa.eu/agriculture/quality/door/list.html>

the Special Eurobarometer 473²⁹, recognition of the TSG in our study is similar for the UK (EB 8%), somewhat lower for Germany (EB 8%) and France (EB 22%) and higher for Italy (EB 24%) and especially Hungary (EB 10%) (European Commission 2018).

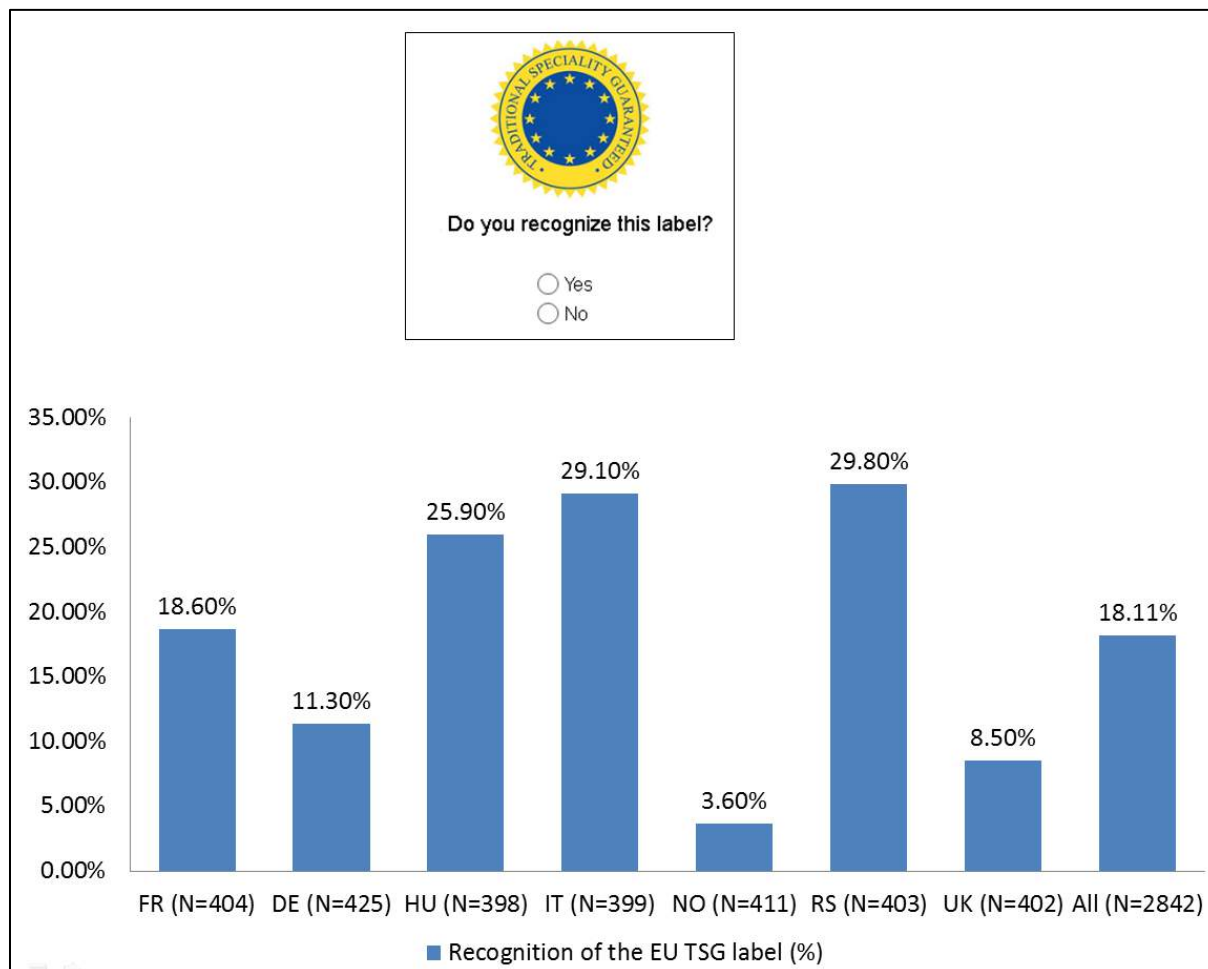


Figure 15. Percentage recognition of the EU TSG label

3.3.2.4.2. TSG label: Use and barriers to use

A comparison of Figures 15 and 16 shows that not all those recognizing the TSG label consider it when doing their grocery shopping. The respective proportions taking the label into account vary considerably amongst countries ranging from 59.17% in Serbia to 85.44% in Hungary. Where the TSG designation is recognized it influences the majority of consumers in their

²⁹ The wording of the question in the Special Eurobarometer 473 (EU Commission 2018) was slightly different. Consumers saw a number of logos (EU organic logo, PDO, PGI, TSG and Fairtrade) and were asked ‘Which of the logos on this card are you aware of?’ In the survey of the present study respondents saw a label and were asked ‘Do you recognize this label?’

decision making and in this regard the results for the TSG label mirror those for the EU organic label, the PDO and PGI labels.

Though Hungary has only one TSG product, the use of this label was the highest among the selected countries. This might be due to the fact that several imported products with a TSG label are available in Hungarian supermarkets: mainly processed meat products (Jamón Serrano from Spain) and dairy products (Mozzarella from Italy).

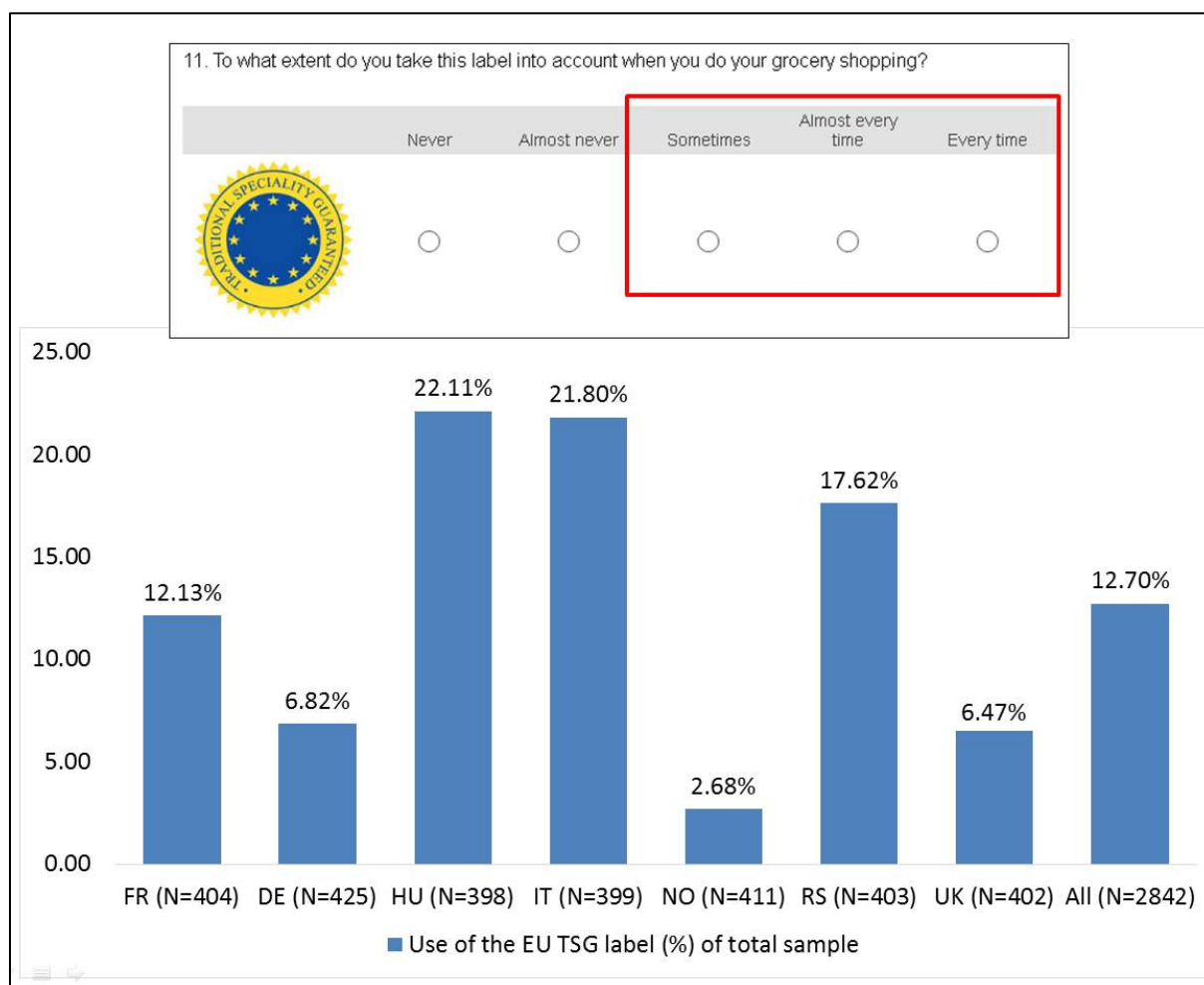


Figure 16. Percentage of consumers taking the EU TSG label into when doing their grocery shopping (out of the total sample)

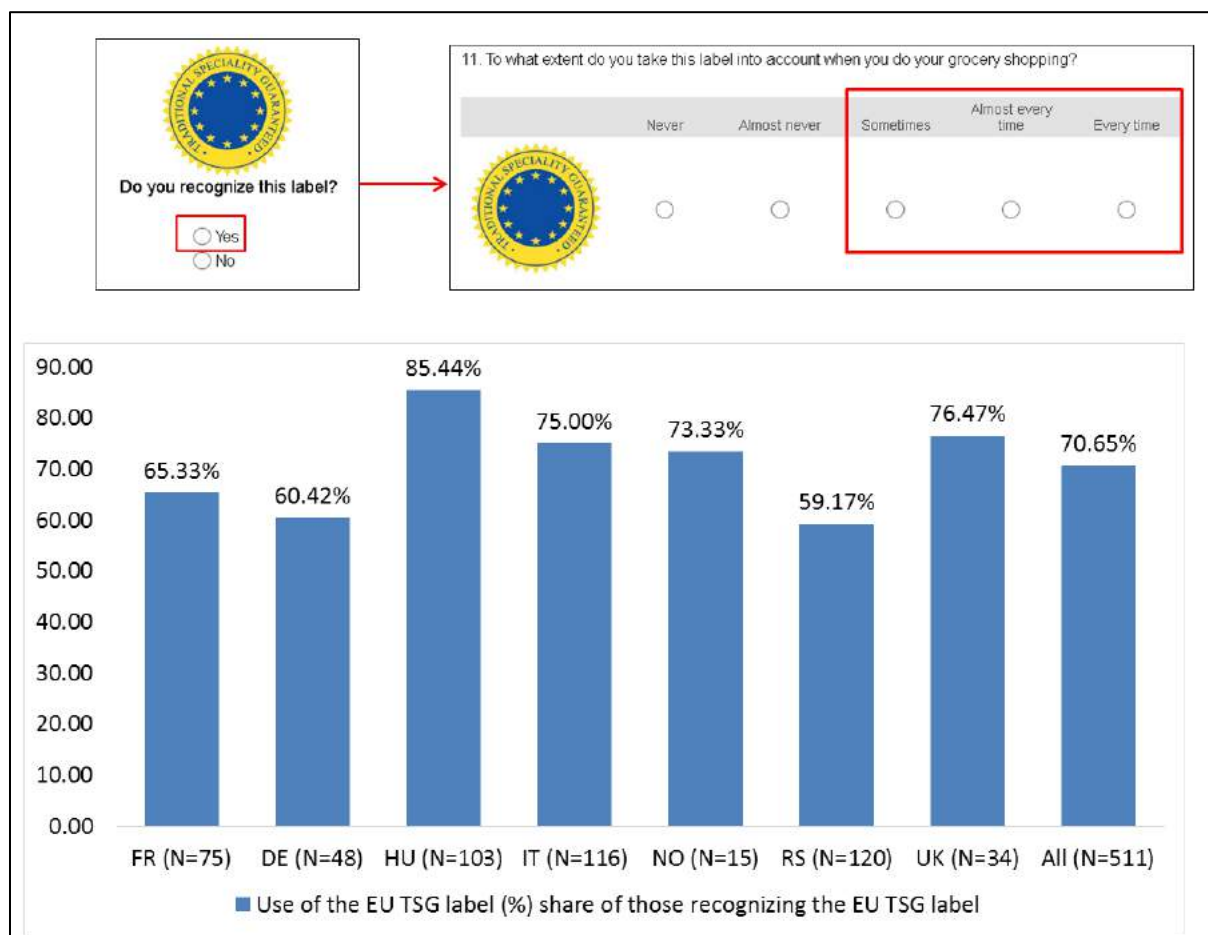


Figure 17. Consumers taking the EU TSG label into account when doing their grocery shopping (share of those recognizing the EU TSG label)

Table 33 shows that for most countries the reasons why respondents do not use the TSG label is the lack of attention they pay to product labels while doing their grocery shopping. However, the lack of availability (covered by the statements: There are only few varieties of products with this label in stores where I do my grocery shopping; Lack of opportunity in the last 2 weeks; I don't know where to find products with this label) seems to be a problem as well, which is not surprising given the low number of registered TSG products. For all countries the number of respondents answering this question (only those recognizing but not using the label) is rather small (from 9 respondents in the UK to 49 in Serbia). This makes it impossible to draw firm conclusions from the sample regarding barriers.

Table 33. Barriers to taking the TSG label into account when making a purchasing decision

	FR (N=26)	DE (N=19)	HU (N=16)	IT (N=29)	NO (N=4)	RS (N=49)	UK (N=9)
1 Products with this label are too expensive	3 (11.5%)	1 (5.3%)	1 (6.3%)	7 (24.1%)	1 (25.0%)	8 (16.3%)	3 (33.3%)
2 I do not trust this label	1 (3.8%)	0 (0.0%)	3 (18.8%)	0 (0.0%)	0 (0.0%)	5 (10.2%)	1 (11.1%)
3 I do not trust labels in general	0 (0.0%)	3 (15.8%)	1 (6.3%)	2 (6.9%)	1 (25.0%)	14 (28.6%)	0 (0.0%)
4 Products with or without this label taste the same	2 (7.7%)	3 (15.8%)	3 (18.8%)	4 (13.8%)	1 (25.0%)	6 (12.2%)	2 (22.2%)
5 I rarely pay attention to product labels while doing grocery shopping	5 (19.2%)	8 (42.1%)	2 (12.5%)	1 (3.4%)	0 (0.0%)	22 (44.9%)	4 (44.4%)
6 There are only few varieties of products with this label in stores where I do my grocery shopping	6 (23.1%)	2 (10.5%)	3 (18.8%)	7 (24.1%)	0 (0.0%)	9 (18.4%)	1 (11.1%)
7 I have no time to consider labels while doing my grocery shopping	2 (7.7%)	2 (10.5%)	1 (6.3%)	3 (10.3%)	1 (25.0%)	9 (18.4%)	1 (11.1%)
8 The issue advertised on this label is not important to me	1 (3.8%)	5 (26.3%)	2 (12.5%)	2 (6.9%)	0 (0.0%)	3 (6.1%)	1 (11.1%)
9 I don't know where to find products with this label	4 (15.4%)	2 (10.5%)	3 (18.8%)	3 (10.3%)	0 (0.0%)	8 (16.3%)	0 (0.0%)
10 I am not interested in buying labeled products	0 (0.0%)	1 (5.3%)	1 (6.3%)	0 (0.0%)	0 (0.0%)	2 (4.1%)	3 (33.3%)
11 I don't buy products with this label because the label is just a marketing tool	0 (0.0%)	3 (15.8%)	1 (6.3%)	1 (3.4%)	1 (25.0%)	3 (6.1%)	0 (0.0%)
12 Products with this label do not look good	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (11.1%)
13 I don't like the taste of products with this label	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
14 Lack of opportunity in the last 2 weeks	7 (26.9%)	2 (10.5%)	1 (6.3%)	3 (10.3%)	1 (25.0%)	7 (14.3%)	1 (11.1%)
15 None of those reasons	5 (19.2%)	2 (10.5%)	1 (6.3%)	4 (13.8%)	0 (0.0%)	0 (0.0%)	1 (11.1%)

1) From the list of 15 potential barriers respondents could tick up to 3 that prevent them from taking the label into account when doing their grocery shopping.

3.3.2.4.1. Perception of the EU TSG label

This section considers the extent to which the European TSG label meets specified characteristics. In the analysis we differentiated between consumers' perception of the EU TSG label considering the whole sample (Table 34), only participants recognizing the label (Table 35) and finally only those using the label (Table 36). For this, we consider that consumers make use of a label if they state that they sometimes, almost every time or every time take the label into account when doing their grocery shopping.

The results in Table 34 (total sample) indicate that evaluation of the EU TSG label is slightly positive over all items and countries. On a scale from 1 to 5, with 1 being "don't agree at all" and 5 being "completely agree", average agreement over all countries and statements was 3.27, and thus comparable to the overall average score for the PDO and PGI labels. Heterogeneity exists among countries with the highest positive overall evaluations in Italy (3.63) and Hungary (3.60) and a slightly negative one in Norway (2.87). As for the PGI and the PDO labels, clarity is evaluated as a strength of the label (average score 3.51 for the statement 'The label has a clear logo/symbol' and 3.43 for the statement 'The label is easy to understand'). Also in line with results for the other two labels, respondents agreed least with the statement that products with this label have similar prices if compared to similar non-labelled products (average 3.00 over all countries, with especially low scores again in Serbia and Norway (2.70 and 2.80, respectively). Also, trustworthiness, the most important label characteristic for respondents as revealed in section 3.3.1, scored only 3.29 if measured over all countries. As for the PGI and PDO labels, the TSG label is also more positively evaluated than the EU organic label.

Compared with results using all respondents (Table 34), those recognizing (Table 35) or those recognizing and using (Table 36) the PDO label lead to a more positive perception (over all countries and statements: 3.81 and 3.95, respectively). This holds true for all statements in all countries if comparing the results between all respondents and those recognizing the label. Comparing the group recognizing the label with those recognizing and using the label shows a slightly different picture. In particular, the attractiveness of the label is more critically perceived by the latter group. Though, as stated above, trustworthiness gets a score of only 3.29 if the whole sample is considered, consumers recognizing (3.81) and those recognizing and using the label (4.01) evaluate trustworthiness of the TSG label considerably more positively. Finally, as for other quality labels, for some countries (especially Norway, the UK and Germany) the groups recognizing, and especially those recognizing and using the label, are rather small and thus the results have to be treated with some caution for those countries.

Table 34. Perception of the EU TSG label (total sample)

	FR			DE			HU			IT			NO			RS			UK		
	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.
The label is easy to understand	380	3.44	1.22	406	3.33	1.22	374	3.76	1.31	392	3.83	1.09	349	2.82	1.37	385	3.77	1.26	395	3.06	1.29
The label has a clear logo/symbol	379	3.43	1.16	404	3.30	1.16	374	3.72	1.26	392	3.82	1.05	351	2.96	1.29	389	3.75	1.21	390	3.62	1.10
The label is trustworthy	349	3.37	1.07	393	3.11	1.11	352	3.63	1.07	380	3.79	0.95	323	2.92	1.22	372	3.05	1.18	372	3.19	1.07
The label helps me to make an informed choice	363	3.30	1.15	393	3.07	1.15	363	3.66	1.13	384	3.83	1.00	326	2.85	1.23	374	3.03	1.24	378	3.01	1.21
Products with this label have similar prices to other products without this label	339	3.05	1.12	371	2.96	1.00	336	3.21	1.09	372	3.25	1.09	275	2.80	1.11	359	2.70	1.10	362	3.01	1.08
The label is more than just a means of advertising	356	3.29	1.15	391	3.12	1.11	355	3.60	1.13	384	3.60	1.08	303	2.90	1.16	374	2.97	1.21	371	3.18	1.09
The label is attractive	365	3.20	1.12	402	3.10	1.11	371	3.61	1.20	381	3.30	1.16	331	2.82	1.14	381	3.12	1.24	391	3.06	1.10

1) Here are several statements concerning your perception of the label above. Please indicate on a scale from 1 to 5 your opinion on the following statements, 1 being “don’t agree at all” and 5 being “completely agree”

Table 35. Perception of the EU TSG label (participants who recognize the label)

	FR			DE			HU			IT			NO			RS			UK		
	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.
The label is easy to understand	75	4.05	1.14	48	3.75	1.31	103	4.19	1.11	116	4.29	0.89	15	3.80	1.15	118	4.14	1.11	34	3.91	1.14
The label has a clear logo/symbol	74	4.01	0.97	47	3.60	1.21	102	4.22	1.03	116	4.18	0.97	15	3.80	1.15	119	4.09	1.07	34	4.12	0.98
The label is trustworthy	72	3.92	0.88	46	3.65	1.12	103	4.03	0.99	114	4.18	0.82	14	3.57	0.94	118	3.43	1.11	33	3.88	1.02
The label helps me to make an informed choice	72	4.07	0.88	47	3.81	1.14	103	4.05	0.97	115	4.18	0.95	13	3.54	1.13	118	3.34	1.23	34	3.79	1.17
Products with this label have similar prices to other products without this label	70	3.56	1.15	45	3.47	1.04	101	3.50	1.05	112	3.46	1.14	14	3.36	1.34	115	2.90	1.15	33	3.64	1.25
The label is more than just a means of advertising	70	3.69	1.19	46	3.72	1.11	102	3.95	1.06	115	3.97	1.07	13	3.54	1.27	117	3.15	1.17	33	3.70	1.13
The label is attractive	70	3.76	0.98	47	3.70	1.16	103	4.08	1.06	112	3.69	1.17	14	3.43	1.16	116	3.32	1.26	34	3.68	1.15

1) Here are several statements concerning your perception of the label above. Please indicate on a scale from 1 to 5 your opinion on the following statements, 1 being “don’t agree at all” and 5 being “completely agree”.

Table 36. Perception of the EU TSG label (participants who use the label)

	FR			DE			HU			IT			NO			RS			UK		
	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.
The label is easy to understand	49	4.24	0.92	29	4.03	1.12	88	4.27	1.06	87	4.31	0.88	11	3.73	1.10	70	4.44	0.77	26	4.12	0.91
The label has a clear logo/symbol	48	4.17	0.86	28	3.93	1.09	88	4.30	0.98	87	4.20	0.95	11	3.73	0.79	71	4.37	0.81	26	4.19	0.85
The label is trustworthy	48	4.08	0.82	27	4.00	0.92	88	4.13	0.94	85	4.24	0.81	11	3.73	0.90	70	3.81	0.92	26	4.08	0.89
The label helps me to make an informed choice	47	4.26	0.85	28	4.11	0.99	88	4.13	0.94	87	4.17	0.94	11	3.73	0.90	71	3.80	1.05	26	4.00	1.02
Products with this label have similar prices to other products without this label	45	3.78	1.11	26	3.88	0.86	87	3.53	1.05	85	3.53	1.05	11	3.64	0.92	70	3.27	1.03	26	3.85	1.08
The label is more than just a means of advertising	46	3.89	1.16	28	4.11	0.92	87	4.05	1.02	86	3.91	1.05	11	3.73	1.10	69	3.49	1.04	26	3.88	1.03
The label is attractive	46	3.80	1.02	28	4.07	0.94	88	4.17	0.96	85	3.69	1.15	11	3.64	1.03	69	3.59	1.12	26	3.96	0.96

1) Here are several statements concerning your perception of the label above. Please indicate on a scale from 1 to 5 your opinion on the following statements, 1 being “don’t agree at all” and 5 being “completely agree”.

3.3.2.4.2. Knowledge of the EU TSG label

Besides recognition, use and perception we also investigate consumers' knowledge with respect to the EU TSG label. Table 37 reveals that the most frequently chosen statement is the third one, which says that the product is of a specific character in that either its raw materials, production method or processing is traditional, which is one of the three correct statements. The word "traditional" on the logo is likely to have helped respondents to recognize the character of the label. Nevertheless, in all countries the percentage of respondents stating that they do not know what the label means is also very high, ranging from 15.6% in Serbia to 50.9% in Norway. Regarding the other two correct statements (it is certified by a body independent of the producer and retailer; it is an EU label) respondents knowledge is more limited with on average about 10% of respondents ticking the former and about 25% ticking the latter. However, Table 37 also reveals that statements not applying to the TSG label were also ticked by a considerable proportion of consumers. This was true especially regarding statements 1 and 2 regarding geographical area. While the results in Table 37 consider the responses of all consumers and thus also include those not recognizing the label, Table 38 focuses on those recognizing and Table 39 on those recognizing and using the TSG label.

When considering only respondents who stated to have recognized (and used) the label (Tables 38 and 39), the share of respondents indicating that they do not know what the label means considerably declines in all countries. In parallel, the percentages of respondents correctly ticking the statements applying to the TSG (statements 3, 4 and 5) considerably increase in most countries. However, compared with the total sample, those recognizing (and using) the TSG label also tick to a greater extent those statements that are wrong. This provides some indication that knowledge about the label is poor, even among those making use of the label when doing their grocery shopping.

Table 37. Knowledge of EU TSG label (total sample)

		FR (N=404)		DE (N=425)		HU (N=398)		IT (N=399)		NO (N=411)		RS (N=403)		UK (N=402)	
1	the product has been produced, processed and prepared in a specific geographical area that defines significantly its quality or properties	76	(18.8%)	77	(18.1%)	52	(13.1%)	105	(26.3%)	45	(10.9%)	70	(17.4%)	53	(13.2%)
2	at least one of the stages of production, processing or preparation takes place in a determined geographical area that influences the quality or a specific property of the product	65	(16.1%)	64	(15.1%)	56	(14.1%)	79	(19.8%)	27	(6.6%)	52	(12.9%)	56	(13.9%)
3	the product is of specific character in that either its raw materials, production method or processing is traditional	134	(33.2%)	150	(35.3%)	149	(37.4%)	149	(37.3%)	87	(21.2%)	229	(56.8%)	123	(30.6%)
4	it is certified by a body independent of the producer and retailer	46	(11.4%)	22	(5.2%)	47	(11.8%)	45	(11.3%)	20	(4.9%)	56	(13.9%)	39	(9.7%)
5	it is an EU label	59	(14.6%)	76	(17.9%)	87	(21.9%)	98	(24.6%)	71	(17.3%)	125	(31.0%)	91	(22.6%)
6	this product is produced according to the EU organic guidelines	25	(6.2%)	23	(5.4%)	50	(12.6%)	43	(10.8%)	21	(5.1%)	74	(18.4%)	36	(9.0%)
7	stricter rules than the minimum required by law have been followed regarding food safety	33	(8.2%)	37	(8.7%)	48	(12.1%)	35	(8.8%)	18	(4.4%)	56	(13.9%)	20	(5.0%)
8	this is a product of superior nutritional value	27	(6.7%)	15	(3.5%)	28	(7.0%)	21	(5.3%)	8	(1.9%)	31	(7.7%)	18	(4.5%)
9	the region where the product is produced/processed is specified	55	(13.6%)	46	(10.8%)	43	(10.8%)	47	(11.8%)	17	(4.1%)	34	(8.4%)	32	(8.0%)
10	in case of livestock products higher animal welfare standards apply	20	(5.0%)	6	(1.4%)	23	(5.8%)	18	(4.5%)	7	(1.7%)	18	(4.5%)	19	(4.7%)
11	None of the above	11	(2.7%)	25	(5.9%)	8	(2.0%)	3	(0.8%)	23	(5.6%)	9	(2.2%)	24	(6.0%)
12	I do not know	118	(29.2%)	121	(28.5%)	108	(27.1%)	61	(15.3%)	209	(50.9%)	63	(15.6%)	132	(32.8%)
1) The question was as follows: Below are several statements. Which of the following do you think apply to food products with this label? Please select all that apply. In Table 37 those statements applying to food product with the respective label are bold.															

Table 38. Knowledge of EU TSG label (participants who recognize the label)

		FR (N=75)		DE (N=48)		HU (N=103)		IT (N=116)		NO (N=15)		RS (N=120)		UK (N=34)	
1	the product has been produced, processed and prepared in a specific geographical area that defines significantly its quality or properties	25	(33.3%)	13	(27.1%)	24	(23.3%)	40	(34.5%)	3	(20.0%)	22	(18.3%)	11	(32.4%)
2	at least one of the stages of production, processing or preparation takes place in a determined geographical area that influences the quality or a specific property of the product	16	(21.3%)	16	(33.3%)	21	(20.4%)	35	(30.2%)	6	(40.0%)	18	(15.0%)	9	(26.5%)
3	the product is of specific character in that either its raw materials, production method or processing is traditional	31	(41.3%)	16	(33.3%)	53	(51.5%)	53	(45.7%)	4	(26.7%)	80	(66.7%)	14	(41.2%)
4	it is certified by a body independent of the producer and retailer	14	(18.7%)	5	(10.4%)	19	(18.4%)	17	(14.7%)	2	(13.3%)	19	(15.8%)	5	(14.7%)
5	it is an EU label	12	(16.0%)	13	(27.1%)	27	(26.2%)	27	(23.3%)	7	(46.7%)	37	(30.8%)	9	(26.5%)
6	this product is produced according to the EU organic guidelines	7	(9.3%)	5	(10.4%)	15	(14.6%)	15	(12.9%)	1	(6.7%)	34	(28.3%)	6	(17.6%)
7	stricter rules than the minimum required by law have been followed regarding food safety	12	(16.0%)	10	(20.8%)	15	(14.6%)	9	(7.8%)	3	(20.0%)	17	(14.2%)	4	11.8%)
8	this is a product of superior nutritional value	11	(14.7%)	2	(4.2%)	12	(11.7%)	9	(7.8%)	1	(6.7%)	12	(10.0%)	5	(14.7%)
9	the region where the product is produced/processed is specified	19	25.3%)	6	(12.5%)	15	(14.6%)	19	(16.4%)	3	(20.0%)	14	(11.7%)	5	(14.7%)
10	in case of livestock products higher animal welfare standards apply	4	(5.3%)	0	(0.0%)	8	(7.8%)	5	(4.3%)	1	(6.7%)	10	(8.3%)	2	(5.9%)
11	None of the above	3	(4.0%)	2	(4.2%)	3	(2.9%)	0	(0.0%)	0	(0.0%)	1	(0.8%)	1	(2.9%)
12	I do not know	6	(8.0%)	5	(10.4%)	5	(4.9%)	2	(1.7%)	1	(6.7%)	8	(6.7%)	2	(5.9%)

1) The question was as follows: Below are several statements. Which of the following do you think apply to food products with this label? Please select all that apply. In Table 37 those statements applying to a food product with the respective label are bold.

Table 39. Knowledge of EU TSG label (participants who use the label)

		FR (N=49)		DE (N=29)		HU (N=88)		IT (N=87)		NO (N=11)		RS (N=71)		UK (N=26)	
1	the product has been produced, processed and prepared in a specific geographical area that defines significantly its quality or properties	20	(40.8%)	8	(27.6%)	22	(25.0%)	34	(39.1%)	2	(18.2%)	16	(22.5%)	9	(34.6%)
2	at least one of the stages of production, processing or preparation takes place in a determined geographical area that influences the quality or a specific property of the product	12	(24.5%)	12	(41.4%)	19	(21.6%)	26	(29.9%)	5	(45.5%)	15	(21.1%)	9	(34.6%)
3	the product is of specific character in that either its raw materials, production method or processing is traditional	20	(40.8%)	9	(31.0%)	47	(53.4%)	38	(43.7%)	4	(36.4%)	51	(71.8%)	11	(42.3%)
4	it is certified by a body independent of the producer and retailer	9	(18.4%)	4	(13.8%)	17	(19.3%)	12	(13.8%)	2	(18.2%)	14	(19.7%)	4	(15.4%)
5	it is an EU label	6	(12.2%)	10	(34.5%)	23	(26.1%)	22	(25.3%)	5	(45.5%)	24	(33.8%)	7	(26.9%)
6	this product is produced according to the EU organic guidelines	5	(10.2%)	3	(10.3%)	13	(14.8%)	10	(11.5%)	0	(0.0%)	25	(35.2%)	4	(15.4%)
7	stricter rules than the minimum required by law have been followed regarding food safety	11	(22.4%)	7	(24.1%)	11	(12.5%)	7	(8.0%)	3	(27.3%)	11	15.5%)	4	(15.4%)
8	this is a product of superior nutritional value	8	(16.3%)	1	(3.4%)	11	(12.5%)	7	(8.0%)	1	(9.1%)	10	(14.1%)	4	(15.4%)
9	the region where the product is produced/processed is specified	13	(26.5%)	4	(13.8%)	14	(15.9%)	14	(16.1%)	1	(9.1%)	11	(15.5%)	4	(15.4%)
10	in case of livestock products higher animal welfare standards apply	2	(4.1%)	0	0.0%)	7	(8.0%)	5	(5.7%)	1	(9.1%)	7	(9.9%)	2	(7.7%)
11	None of the above	1	(2.0%)	1	(3.4%)	2	(2.3%)	0	(0.0%)	0	(0.0%)	0	(0.0%)	1	(3.8%)
12	I do not know	5	(10.2%)	2	(6.9%)	5	(5.7%)	2	(2.3%)	1	(9.1%)	2	(2.8%)	2	(7.7%)

The question was as follows: Below are several statements. Which of the following do you think apply to food products with this label? Please select all that apply. In Table 37 those statements applying to a food product with the respective label are bold.

3.3.2.5. Comparison among EU-labels

Our analysis revealed similarities and differences between countries regarding their recognition, use, barriers to use, perception and knowledge of EU quality labels which again differ depending on the label considered.

Overall our results show that recognition is on average highest for the EU organic label, with about 40% of respondents over all countries recognizing the label, and lowest for the EU TSG label with a share of recognition which is only slightly above 20%. Besides the EU organic label, consumers in the seven countries are particularly familiar with the EU PGI label (35% recognition) while awareness is somewhat lower for the PDO label. However, for each EU label recognition considerably varies amongst countries. Thus, for example regarding the PGI label recognition is very high (69.3%) in Italy while only 7.2% of respondents from Norway recognize this label. However, relatively low recognition of the label was found not only in the non-EU country Norway but also in the EU member states UK and Germany, with 14.4% and 17.3%, respectively. In accordance with our results in section 3.2, where the attributes region and country of origin proved to be especially important, we found that for France and Italy recognition of the PGI and PDO labels considerably exceeds recognition in the other countries. Our results also demonstrate that recognition is the crucial step to the label's use. In our study, we found that the majority (in general around 70%) of those recognizing a label also state that they make use of the label at least sometimes when doing their grocery shopping. This reveals the importance of increasing awareness regarding the EU food quality labels.

The reasons why consumers who recognize the label do not use the label differ, though one reason dominates: consumers indicate that they just do not pay attention while doing their grocery shopping. Other reasons mentioned by a large proportion of respondents are that the labelled products are too expensive and have a lack of availability.

Though the EU organic label is the one best recognized by respondents it is not regarded very highly. In fact, considering the whole sample over all countries and statements it is just neutrally perceived (an average around 3 on a five point scale with 1 being “don’t agree at all” and 5 being “completely agree”). The three other EU labels are more favourably perceived. Consumers especially see a lack of clarity regarding the EU organic label. Evidently, the green leaf does not explain itself. The perception of the other three EU labels is very similar. Though trust is perceived by consumers to be the most important characteristic, even those indicating

that they take the label into account when doing their grocery shopping give this item a score of only about 4 on the 5-point.

In general, over all EU labels and countries we found that label perception improves with recognition and further improves with use. This again reveals the importance linked to consumers' initial recognition of a label.

Finally, we investigated consumers' knowledge with respect to the EU food quality label. Our results show that knowledge is poor for all four labels. Perceived knowledge increases for those recognizing and using the label, though this does not always correspond to factual knowledge. Indeed, if consumers do not know what the label stands for and whether it is third-party certified, the label cannot help them to make an informed choice. In fact, in their evaluation of the EU labels, the statement 'this label helps me to make an informed choice' receives comparably low ratings in all countries except Italy.

3.3.3. *National labels*

Besides the four EU labels for each of the seven countries, two national/regional labels for each country were considered in the analysis. First, the 14 labels will be briefly introduced. In a second step consumers' recognition, use, barriers to use, perception and knowledge will be investigated for each national/regional label.

The following two national labels were selected and used in the French survey: *AB* (Agriculture Biologique) which certifies organic products, and *Label Rouge* (since 1960) which guarantees the use of higher quality raw materials in food processing. Although the use of the EU organic label is mandatory since 2010 on organic products, the French label *AB* can also be used and is still present to a large extent on organic food products provided on the French market.

The specifications of the *French national label AB* are more stringent than those applied to the EU Organic label. Organic producers often use on their packaging the EU organic label, which is mandatory for organic products, and the national *label AB* which is not mandatory, but which promotes the French touch from the organic farming sector.

The *Label Rouge* is almost 60 years old and very well-known and attractive on the French food market where consumers pay attention mainly to taste and higher gustative quality of the food.

There are two German national labels used in the consumer survey. The first is the German *Bio* label and the second is the *Regional window* label. The German *Bio* label was introduced in

September 2001 by the Federal Ministry of Food and Agriculture. Food displaying the *Bio* label must have been produced and prepared according to Regulation (EC) No. 834/2007. It can be used in addition to the EU Organic label (the use of the latter is mandatory) as the same rules apply for both labels.³⁰

The *Regional Window* label was founded in August 2012 by the association of "Regionalfenster e.V." with the goal of establishing a consistent, transparent and trustworthy label for the uniform labelling of regional products at the federal level. The *Regional Window* label was established as a promising approach for helping consumers to identify regional food in Germany. The main product groups labelled with the *Regional Window* are "fruits and vegetables", followed by "meat and sausages" and "milk and dairy products". The certification rules request that at least 51% of the ingredients are from a certain region. The first products were labelled in January 2014 with the *Regional Window*.³¹ In 2017, there were contracts with 760 licensees and over 4000 products were certified with the German *Regional Window* label.

The two Hungarian national labels were both introduced in 1998 and are managed by the Ministry of Agriculture. With the *Traditions-Flavours-Regions (TFR) label* Hungary joined the EU Euroterroirs initiative. Traditional and locally-typical Hungarian agricultural and food products are labelled by the *TFR*. By the end of 2001 the first registration round had resulted in more than 300 registered products. Since then producers could join the system following a yearly announced call of the Ministry. Those producers meeting all the requirements of the *TFR* standard with their products can use the logo.³²

The Quality Food from Hungary (*QFH*) label was launched in 1998 by the Ministry of Agriculture and Rural Development to help producers and processors of top quality food products to differentiate those from standard products. Only those products can use the label for which the raw materials, ingredients, the manufacturing process and the final product exceeds given governmental regulations. Currently about 50 products use the *QFH* label.³³

There are two Italian regional labels used in the consumer survey. The first, the label of *Prodotti Di Qualità Pugliah* refers to the "Quality Products of Apulia". The second is the label of *Qualità Alto Adige* and refers to "Quality South Tyrol".

³⁰ <https://www.bmel.de/DE/Landwirtschaft/Nachhaltige-Landnutzung/Oekolandbau/Texte/Bio-Siegel.html>

³¹ <http://www.regionalfenster.de>

³² <http://eredetvedelem.kormany.hu/hagyományok-izek-regioik>

³³ <http://elelmiszerlanc.kormany.hu/kivalo-magyar-elelmiszer-kme-vedjegy>

The Italian label from Apulia was filed for application in 2012 by the region of Apulia and was approved by the office for harmonisation in the domestic market (UAMI). “*Quality Products of Apulia*” is a quality label with indication of origin which guarantees the quality and origin of the product. Products carrying a *Quality Products of Apulia* label aim to enhance agricultural and food products with a high quality-controlled standard and to inform consumers, through information and advertising actions, about the qualitative characteristics of the products and services provided by the label participating in the food quality system. Food products displaying the *Apulia* label guarantee higher quality standards than current legal standards, the origin of the product and ensure complete traceability of the products (EC Regulation no. 1698). The *Quality South Tyrol* label was introduced in 2005 by the region of Bozen and approved by the European Commission. The label has been established to ensure a consistent, transparent and trustworthy label for certain agricultural products and foods from the South Tyrol region in compliance with the restrictive rules imposed by the EU. The aim of this label is to guarantee a higher quality level than the national standard with a focus on traditional production.³⁴

The two Norwegian labels that were selected for the consumer survey (Table 40) are both national labels administered by Matmerk, an independent foundation established by the Ministry of Agriculture and Food in 2007. The *Nyt Norge* label aims to make it easier for consumers to choose Norwegian food. To use the *Nyt Norge* label, a product has to fulfil certain criteria, such as the raw materials have to be produced in Norway and the products have to be processed and packed in Norway. The second label “*BGB*” is the Norwegian PGI label, which was introduced in 2002 in Norway based on the European directive. Currently 23 products carry this label (including fresh fruits).³⁵

For the Serbian consumer survey the national organic label was selected. Every product certified as organic in Serbia must carry this label. The label is authorized and maintained by the Ministry of Agriculture. The logo contains the picture of a tree, with green, blue and red colours, and also includes the text “Organic product”, written in Cyrillic. The second label selected is the “*Serbian Quality*” label. The Serbian government has been working with the European Bank for Reconstruction and Development (EBRD) and the Food and Agriculture Organization (FAO) to encourage the adoption of high quality standards in the meat sector. To obtain the quality stamp, products must use Serbian raw materials, in this case Serbian meat. In

³⁴ IDM – Südtirol/Alto Adige (2018); Label-Online (2018)

³⁵ www.matmerk.no

addition, for each type of product category, the label will require up to three specific properties differentiating the Srpski Kvalitet products from standard products in the market. The new quality label, created by a ministerial decree, can help premium meat products to gain recognition in the domestic market and potentially abroad, and provide consumers with guarantees on product quality and traceability. The label is inspired by France's *Label Rouge*.³⁶

The *Red Tractor* scheme, run by Assured Food Standards, is an independent UK whole chain food assurance scheme, and the largest in the UK, which certifies that the food is produced in Britain and in line with agreed quality standards for food safety, hygiene, and the environment (from farm to fork). *RSPCA Assured* is the RSPCA's ethical food label dedicated to animal welfare³⁷, with standards applied to each stage of an animal's life (including rearing, handling, transportation and slaughter).

³⁶ Pyrkalo, S. (2017), New quality label to raise profile of Serbian meats, <http://www.ebrd.com/news/2017/new-quality-label-to-raise-profile-of-serbian-meats.html>

³⁷ This was previously known as Freedom Food

Table 40. Selected national/regional labels of seven European countries

Countries	Group 1 survey	Group 2 survey
France		
Germany		
Hungary		
Italy		
Norway		
Serbia		
UK		

3.3.3.1. Recognition of the national /regional labels

Figure 18 shows the results with respect to recognition of the national/regional labels.

For France, Figure 18 reveals that the *AB* as well as the *Label Rouge* are recognized by about 96% of the survey participants. These results are in line with those usually published in France (respectively 98% and 88%) regarding consumers awareness of those labels.

Considerable differences exist between consumers' recognition of the two German labels. While the German *Bio* label is recognized by almost everybody (98.2%) the percentage of those recognizing the German *Regional Window* label is relative low (25.9%). However, the German *Bio* label had already been introduced in 2001, accompanied by massive public advertisement at that time. In contrast, the first product carrying the *Regional Window* was introduced in only 2014 and received comparably little public attention.

Recognition of the Hungarian *QFH* label (97.0%) is comparable to recognition of the *AB*, *Label Rouge* and the *Bio* labels. Compared with previous studies, our findings for the *QFH* label reveal a higher level of recognition. Szakály et al. (2014) conducted a consumer survey (n=1000) in 2014 and found a level of recognition of 71.9%. The difference might be due to different wording of the question (know instead of recognize) as well as the fact that the survey by Szakály et al. (2014) was carried out three years earlier. As in the case of the German *Regional Window*, the second Hungarian label investigated, the *TFR*, was recognized by only 28.0% of survey participants. To our knowledge this label has so far not been investigated in any prior study.

Recognition of the regional label *Quality Products of Apulia* is lower (23.0%) than the *Quality South Tyrol* label (62.7%). The latter is often associated with traditional food products with significant market shares, including some geographical indications widely recognized, i.e. the South Tyrol Speck PGI and the South Tyrol Apple PGI. These synergies are not exploited in the Apulia regional case.

Figure 18 shows that almost all Norwegian respondents (95.2%) recognized the *NYT Norge* label while recognition of the *Norwegian PGI label* was much lower: less than 10% of respondents. The latter label has the lowest level of recognition of all national/regional labels.

Serbian participants' recognition is much higher for the organic label (85.3%) than for the Serbian Quality label (61.8%). This is likely due to the fact that the latter has been established

quite recently, with only a few products having been granted the right to use it in 2017³⁸, while the organic label has been present in the Serbian market since 2011³⁹.

Recognition of national labels (both *Red Tractor* scheme (75.9%) and RSPCA (35.3%)) is higher than that for the EU's organic label as well as for PDO, PGI and TSG labels. The majority of the UK sample recognises the *Red Tractor* logo, indicating that it is possible for food quality labels to gain a reasonable degree of 'cut through' with consumers.

³⁸ Pyrkalo, S. (2017), New quality label to raise profile of Serbian meats, <http://www.ebrd.com/news/2017/new-quality-label-to-raise-profile-of-serbian-meats.html>

³⁹ Official Gazette of the RS, No. 48/11

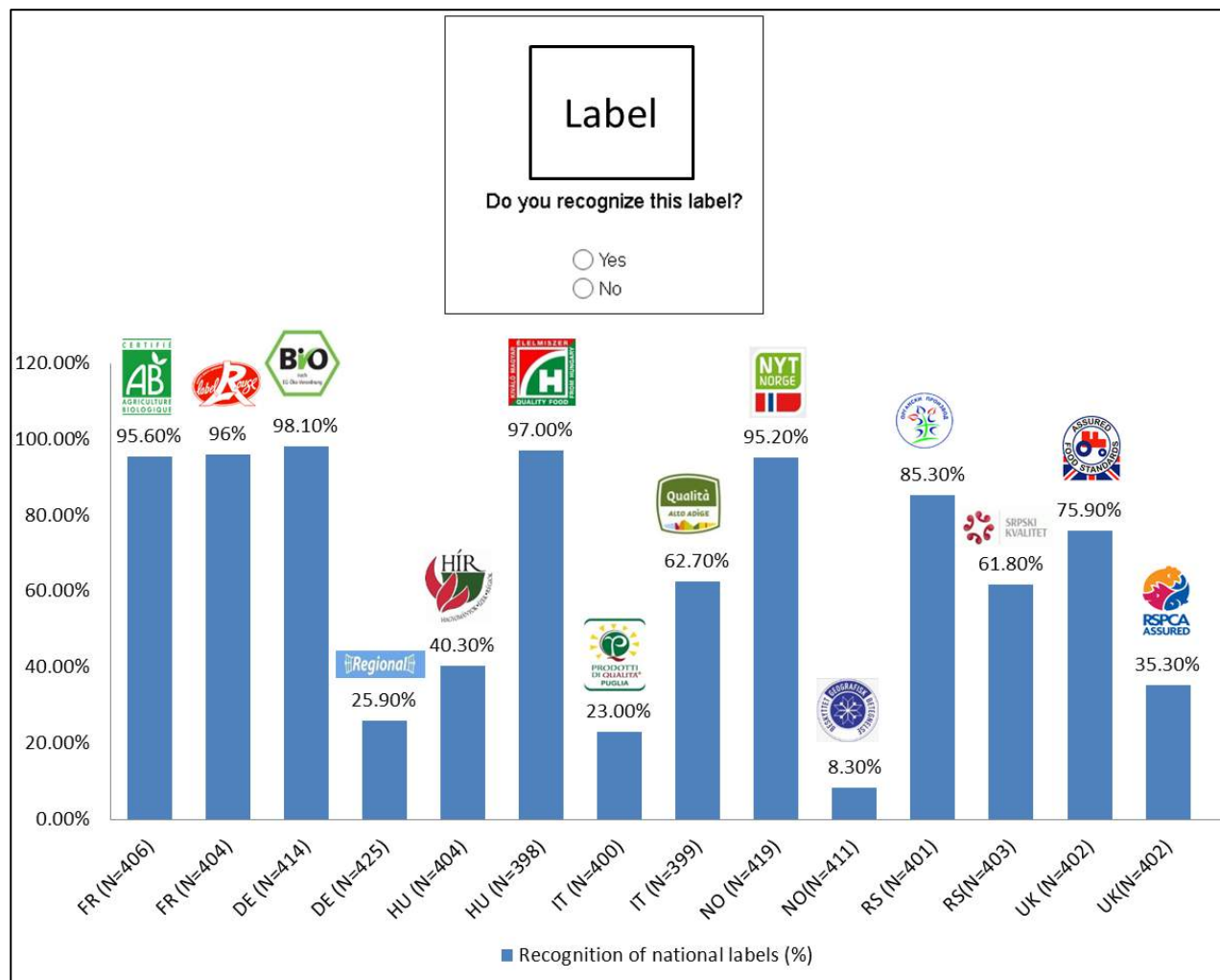


Figure 18. Percentage recognition of national/regional labels (out of total the sample)

3.3.3.2. National/regional label: Use and barriers to use

Figure 19 presents the results regarding the use of the respective national/regional labels considering all participants.⁴⁰ In addition, Figure 20 provides information on the percentage of use considering only those recognizing the label.

Figure 19 shows a similar structure to Figure 18, indicating a considerable level of correspondence between label recognition and label use. This, however, does not imply that the relation between recognizing and using the label is the same in all countries and for all labels. Figure 20 reveals that recognition varies between about 59% for the Italian *Prodotti Di Qualità Puglia* and the Norwegian *BGB* label and 87% for the Hungarian *QFH* label.

⁴⁰ We consider “use of the label” if the consumer states that (s)he sometimes, almost every time or every time takes the label into account when doing her/his grocery shopping.

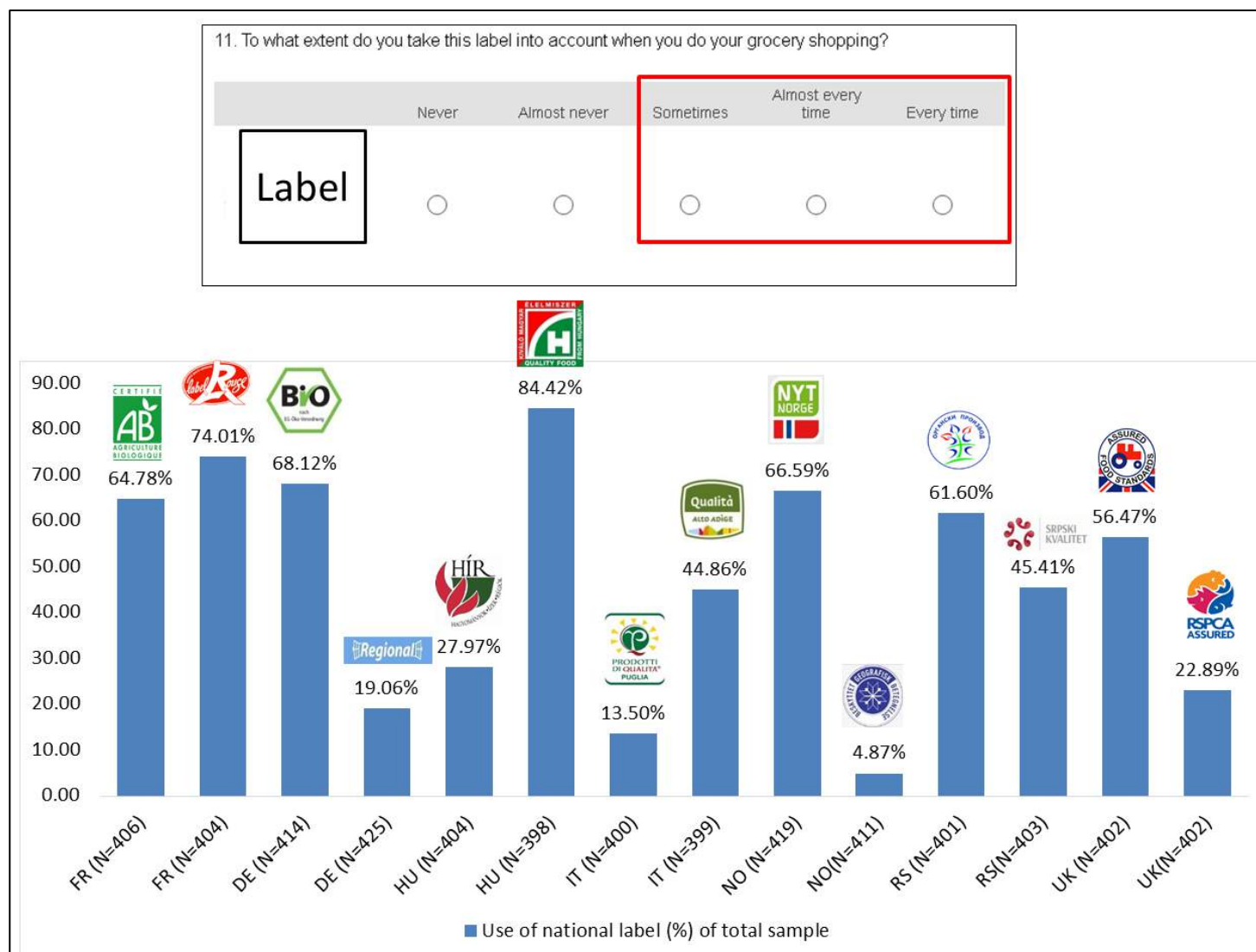


Figure 19. Percentage of consumers taking the national/regional label into account when doing their grocery shopping (out of the total sample)

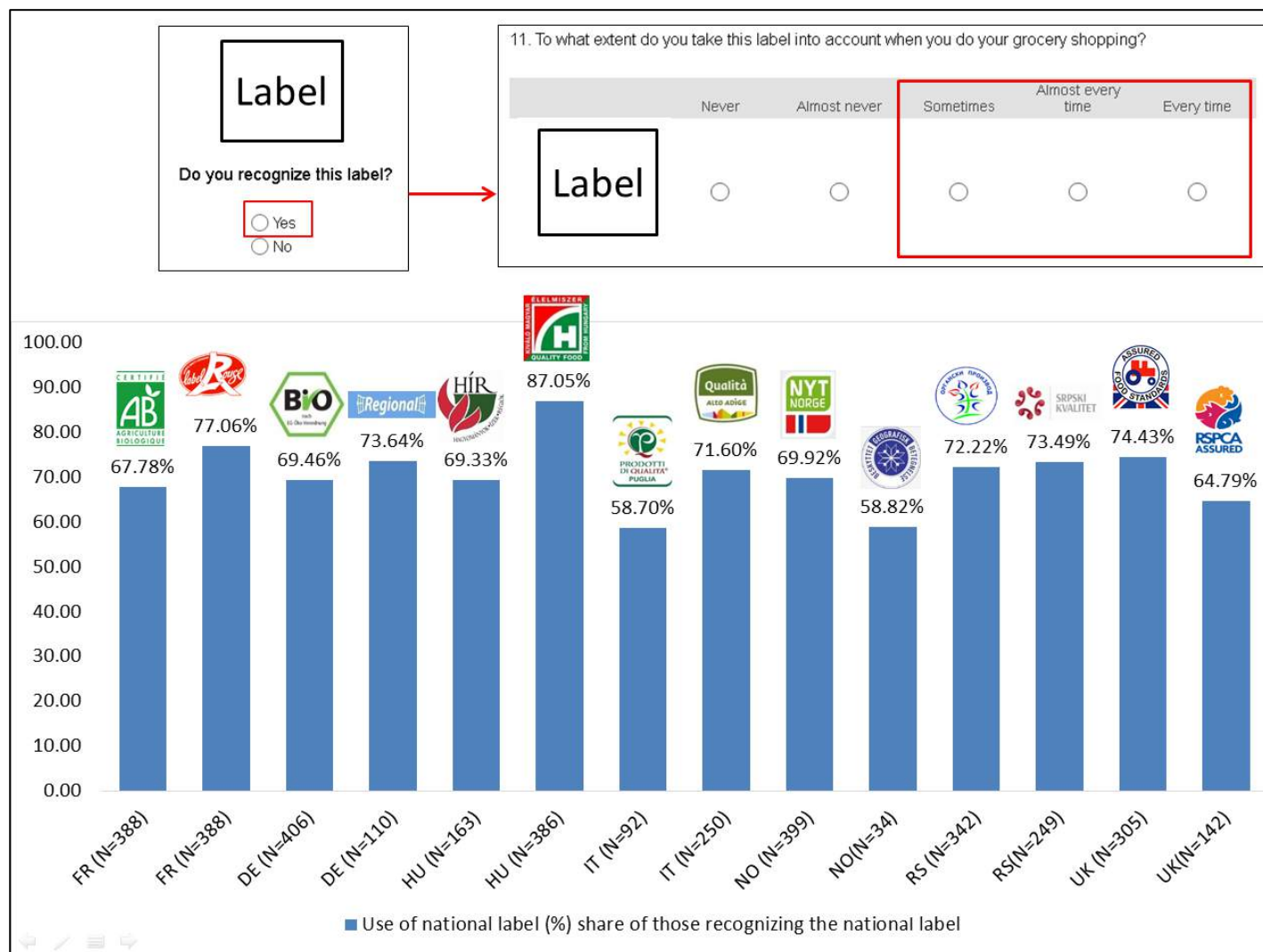


Figure 20. Consumers taking the respective national/regional label into account when doing their grocery shopping (percentage of those recognizing the respective national/regional label)

What prevents respondents recognizing a national/regional label to take it into account when doing their grocery shopping? Tables 41a and 42b provide answers with respect to this question for the 14 labels analysed.⁴¹

For the German *Bio* label (see Table 41a) it is first and foremost the high price (52.4%) that prevent consumers from making use of the label. This result confirms the results of Buder et al. (2014). In addition, a high percentage of consumers (30.0%) indicate that in general they do not pay attention to product labels during grocery shopping. Also the study by Grunert (2011) showed that much information on and around products is ignored by consumers, or at least not consciously perceived.

With regard to the German *Regional Window* label, the statement ‘I rarely pay attention to product labels while doing grocery shopping’ was most often ticked (37.9% of those respondents that recognize but do not use the label). However, regarding this label a lack of availability (There are only few varieties of products with this label in stores where I do my grocery shopping 20.7%; I don't know where to find products with this label 24.1%) is also relevant. Finally, the proportion of those deciding not to buy the product because they perceive the label as a marketing gag is 24.1%, again relatively high. Regarding interpretation of the results for the *Regional Window* label, it is notable that the number of participants who answered the question with respect to barriers (those respondents that recognize but do not use the label) was rather small: only 29.

Similar to results for the EU quality labels, the lack of attention to labels and a lack of time are the most important reasons why Hungarian consumers who recognize the national labels do not make use of them (28.0%/30.0% for the *TFR* label and 48.0%/32.0% for the *QFH* label regarding lack of attention/time). Also, a lack of availability seems to be a barrier to use in the case of the *TFR* label (There are only few varieties of products with this label in stores where I do my grocery shopping 20.0%; I don't know where to find products with this label 20.0%). A lack of trust in this specific label was not mentioned by any respondent as a barrier in the case of the *TFR* label.

Taking a look at what prevents Italian consumers from using the regional labels in their purchase decisions confirms the relevance of availability. The main barriers for both regional labels *Quality Products of Apulia* and *Quality South Tyrol* are the fact that only a few varieties

⁴¹ From a list of 15 potential barriers, respondents could tick up to 3 that prevent them from taking the label into account when doing their grocery shopping.








are available where consumers do their grocery shopping (18.4% and 26.8%, respectively), and a lack of knowledge where to find those labels (respectively 13.2% and 16.9%). Lack of opportunity which might be closely linked to lack of availability is another important reason why Italian respondents do not consider the two regional labels (18.4% and 16.9%, respectively, see Tables 41a and 41b).

The main reason for Norwegian consumers not to consider the national labels when doing their grocery shopping are that they rarely pay attention to product labels while doing grocery shopping (41.7% for the *NYT Norge* label and 21.4% for the *Norwegian PGI* label) and that products with or without this label taste the same (40.0% and 35.7%, respectively). These findings correspond well to the results presented in the counting frequencies of BWS of cheese, fresh fruits, and fresh fish among Norwegian consumers (see section 3.2), emphasizing that consumers are not actively looking for labels, but rather focus on price and taste. This contrasts Norwegian consumers with most respondents from the other countries in the survey.

The main barriers preventing Serbian consumers from using the organic label are high prices (49.5%), lack of attention (32.6%) and lack of trust in the label (26.3%) and in labels in general (27.4%) (see Table 41a). The *Serbian Quality label* is not considered during consumers' grocery shopping due to a lack of attention to labels in general (39.4%) and a lack of time while doing grocery shopping (30.3%). Notably, products with quality labels are not perceived to be less attractive (none of the respondents stated their bad appearance) or tasty than non-labelled products. A rather small number of participants cited the lack of availability of products with these labels as a limitation, which might be due to the fact that in the sample urban respondents are overrepresented compared with the national average. Surprisingly, many respondents perceive the *Serbian organic label* to be just a marketing tool (17.9%).








The main barrier to the use of the UK national labels is that consumers do not pay attention to them when shopping (50.0% for the *Red Tractor* label and 40.0% for the *RSPCA* label). All other statements are ticked to a much lower degree (none above 16%). It may be that in a retail environment, shoppers pay more attention to convenience and price than ethical and environmental concerns, with supermarkets focusing on price, priming consumers to focus on frugality as a goal rather than wider, societal objectives (Reczek and Irwin, 2015).

Table 41a. Barriers to taking the national/regional label into account when making a purchasing decision (Group 1 of the respective surveys)

	FR (N=125) 	DE (N=124) 	HU (N=50) 	IT (N=38) 	NO (N=120) 	RS (N=95) 	UK (N=78) 
1 Products with this label are too expensive	81 (64.8%)	65 (52.4%)	8 (16.0%)	4 (10.5%)	17 (14.2%)	47 (49.5%)	5 (6.4%)
2 I do not trust this label	16 (12.8%)	29 (23.4%)	0 (0.0%)	1 (2.6%)	14 (11.7%)	25 (26.3%)	1 (1.3%)
3 I do not trust labels in general	11 (8.8%)	34 (27.4%)	15 (30.0%)	0 (0.0%)	10 (8.3%)	26 (27.4%)	4 (5.1%)
4 Products with or without this label taste the same	18 (14.4%)	32 (25.8%)	2 (4.0%)	3 (7.9%)	48 (40.0%)	17 (17.9%)	12 (15.4%)
5 I rarely pay attention to product labels while doing grocery shopping	26 (20.8%)	38 (30.6%)	14 (28.0%)	6 (15.8%)	50 (41.7%)	31 (32.6%)	39 (50.0%)
6 There are only few varieties of products with this label in stores where I do my grocery shopping	9 (7.2%)	1 (0.8%)	10 (20.0%)	7 (18.4%)	9 (7.5%)	11 (11.6%)	9 (11.5%)
7 I have no time to consider labels while doing my grocery shopping	15 (12.0%)	7 (5.6%)	15 (30.0%)	4 (10.5%)	13 (10.8%)	8 (8.4%)	10 (12.8%)
8 The issue advertised on this label is not important to me	7 (5.6%)	13 (10.5%)	4 (8.0%)	3 (7.9%)	27 (22.5%)	10 (10.5%)	4 (5.1%)
9 I don't know where to find products with this label	1 (0.8%)	3 (2.4%)	10 (20.0%)	5 (13.2%)	5 (4.2%)	4 (4.2%)	3 (3.8%)
10 I am not interested in buying labeled products	13 (10.4%)	16 (12.9%)	8 (16.0%)	2 (5.3%)	6 (5.0%)	6 (6.3%)	6 (7.7%)
11 I don't buy products with this label because the label is just a marketing tool	14 (11.2%)	10 (8.1%)	8 (16.0%)	0 (0.0%)	22 (18.3%)	17 (17.9%)	8 (10.3%)
12 Products with this label do not look good	2 (1.6%)	1 (0.8%)	0 (0.0%)	0 (0.0%)	1 (0.8%)	0 (0.0%)	0 (0.0%)
13 I don't like the taste of products with this label	1 (0.8%)	5 (4.0%)	2 (4.0%)	0 (0.0%)	0 (0.0%)	1 (1.1%)	0 (0.0%)
14 Lack of opportunity in the last 2 weeks	9 (7.2%)	1 (0.8%)	7 (14.0%)	11 (28.9%)	5 (4.2%)	5 (5.3%)	1 (1.3%)
15 None of those reasons	3 (2.4%)	6 (4.8%)	1 (2.0%)	7 (18.4%)	7 (5.8%)	1 (1.1%)	13 (16.7%)

1) From the list of 15 potential barriers respondents could tick up to 3 that prevent them from taking the label into account when doing their grocery shopping.

Table 41b. Barriers to taking the national/regional label into account when making a purchasing decision (Group 2)

(Frequency count)		FR (N=89)	DE (N=29)	HU (N=50)	IT (N=71)	NO (N=14)	RS (N=66)	UK (N=50)
								
1	Products with this label are too expensive	34 (38.2%)	3 (10.3%)	8 (16.0%)	7 (9.9%)	1 (7.1%)	7 (10.6%)	8 (16.0%)
2	I do not trust this label	12 (13.5%)	1 (3.4%)	10 (20.0%)	2 (2.8%)	1 (7.1%)	8 (12.1%)	3 (6.0%)
3	I do not trust labels in general	11 (12.4%)	2 (6.9%)	12 (24.0%)	4 (5.6%)	2 (14.3%)	13 (19.7%)	4 (8.0%)
4	Products with or without this label taste the same	4 (4.5%)	5 (17.2%)	8 (16.0%)	2 (2.8%)	5 (35.7%)	11 (16.7%)	6 (12.0%)
5	I rarely pay attention to product labels while doing grocery shopping	23 (25.8%)	11 (37.9%)	24 (48.0%)	11 (15.5%)	3 (21.4%)	26 (39.4%)	20 (40.0%)
6	There are only few varieties of products with this label in stores where I do my grocery shopping	7 (7.9%)	6 (20.7%)	4 (8.0%)	19 (26.8%)	2 (14.3%)	5 (7.6%)	8 (16.0%)
7	I have no time to consider labels while doing my grocery shopping	9 (10.1%)	3 (10.3%)	16 (32.0%)	4 (5.6%)	0 (0.0%)	20 (30.3%)	6 (12.0%)
8	The issue advertised on this label is not important to me	2 (2.2%)	4 (13.8%)	7 (14.0%)	7 (9.9%)	3 (21.4%)	6 (9.1%)	1 (2.0%)
9	I don't know where to find products with this label	1 (1.1%)	7 (24.1%)	4 (8.0%)	12 (16.9%)	2 (14.3%)	12 (18.2%)	6 (12.0%)
10	I am not interested in buying labeled products	5 (5.6%)	2 (6.9%)	6 (12.0%)	3 (4.2%)	1 (7.1%)	3 (4.5%)	5 (10.0%)
11	I don't buy products with this label because the label is just a marketing tool	9 (10.1%)	7 (24.1%)	5 (10.0%)	2 (2.8%)	4 (28.6%)	7 (10.6%)	5 (10.0%)
12	Products with this label do not look good	1 (1.1%)	0 (0.0%)	1 (2.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
13	I don't like the taste of products with this label	1 (1.1%)	0 (0.0%)	0 (0.0%)	1 (1.4%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
14	Lack of opportunity in the last 2 weeks	5 (5.6%)	2 (6.9%)	4 (8.0%)	12 (16.9%)	2 (14.3%)	11 (16.7%)	4 (8.0%)
15	None of those reasons	11 (12.4%)	2 (6.9%)	3 (6.0%)	9 (12.7%)	2 (14.3%)	2 (3.0%)	9 (18.0%)

1) From the list of 15 potential barriers respondents could tick up to 3 that prevent them from taking the label into account when doing their grocery shopping.

3.3.3.3. Perception of labels

In section 3.3.1 findings were presented regarding what label characteristics consumers perceive to be important. In this section we investigate the extent to which the 14 national/regional labels considered in this report meet those characteristics. We differentiate between consumers' perception of the respective label considering the whole sample (Tables 42a and 42b), only participants recognizing the label (Tables 43a and 43b) and finally only those using⁴² the label (Tables 44a and 44b).

The *AB* label as well as the *Label Rouge* are perceived by respondents from France in a rather positive way. On a scale from 1 to 5, with 1 being "don't agree at all" and 5 being "completely agree", average agreement over all statements is equal to 3.91 for the *AB* and 3.83 for *Label Rouge*. Especially the clarity of the label is appreciated (The label is easy to understand, the label has a clear logo/symbol) with scores around 4.4 for the *AB* label and between 4.04 and 4.13 for the *Label Rouge*. The trustworthiness of the label, and thus the characteristic consumers in France as well as in all other analysed countries perceive to be most important (see section 3.3.1) scores 3.91 for the *AB* label and 3.83 for the *Label Rouge*, both positive. As almost all respondents in the French survey recognize the two labels, results depicted for France hardly differ between Tables 42a and 42b on the one hand and Tables 43a and 43b on the other hand. However, considering participants who do not only recognize but also make use of the label (see Tables 44a and 44b) reveals a considerably more positive perception (4.22 for the *AB*, 4.05 for the *Label Rouge*). Comparing the results summarized above for the national labels with the results for the four EU labels shows a much lower score for the EU compared with the national labels.

Clarity is also a strength of the two German labels. Considering the whole sample, the mean score for the statement 'The label has a clear goal/symbol' is 4.27, and 4.28 for the statement 'The label is easy to understand' (see Table 42a). The respective scores for the *German Regional Window* are 3.96 and 4.17 (see Table 42b). The trustworthiness for both labels is rated considerably lower but still positive. Table 42a, in addition, reveals that respondents perceive products with the *Bio* label to be pricy. Regarding the German *Bio* label there are no large differences between Tables 42a and 43a, as almost all survey participants of the German sample recognize the label. However, comparing Tables 43a and 44a reveals that those who make use of the label in their purchase decision perceive the label more positively than those who only

⁴² As previously mentioned, we consider use of the label if the consumer states that (s)he sometimes, almost every time or every time takes the label into account when doing her/his grocery shopping.

recognize the label. In the case of the German *Regional Window*, respondents' perception is more positive for those recognizing the label compared with all respondents. Perception further improves for those also using the label. As in the case of France, perception of both German labels is more positive than for the four EU labels.

Clarity is highest among all labels for the *QFH* logo (mean scores around 4.6 for the total sample; Table 42b). However, trust with 4.3 (Table 42b) is also a characteristic that consumers rated very highly for this label. The only attribute that receives a score below 4 (3.67) refers to the price of products carrying the *QFH* logo. Over all statements the score for the *QFH* logo is 4.25 if considering the total sample. Evaluation of the second Hungarian label receives an average score of 3.63 for the whole sample (see Table 42a). Participants recognizing the label perceive the label more positively (Tables 43a and 43b). This was even more apparent for those using the label (Tables 44a and 44b). Participants of the Hungarian sample perceive their national labels more positively than the EU labels investigated in section 3.3.2.

According to the Italian respondents, clarity is a strength of the regional labels “*Quality Products of Apulia*” and “*Quality South Tyrol*”; indeed, the label is easy to understand (mean scores, respectively, 4.28 and 4.27), and the label has a clear logo (respectively, 4.11 and 4.20) were the most agreed items (Tables 42a and 42b). Again, clarity of the label helps consumers to make an informed choice (respectively, 3.92 and 4.03). Trustworthiness is also perceived for the “*Quality South Tyrol*” label (4.01) as relatively high. For participants who recognize the label (Tables 43a and 43b) and for those who use the label (Tables 44a and 44b) these statements are still the most important ones, with, however, higher scores.








The Norwegian respondents seemed to largely agree that the *Nyt Norge* label is clear and easy to understand (the respective statements scored around 4.25, Table 42a), whereas this does not hold for the *Norwegian PGI* (respective scores about 3.1, Table 42b). However, respondents' evaluations differ between the two national labels not only with respect to the statements of clarity but also the overall evaluation is rather positive for the *Nyt Norge* label while it is neutral for the *Norwegian PGI*. Label perception is higher for consumers recognizing the labels and even further increases if consumers also use the labels. Compared with the EU labels, national labels are more positively perceived. This was true even for the *Norwegian PGI* label.

The general perception of the *Serbian Organic label* is positive among all respondents of the Serbian sample. Agreement with the different statements was below 3 only for the statement referring to equal prices (2.81) which implies that Serbian consumers perceive products with

the Serbian organic label as expensive. Clarity seems to be the strength of the label. The scores are 4.47 for the statement that ‘The label has a clear logo/symbol’ and even 4.62 for the statement ‘The label is easy to understand’. The scores for trustworthiness of the label (3.75) and the value of the label (The label is more than just a means of advertising; 3.48) are comparatively low. Similar results are obtained for the *Serbian Quality label*. However, while the average score over all statements is 3.81 for the organic label, it is 3.51 for the quality label (Tables 42a and 42b). Again label perception improves with recognition and further improves with use. Finally, evaluations of the national labels are much more positive than the EU labels.








The latter is also true for the UK national labels (*Red Tractor* and *RSPCA assured*) which are perceived in a more favourable light than the EU’s quality labels (PDO, PGI, TSG and organics) by respondents from the UK. Focusing on the UK national labels shows that those are perceived as being rather clear (The label is easy to understand: *Red Tractor* 4.00, *RSPCA*: 3.96, Table 42a; the label has a clear logo/symbol: *Red Tractor* 4.19; *RSPCA* 4.11, Table 42b). Respondents recognizing the *Red Tractor* label/the *RSPCA* label hold more positive views of the scheme compared with the full sample. As in the case of the EU quality schemes and the other national labels, the sub-samples that record the most positive evaluations of both UK national schemes (*Red Tractor* and *RSPCA Assured*) are those that use the labels in their decision making. In both cases, the labels are regarded as easy to use, trustworthy and help consumers make informed choices.

Table 42a. Perception of the national/regional label in group 1 (total sample)

	FR			DE			HU			IT			NO			RS			UK		
																					
	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.
The label is easy to understand	401	4.41	0.88	401	4.27	0.97	399	3.90	1.12	390	4.28	0.89	413	4.24	1.01	394	4.62	0.75	395	4.00	1.12
The label has a clear logo/symbol	398	4.37	0.91	403	4.29	0.90	397	3.85	1.14	389	4.11	0.96	413	4.30	0.97	393	4.47	0.89	396	4.19	0.96
The label is trustworthy	391	3.94	1.13	400	3.72	1.11	370	3.66	1.06	375	3.83	1.01	403	3.93	1.13	392	3.75	1.26	387	3.92	1.04
The label helps me to make an informed choice	390	3.96	1.14	397	3.73	1.17	388	3.65	1.11	387	3.92	1.01	406	3.86	1.13	393	3.72	1.22	393	3.81	1.14
Products with this label have similar prices to other products without this label	389	3.08	1.39	396	2.86	1.23	353	3.21	1.15	353	3.30	1.06	381	3.50	1.08	377	2.81	1.34	382	3.55	1.05
The label is more than just a means of advertising	392	3.74	1.18	401	3.57	1.17	382	3.54	1.12	387	3.68	1.03	391	3.64	1.18	385	3.48	1.27	390	3.79	1.06
The label is attractive	390	3.83	1.09	401	3.79	1.06	393	3.63	1.15	385	3.52	1.14	406	3.86	1.12	391	3.82	1.12	395	3.74	1.07








1) Here are several statements concerning your perception of the label above. Please indicate on a scale from 1 to 5 your opinion on the following statements, 1 being “don’t agree at all” and 5 being “completely agree”.

Table 42b. Perception of the national/regional label in group 2 (total sample)

	FR			DE			HU			IT			NO			RS			UK		
																					
	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.
The label is easy to understand	396	4.04	1.07	419	4.17	1.02	391	4.59	0.80	392	4.27	0.94	361	3.07	1.42	395	4.24	1.13	398	3.96	1.13
The label has a clear logo/symbol	396	4.13	0.97	417	3.96	1.10	391	4.58	0.77	391	4.20	0.96	359	3.10	1.35	395	4.18	1.10	397	4.11	0.98
The label is trustworthy	383	3.94	1.09	407	3.43	1.12	386	4.30	0.96	385	4.01	0.94	334	3.08	1.26	389	3.55	1.22	385	3.82	1.07
The label helps me to make an informed choice	390	3.91	1.08	407	3.57	1.12	392	4.34	0.92	383	4.03	0.95	335	2.98	1.25	389	3.42	1.20	391	3.81	1.08
Products with this label have similar prices to other products without this label	380	3.26	1.24	393	3.23	1.03	371	3.67	1.18	372	3.42	1.12	274	2.83	1.16	370	3.07	1.13	370	3.32	1.05
The label is more than just a means of advertising	384	3.67	1.16	405	3.42	1.12	385	4.12	1.09	385	3.78	1.07	310	3.00	1.23	383	3.26	1.19	380	3.73	1.09
The label is attractive	391	3.84	1.03	415	3.38	1.16	386	4.16	1.02	384	3.68	1.10	335	3.02	1.20	389	3.56	1.21	396	3.69	1.07








1) Here are several statements concerning your perception of the label above. Please indicate on a scale from 1 to 5 your opinion on the following statements, 1 being “don’t agree at all” and 5 being “completely agree”.

Table 43a. Perception of the national/regional label in group 1 (participants who recognize the label)

	FR			DE			HU			IT			NO			RS			UK		
																					
	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.
The label is easy to understand	384	4.46	0.84	393	4.28	0.97	162	4.12	1.01	92	4.59	0.67	395	4.30	0.96	336	4.63	0.77	302	4.20	0.96
The label has a clear logo/symbol	381	4.42	0.86	395	4.30	0.90	162	4.07	1.06	92	4.49	0.81	395	4.35	0.92	336	4.48	0.90	304	4.37	0.81
The label is trustworthy	375	3.98	1.11	392	3.72	1.12	159	3.84	1.02	92	4.20	0.90	388	3.97	1.11	336	3.80	1.26	299	4.14	0.85
The label helps me to make an informed choice	374	4.00	1.11	389	3.74	1.17	161	3.78	1.10	92	4.26	0.92	391	3.90	1.12	336	3.74	1.23	302	4.00	0.99
Products with this label have similar prices to other products without this label	373	3.09	1.40	388	2.84	1.23	156	3.32	1.19	89	3.45	1.24	366	3.54	1.06	327	2.81	1.37	294	3.67	0.99
The label is more than just a means of advertising	376	3.77	1.18	393	3.57	1.17	159	3.64	1.14	92	4.02	1.03	374	3.66	1.17	330	3.51	1.27	300	3.98	0.95
The label is attractive	373	3.87	1.08	394	3.79	1.07	160	3.78	1.15	91	3.89	1.15	389	3.89	1.10	334	3.88	1.09	302	3.89	0.96








1) Here are several statements concerning your perception of the label above. Please indicate on a scale from 1 to 5 your opinion on the following statements, 1 being “don’t agree at all” and 5 being “completely agree”.

Table 43b. Perception of the national/regional label in group 2 (participants who recognize the label)

	FR			DE			HU			IT			NO			RS			UK		
																					
	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.
The label is easy to understand	381	4.10	1.02	110	4.51	0.82	380	4.62	0.75	249	4.41	0.85	34	4.03	1.19	245	4.39	0.98	141	4.26	1.01
The label has a clear logo/symbol	381	4.19	0.90	110	4.28	0.97	380	4.61	0.73	248	4.35	0.87	34	4.09	1.06	246	4.33	0.96	141	4.33	0.90
The label is trustworthy	370	3.98	1.07	110	3.96	1.02	376	4.31	0.96	246	4.16	0.95	33	3.91	1.18	245	3.76	1.16	139	4.05	1.02
The label helps me to make an informed choice	376	3.94	1.05	108	4.07	0.95	381	4.35	0.90	243	4.16	0.93	34	3.76	1.21	244	3.59	1.15	140	4.08	1.01
Products with this label have similar prices to other products without this label	366	3.26	1.23	110	3.58	1.08	362	3.67	1.17	243	3.51	1.17	29	3.48	1.30	239	3.21	1.08	134	3.60	1.10
The label is more than just a means of advertising	370	3.69	1.15	109	3.76	1.19	374	4.15	1.07	246	3.87	1.08	31	3.81	1.40	240	3.43	1.16	137	3.84	1.10
The label is attractive	376	3.88	1.02	110	3.85	1.21	375	4.18	1.01	243	3.84	1.08	34	3.91	1.24	245	3.70	1.17	140	3.94	0.99








1) Here are several statements concerning your perception of the label above. Please indicate on a scale from 1 to 5 your opinion on the following statements, 1 being “don’t agree at all” and 5 being “completely agree”.

Table 44a. Perception of the national/regional label in group 1 (participants who use the label)

	FR			DE			HU			IT			NO			RS			UK		
																					
	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.
The label is easy to understand	260	4.59	0.72	276	4.41	0.88	112	4.25	0.91	54	4.65	0.55	276	4.54	0.77	244	4.66	0.72	225	4.35	0.85
The label has a clear logo/symbol	257	4.60	0.72	276	4.39	0.83	112	4.20	0.95	54	4.50	0.86	276	4.57	0.75	244	4.55	0.79	227	4.44	0.80
The label is trustworthy	257	4.34	0.88	277	4.03	0.92	112	4.06	0.89	54	4.33	0.85	272	4.34	0.83	244	4.17	1.04	224	4.28	0.79
The label helps me to make an informed choice	257	4.35	0.84	276	4.08	0.96	112	3.97	0.96	54	4.33	0.97	273	4.25	0.84	244	4.10	1.03	225	4.25	0.81
Products with this label have similar prices to other products without this label	253	3.41	1.32	272	3.07	1.13	110	3.53	1.10	53	3.57	1.35	262	3.73	0.99	238	3.06	1.37	223	3.88	0.91
The label is more than just a means of advertising	257	4.04	1.08	278	3.86	1.02	112	3.89	1.00	54	4.04	1.10	262	3.99	0.97	239	3.71	1.22	226	4.14	0.94
The label is attractive	255	4.18	0.92	278	4.06	0.91	112	3.99	1.02	54	4.04	1.12	274	4.23	0.92	242	4.13	0.95	227	4.00	0.94

1) Here are several statements concerning your perception of the label above. Please indicate on a scale from 1 to 5 your opinion on the following statements, 1 being “don’t agree at all” and 5 being “completely agree”.

Table 44b. Perception of the national/regional label in group 2 (participants who use the label)

	FR			DE			HU			IT			NO			RS			UK		
																					
	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.
The label is easy to understand	297	4.27	0.87	81	4.54	0.69	330	4.68	0.68	178	4.52	0.76	20	4.20	1.06	179	4.44	0.93	91	4.34	0.97
The label has a clear logo/symbol	297	4.33	0.80	81	4.33	0.91	330	4.65	0.70	177	4.47	0.77	20	4.20	0.95	180	4.39	0.92	91	4.41	0.87
The label is trustworthy	290	4.24	0.87	81	4.21	0.88	329	4.45	0.81	176	4.32	0.86	20	4.20	1.06	180	4.02	0.97	91	4.18	0.94
The label helps me to make an informed choice	296	4.18	0.83	81	4.28	0.73	333	4.47	0.77	174	4.34	0.83	20	3.95	1.15	181	3.82	1.04	90	4.24	0.89
Products with this label have similar prices to other products without this label	291	3.42	1.20	81	3.74	0.98	319	3.76	1.14	174	3.68	1.16	19	3.95	1.08	178	3.41	1.00	87	3.72	1.07
The label is more than just a means of advertising	288	3.85	1.06	80	3.88	1.14	326	4.32	0.90	176	4.02	1.04	19	4.21	1.18	176	3.60	1.12	88	4.00	1.04
The label is attractive	294	4.05	0.89	81	4.04	1.04	328	4.34	0.85	175	4.02	1.03	20	4.25	0.97	180	3.89	1.08	91	4.00	1.01

1) Here are several statements concerning your perception of the label above. Please indicate on a scale from 1 to 5 your opinion on the following statements, 1 being “don’t agree at all” and 5 being “completely agree”.

3.3.3.4. Knowledge of national labels

Do consumers know what those national labels stand for? To obtain insights with respect to consumers' knowledge we showed consumers 10 statements and asked them which of those statements apply to food products with the respective label. Consumers were asked to select all that apply. They could also indicate that none of the statements apply or that they do not know. The results in Tables 45a and 45b refer to all respondents; those in Tables 46a and 46b to respondents who recognize the label and those in Tables 47a and 47b to respondents considering the label when doing their grocery shopping.

Investigating first the results based on all participants (Tables 45a and 45b) reveals a rather heterogeneous pattern. Compared with the EU labels we see on average that a much lower percentage of respondent state "I do not know". However, the higher level of perceived knowledge does not in all cases correspond to factual knowledge.

With regard to the three national organic labels (*French AB*, *German BIO*, *Serbian organic label*) 53.2% of the French, 63.5% of the German and 44.1% of the Serbian respondent state that products with those labels are produced according to the EU organic guidelines. This clearly holds for the German for which the standards are identical with the ones of the EU organic label. Regarding the *French AB* label and *Serbian organic label*, however, higher standards than the ones for the EU organic label apply. As those higher standards include the ones of the EU organic standards the statement is somewhat equivocal and thus written in italics in Table 45a (neither right nor wrong). Table 45a reveals that the share of those being aware that for products labelled with any of the three organic labels higher animal welfare standards apply is much smaller (20.7%, 27.3%, and 8.5%, respectively). The same holds regarding the statement 'it is certified by a body independent of the producer and retailer' (23.9%, 16.2%, and 24.7%, respectively). At the same time, respondents tick a large number of statements that do not apply, e.g. 30.4% of the respondents from Serbia state that the organic label implies that respective products are of specific character in that either its raw materials, production method or processing is traditional, a statement which does not apply.








Several of the national/regional labels promote regional aspects such as the German *Regional Window*, the Hungarian *TFR* label, the two Italian labels *Quality Products of Apulia* and *Quality South Tyrol*, the Norwegian *BGB* label and the Serbian *Quality Label*. For those labels more than one third of participants correctly tick the statement "the region where the product is produced/processed is specified". We see that knowledge of regional labels "*Quality Products of Apulia*" and "*Quality South Tyrol*" clearly overlaps with the PDO

characters, indeed, the proportion of those indicating that these products have been produced, processed and prepared in a specific geographical area that defines significantly its quality or properties, is, respectively, 39.3% and 37.1%. Notably, even 33.7% of Hungarian participants are aware that the Hungary *TFR* label is not only about regional issues, but also involves the characteristics of traditional methods in the production or processing procedure. Although the exact definitions of the Hungarian labels were not among the answers, the majority of the respondents consider the Hungarian labels somehow connected to the producing area and specific/traditional products. This means that the majority of the respondents were aware of the basic meaning and message of the labels. Also regarding the Norwegian labels *Nyt Norge* and *BGB* consumers correctly associate those with regional issue; however, the statement most often ticked ‘the product has been produced, processed and prepared in a specific geographical area that defines significantly its quality or properties’ does not apply. Along similar lines knowledge that the labels are third party certified is very low.

There is a relative good understanding of the UK national quality labels. A significant proportion of UK respondents correctly tick those statements that hold for the *Red Tractor* scheme. Regarding the *RSPCA Assured label*, the most commonly cited attribute is that higher welfare standards apply, which indeed is the central objective of the scheme.

The results of consumers’ knowledge with respect to the national labels are presented in Tables 46a and 46b, based on the participants who recognize the label. Results are similarly to the ones of the whole sample (Tables 46a and 46b). With respect to those labels that received a high level of recognition (the French and German organic label, the French *Label Rouge*, the Hungarian *Food Quality* label and the Norwegian *Nyt Norge*) there are no differences in the results as almost all respondents considered in Tables 45a and 45b are also considered in Tables 46a and 46b. For the other national/regional labels we find that the proportion of respondents indicating that they do not know what the label expresses is lower for those recognizing the label compared to the whole sample. In addition, a larger percentage of those recognizing the label tick the right statements. However, it should be noted that they also tick with a larger percentage the wrong ones, though in general not to the same extent. Perceived knowledge slightly further increases for those using the label when doing their grocery shopping though factual knowledge remains low to moderate. Only for five of the 14 considered labels at least one of the correct statement was recognized by more than 50% of the respondent even in this latter group.

Table 45a. Knowledge of national/regional label in group 1 (total sample)

		FR (N=406)		DE (N=414)		HU (N=404)		IT (N=400)		NO (N=419)		RS (N=401)		UK (N=402)	
															
1	the product has been produced, processed and prepared in a specific geographical area that defines significantly its quality or properties	54	(13.3%)	44	(10.6%)	128	(31.7%)	206	(51.5%)	255	(60.9%)	97	(24.2%)	95	(23.6%)
2	at least one of the stages of production, processing or preparation takes place in a determined geographical area that influences the quality or a specific property of the product	48	(11.8%)	33	(8.0%)	102	(25.2%)	87	(21.8%)	107	(25.5%)	43	(10.7%)	58	(14.4%)
3	the product is of specific character in that either its raw materials, production method or processing is traditional	98	(24.1%)	60	(14.5%)	136	(33.7%)	69	(17.3%)	100	(23.9%)	122	(30.4%)	72	(17.9%)
4	it is certified by a body independent of the producer and retailer	119	(29.3%)	67	(16.2%)	55	(13.6%)	44	(11.0%)	62	(14.8%)	99	(24.7%)	141	(35.1%)
5	it is an EU label	77	(19.0%)	122	(29.5%)	25	(6.2%)	21	(5.3%)	11	(2.6%)	19	(4.7%)	29	(7.2%)
6	this product is produced according to the EU organic guidelines	216	(53.2%)	263	(63.5%)	21	(5.2%)	16	(4.0%)	21	(5.0%)	177	(44.1%)	36	(9.0%)
7	stricter rules than the minimum required by law have been followed regarding food safety	100	(24.6%)	112	(27.1%)	45	(11.1%)	30	(7.5%)	67	(16.0%)	129	(32.2%)	109	(27.1%)
8	this is a product of superior nutritional value	59	(14.5%)	27	(6.5%)	30	(7.4%)	22	(5.5%)	58	(13.8%)	49	(12.2%)	35	(8.7%)
9	the region where the product is produced/processed is specified	29	(7.1%)	28	(6.8%)	129	(31.9%)	157	(39.3%)	109	(26.0%)	40	(10.0%)	40	(10.0%)
10	in case of livestock products higher animal welfare standards apply	84	(20.7%)	113	(27.3%)	33	(8.2%)	9	(2.3%)	43	(10.3%)	34	(8.5%)	135	(33.6%)
11	None of the above	14	(3.4%)	11	(2.7%)	10	(2.5%)	5	(1.3%)	19	(4.5%)	11	(2.7%)	11	(2.7%)
12	I do not know	29	(7.1%)	35	(8.5%)	82	(20.3%)	44	(11.0%)	48	(11.5%)	21	(5.2%)	66	(16.4%)

1) The question was as follows: Below are several statements. Which of the following do you think apply to food products with this label? Please select all that apply. In the table those statements applying to food product with the respective label are bold. The statements in italics can be interpreted heterogeneously and are considered as neither right nor wrong.

Table 45b. Knowledge of national/regional label in group 2 (total sample)






















		FR (N=404)		DE (N=425)		HU (N=398)		IT (N=399)		NO (N=411)		RS (N=403)		UK (N=402)	
															
1	the product has been produced, processed and prepared in a specific geographical area that defines significantly its quality or properties	75	(18.6%)	187	(44.0%)	196	(49.2%)	218	(54.6%)	120	(29.2%)	242	(60.0%)	41	(10.2%)
2	at least one of the stages of production, processing or preparation takes place in a determined geographical area that influences the quality or a specific property of the product	57	(14.1%)	73	(17.2%)	105	(26.4%)	97	(24.3%)	62	(15.1%)	120	(29.8%)	32	(8.0%)
3	the product is of specific character in that either its raw materials, production method or processing is traditional	119	(29.5%)	43	(10.1%)	93	(23.4%)	78	(19.5%)	30	(7.3%)	158	(39.2%)	33	(8.2%)
4	it is certified by a body independent of the producer and retailer	111	(27.5%)	32	(7.5%)	100	(25.1%)	42	(10.5%)	21	(5.1%)	57	(14.1%)	105	(26.1%)
5	it is an EU label	60	(14.9%)	20	(4.7%)	26	(6.5%)	31	(7.8%)	14	(3.4%)	6	(1.5%)	19	(4.7%)
6	this product is produced according to the EU organic guidelines	26	(6.4%)	20	(4.7%)	23	(5.8%)	27	(6.8%)	16	(3.9%)	29	(7.2%)	27	(6.7%)
7	stricter rules than the minimum required by law have been followed regarding food safety	112	(27.7%)	24	(5.6%)	123	(30.9%)	31	(7.8%)	16	(3.9%)	67	(16.6%)	59	(14.7%)
8	this is a product of superior nutritional value	117	(29.0%)	11	(2.6%)	36	(9.0%)	39	(9.8%)	9	(2.2%)	28	(6.9%)	16	(4.0%)
9	the region where the product is produced/processed is specified	49	(12.1%)	190	(44.7%)	157	(39.4%)	148	(37.1%)	46	(11.2%)	192	(47.6%)	22	(5.5%)
10	in case of livestock products higher animal welfare standards apply	111	(27.5%)	6	(1.4%)	29	(7.3%)	18	(4.5%)	7	(1.7%)	24	(6.0%)	237	(59.0%)
11	None of the above	13	(3.2%)	20	(4.7%)	12	(3.0%)	8	(2.0%)	17	(4.1%)	13	(3.2%)	14	(3.5%)
12	I do not know	55	(13.6%)	67	(15.8%)	8	(2.0%)	28	(7.0%)	202	(49.1%)	27	(6.7%)	69	(17.2%)
1) The question was as follows: Below are several statements. Which of the following do you think apply to food products with this label? Please select all that apply. In the table those statements applying to food product with the respective label are bold. The statements in italics can be interpreted heterogeneously and are considered as neither right nor wrong.															

Table 46a. Knowledge of national/regional label in group1 (participants who recognize the label)

		FR (N=388)		DE (N=406)		HU (N=163)		IT (N=92)		NO (N=399)		RS (N=342)		UK (N=305)	
															
1	the product has been produced, processed and prepared in a specific geographical area that defines significantly its quality or properties	51	(13.1%)	44	(10.8%)	65	(39.9%)	64	(69.6%)	250	(62.7%)	84	(24.6%)	79	(25.9%)
2	at least one of the stages of production, processing or preparation takes place in a determined geographical area that influences the quality or a specific property of the product	45	(11.6%)	32	(7.9%)	47	(28.8%)	23	(25.0%)	104	(26.1%)	36	(10.5%)	46	(15.1%)
3	the product is of specific character in that either its raw materials, production method or processing is traditional	96	(24.7%)	60	(14.8%)	60	(36.8%)	17	(18.5%)	97	(24.3%)	108	(31.6%)	54	(17.7%)
4	it is certified by a body independent of the producer and retailer	119	(30.7%)	67	(16.5%)	26	(16.0%)	11	(12.0%)	59	(14.8%)	90	(26.3%)	127	(41.6%)
5	it is an EU label	75	(19.3%)	122	(30.0%)	19	(11.7%)	9	(9.8%)	10	(2.5%)	19	(5.6%)	25	(8.2%)
6	this product is produced according to the EU organic guidelines	209	(53.9%)	261	(64.3%)	12	(7.4%)	7	(7.6%)	19	(4.8%)	156	(45.6%)	26	(8.5%)
7	stricter rules than the minimum required by law have been followed regarding food safety	97	(25.0%)	112	(27.6%)	25	(15.3%)	11	(12.0%)	65	(16.3%)	117	(34.2%)	95	(31.1%)
8	this is a product of superior nutritional value	57	(14.7%)	27	(6.7%)	15	(9.2%)	10	(10.9%)	57	(14.3%)	41	(12.0%)	28	(9.2%)
9	the region where the product is produced/processed is specified	28	(7.2%)	28	(6.9%)	59	(36.2%)	38	(41.3%)	104	(26.1%)	35	(10.2%)	33	(10.8%)
10	in case of livestock products higher animal welfare standards apply	83	(21.4%)	112	(27.6%)	14	(8.6%)	2	(2.2%)	43	(10.8%)	29	(8.5%)	128	(42.0%)
11	None of the above	11	(2.8%)	10	(2.5%)	6	(3.7%)	0	(0.0%)	18	(4.5%)	6	(1.8%)	5	(1.6%)
12	I do not know	26	(6.7%)	31	(7.6%)	9	(5.5%)	2	(2.2%)	42	(10.5%)	13	(3.8%)	33	(10.8%)








1) The question was as follows: Below are several statements. Which of the following do you think apply to food products with this label? Please select all that apply. In the table those statements applying to food product with the respective label are bold. The statements in italics can be interpreted heterogeneously and are considered as neither right nor wrong.

Table 46b. Knowledge of national/regional label in group 2 (participants who recognize the label)

		FR (N=388)		DE (N=110)		HU (N=386)		IT (N=250)		NO (N=34)		RS (N=249)		UK (N=142)	
															
1	the product has been produced, processed and prepared in a specific geographical area that defines significantly its quality or properties	73	(18.8%)	57	(51.8%)	191	(49.5%)	153	(61.2%)	24	(70.6%)	157	(63.1%)	26	(18.3%)
2	at least one of the stages of production, processing or preparation takes place in a determined geographical area that influences the quality or a specific property of the product	54	(13.9%)	25	(22.7%)	103	(26.7%)	62	(24.8%)	6	(17.6%)	82	(32.9%)	21	(14.8%)
3	the product is of specific character in that either its raw materials, production method or processing is traditional	117	(30.2%)	24	(21.8%)	92	(23.8%)	54	(21.6%)	10	(29.4%)	109	(43.8%)	22	(15.5%)
4	it is certified by a body independent of the producer and retailer	108	(27.8%)	14	(12.7%)	97	(25.1%)	30	(12.0%)	3	(8.8%)	42	(16.9%)	49	(34.5%)
5	it is an EU label	59	(15.2%)	9	(8.2%)	25	(6.5%)	20	(8.0%)	3	(8.8%)	5	(2.0%)	11	(7.7%)
6	this product is produced according to the EU organic guidelines	26	(6.7%)	9	(8.2%)	23	(6.0%)	21	(8.4%)	5	(14.7%)	23	(9.2%)	15	(10.6%)
7	stricter rules than the minimum required by law have been followed regarding food safety	112	(28.9%)	12	(10.9%)	121	(31.3%)	26	(10.4%)	3	(8.8%)	50	(20.1%)	31	(21.8%)
8	this is a product of superior nutritional value	116	(29.9%)	5	(4.5%)	34	(8.8%)	29	(11.6%)	3	(8.8%)	19	(7.6%)	7	(4.9%)
9	the region where the product is produced/processed is specified	49	(12.6%)	64	(58.2%)	155	(40.2%)	99	(39.6%)	10	(29.4%)	126	(50.6%)	14	(9.9%)
10	in case of livestock products higher animal welfare standards apply	108	(27.8%)	4	(3.6%)	29	(7.5%)	16	(6.4%)	1	(2.9%)	17	(6.8%)	91	(64.1%)
11	None of the above	12	(3.1%)	3	(2.7%)	10	(2.6%)	1	(0.4%)	0	(0.0%)	7	(2.8%)	2	(1.4%)
12	I do not know	49	(12.6%)	2	(1.8%)	7	(1.8%)	8	(3.2%)	1	(2.9%)	3	(1.2%)	9	(6.3%)








1) The question was as follows: Below are several statements. Which of the following do you think apply to food products with this label? Please select all that apply. In the table those statements applying to food product with the respective label are bold. The statements in italics can be interpreted heterogeneously and are considered as neither right nor wrong.

Table 47a. Knowledge of national/regional label in group 1 (participants who use the label)

		FR (N=263)		DE (N=282)		HU (N=113)		IT (N=54)		NO (N=279)		RS (N=247)		UK (N=227)	
															
1	the product has been produced, processed and prepared in a specific geographical area that defines significantly its quality or properties	42	(16.0%)	34	(12.1%)	44	(38.9%)	39	(72.2%)	194	(69.5%)	64	(25.9%)	66	(29.1%)
2	at least one of the stages of production, processing or preparation takes place in a determined geographical area that influences the quality or a specific property of the product	36	(13.7%)	28	(9.9%)	30	(26.5%)	12	(22.2%)	81	(29.0%)	30	(12.1%)	40	(17.6%)
3	the product is of specific character in that either its raw materials, production method or processing is traditional	69	(26.2%)	48	(17.0%)	42	(37.2%)	12	(22.2%)	79	(28.3%)	84	(34.0%)	47	(20.7%)
4	it is certified by a body independent of the producer and retailer	90	(34.2%)	61	(21.6%)	23	(20.4%)	7	(13.0%)	49	(17.6%)	72	(29.1%)	95	(41.9%)
5	it is an EU label	57	(21.7%)	96	(34.0%)	17	(15.0%)	7	(13.0%)	10	(3.6%)	17	(6.9%)	22	(9.7%)
6	this product is produced according to the EU organic guidelines	146	(55.5%)	194	(68.8%)	11	(9.7%)	5	(9.3%)	16	(5.7%)	117	(47.4%)	23	(10.1%)
7	stricter rules than the minimum required by law have been followed regarding food safety	69	(26.2%)	87	(30.9%)	21	(18.6%)	8	(14.8%)	58	(20.8%)	84	(34.0%)	73	(32.2%)
8	this is a product of superior nutritional value	47	(17.9%)	23	(8.2%)	14	(12.4%)	7	(13.0%)	49	(17.6%)	31	(12.6%)	23	(10.1%)
9	the region where the product is produced/processed is specified	26	(9.9%)	23	(8.2%)	46	(40.7%)	22	(40.7%)	83	(29.7%)	28	(11.3%)	31	(13.7%)
10	in case of livestock products higher animal welfare standards apply	64	(24.3%)	86	(30.5%)	11	(9.7%)	1	(1.9%)	40	(14.3%)	23	(9.3%)	108	(47.6%)
11	None of the above	5	(1.9%)	2	(0.7%)	2	(1.8%)	0	(0.0%)	7	(2.5%)	4	(1.6%)	3	(1.3%)
12	I do not know	13	(4.9%)	12	(4.3%)	4	(3.5%)	1	(1.9%)	16	(5.7%)	7	(2.8%)	17	(7.5%)

1) The question was as follows: Below are several statements. Which of the following do you think apply to food products with this label? Please select all that apply. In the table those statements applying to food product with the respective label are bold. The statements in italics can be interpreted heterogeneously and are considered as neither right nor wrong.

Table 47b. Knowledge of national/regional label in group 2 (participants who use the label)

		FR (N=299)		DE (N=81)		HU (N=336)		IT (N=179)		NO (N=20)		RS (N=183)		UK (N=92)	
															
1	the product has been produced, processed and prepared in a specific geographical area that defines significantly its quality or properties	61	(20.4%)	44	(54.3%)	171	(50.9%)	108	(60.3%)	15	(75.0%)	121	(66.1%)	18	(19.6%)
2	at least one of the stages of production, processing or preparation takes place in a determined geographical area that influences the quality or a specific property of the product	43	(14.4%)	20	(24.7%)	94	(28.0%)	49	(27.4%)	2	(10.0%)	64	(35.0%)	16	(17.4%)
3	the product is of specific character in that either its raw materials, production method or processing is traditional	98	(32.8%)	17	(21.0%)	82	(24.4%)	41	(22.9%)	7	(35.0%)	79	(43.2%)	16	(17.4%)
4	it is certified by a body independent of the producer and retailer	92	(30.8%)	10	(12.3%)	88	(26.2%)	23	(12.8%)	2	(10.0%)	29	(15.8%)	31	(33.7%)
5	it is an EU label	51	(17.1%)	8	(9.9%)	24	(7.1%)	16	(8.9%)	2	(10.0%)	3	(1.6%)	10	(10.9%)
6	this product is produced according to the EU organic guidelines	23	(7.7%)	6	(7.4%)	21	(6.3%)	17	(9.5%)	4	(20.0%)	18	(9.8%)	11	(12.0%)
7	stricter rules than the minimum required by law have been followed regarding food safety	96	(32.1%)	9	(11.1%)	114	(33.9%)	23	(12.8%)	1	(5.0%)	40	(21.9%)	22	(23.9%)
8	this is a product of superior nutritional value	99	(33.1%)	4	(4.9%)	31	(9.2%)	24	(13.4%)	3	(15.0%)	17	(9.3%)	6	(6.5%)
9	the region where the product is produced/processed is specified	45	(15.1%)	50	(61.7%)	141	(42.0%)	78	(43.6%)	3	(15.0%)	93	(50.8%)	12	(13.0%)
10	in case of livestock products higher animal welfare standards apply	91	(30.4%)	4	(4.9%)	27	(8.0%)	11	(6.1%)	1	(5.0%)	15	(8.2%)	63	(68.5%)
11	None of the above	4	(1.3%)	2	(2.5%)	4	(1.2%)	1	(0.6%)	0	(0.0%)	4	(2.2%)	1	(1.1%)
12	I do not know	24	(8.0%)	0	(0.0%)	4	(1.2%)	4	(2.2%)	0	(0.0%)	2	(1.1%)	4	(4.3%)

- 1) The question was as follows: Below are several statements. Which of the following do you think apply to food products with this label? Please select all that apply. In the table those statements applying to food product with the respective label are bold. The statements in italics can be interpreted heterogeneously and are considered as neither right nor wrong.

3.3.3.5. Comparison among national/regional labels

Our analysis of national/regional labels considered organic, food quality, regional as well as animal welfare labels. Recognition of labels considerably varies even between the same kinds of label (regional label) in the same country (Italy). In general, however, it seems that especially organic labels have a relative high level of recognition. Label recognition seems, in addition, dependent on the time span a label has been on the market and thus, consumers could see products with this label on the shelves.

Approximately 70% of participants recognizing a label take the label at least sometimes into account when doing their grocery shopping underlining the relevance of awareness for label use and thus for exploiting the market potential. The reasons why participants recognizing a label but do not consider the label when grocery shopping show that the lack of attention with regard to labels in general is one of the core reasons. For organic products an even more important barrier is the perceived high price of those products. One other reason mentioned especially for the regional labels is a lack of availability.

For most national labels their clarity is very positive perceived. Though differences exists between the 14 national/regional labels we do note a positive overall evaluation. This evaluation improves with recognition and further improves with use of the label. This again reveals the importance linked to consumers' recognition of a label.

Finally, we investigated consumers' knowledge with respect to the 14 national/regional labels. Our results show that knowledge is moderate to poor for most countries. Consumers recognizing and using the label have a higher level of perceived knowledge. However, this does not necessary imply that they actually know better what the label stands for. Due to these deficiencies labels cannot help consumers to make an informed choice in line with their preferences.

3.3.4. Comparison between EU and national/regional labels

A comparison between the four EU food quality labels and the 14 national and regional labels reveals similarities and differences.

What we observe for the EU and for the national/regional labels is that recognition of labels is the crucial step to be successful in achieving a higher uptake of labelled products in consumers' purchase decision. This holds as for most labels we find that the large majority of consumers

make at least sometimes use of a label if they recognize it (about 70%). We also find that recognition and use leads to a more positive evaluation of a label. This holds for regional/national and EU labels alike.

Generally, we do find a more positive evaluation of national relative to the EU labels. This is especially interesting if comparing consumers' perception of two labels that are based on the same standards: e.g. the EU organic label and the German label. While e.g. the trustworthiness of the EU label is evaluated by respondents with a score of 3.16, the German label receives a score of 3.72.

Consumers' knowledge about what a label represents is low for national/regional as well as EU labels though there is some indication that it is lower for the latter group of labels. We also find that perceived knowledge considerably increases with recognition of a label and even more with the use of a label. However, factual knowledge does not improve (to the same extent). Labels thus cannot serve their role in helping consumers in making an informed.

4 SUMMARY AND CONCLUSIONS

The aim of this report is to provide useful insights on consumers' perceptions and valuation of EU and national/regional FQS across seven European countries (France, Germany, Hungary, Italy, Norway, Serbia and UK). Food quality labels intend to serve as a quality cue for attributes consumers cannot readily evaluate before their purchase. For this purpose, this report shows which product and process attributes are of relevance in consumers' purchase decisions. The analysis is based on online surveys in seven European countries. In each country about 800 consumers took part in the survey.

The importance of different product and process attributes was investigated in each country for different products. Selection criteria were the importance of the respective product category in consumers' diet in the respective country, the relevance of process characteristics and labels for the respective product category and the coverage of a diverse set of processed and fresh products over the seven countries included in the research. In addition, we ensured that each product category selected was examined by at least two countries. Cheese was determined to be the product category to be investigated in all countries. In addition, fresh meat was investigated in France and the UK, processed meat in Hungary and Serbia, fresh fish in Norway and the UK, fresh vegetables in Germany, Hungary, and Italy, and processed vegetables in Germany and Serbia.

The main findings can be summarized as follows. First, taste is of crucial importance in consumers' food purchase decisions. For many products in most countries it is the major, or among the major attributes that influence food purchase. Thus, even if consumers do care for e.g. sustainable attributes such as animal friendly production or organic they do not want to compromise taste. Second, knowing the producer is in general of little importance to consumers in the countries and for the products considered in this study. Third, our results demonstrate that the relevance of most other attributes depends on the product type and the country.

Freshness and best before date are among the most important attributes for fresh and thus perishable products, such as fresh meat or fresh fruits and vegetables. However, not surprisingly, this attribute is of little relevance for processed products such as cheese, especially if we refer to hard cheese. Tables 4a and 4b, however, reveal that in the case of cheese best before dates are of higher importance in Hungary and Serbia compared with the other countries. This can be explained by the fact that in those two countries, in contrast with e.g. France and Germany, a large proportion of cheese is "young" soft cheese, which in general has a more

limited shelf life than hard cheese. This finding also reveals that differences in attribute relevance for a product category (e.g. cheese) can be explained by a different composition of the product category (e.g. soft versus hard cheese) in the different countries.

Country and region of origin are process attributes with a relatively high relevance for consumers in Italy and France when buying food but prove to be of minor relevance in countries such as Serbia, the UK, Norway and Hungary. Considerable heterogeneity also exists regarding the attribute GMO free which is one of the most important attributes in consumers' food purchase decisions in Serbia while being of relatively low importance in countries such as the UK or Norway. The same was true for animal welfare friendly products which play a minor role in Serbia and Hungary and are of especially high relevance in Germany. An interesting finding concerns the ambiguous evaluation of the 'price' attribute, as in several countries, especially in Italy and France, there seems to be considerable heterogeneity in consumers' preferences with respect to price. This aspect will receive attention in further analysis of the data. Finally, for some countries more general conclusions can be drawn. Regardless of the food product, the respondents from France are more sensitive to its hedonic attributes such as taste, freshness and traditional food-processing method, rather than more abstract and ethical ones, such as animal welfare, environment friendly production, or fair trade.

The second part of the report concentrates on consumers' awareness and valuation of four EU food quality labels (Organic, PGI, PDO, TSG) as well as 14 national/regional labels (two for each country). Our analysis revealed similarities and differences among countries regarding their recognition, use, barriers to use, perception and knowledge of those labels which again differ depending on the label considered.

Focusing first on the EU labels we found that recognition is on average the highest for the EU organic label, closely followed by the PGI label. The PDO label has a much lower level of recognition, with the TSG label exhibiting the lowest score. In fact, this order reflects the number of products with the respective label in the market, which is by far the lowest for the TSG label and the highest for the organic label. Recognition of EU labels varies considerably between countries, e.g. for the organic label ranging from only 16.4 % recognition in the UK compared to about 50% in France, Germany and Italy. In line with those differences we also observe that the share of organic products in total retail sales differs considerably between those countries reaching 5.1%, 3.5%, 3.0% respectively in Germany, France and Italy, and only 1.5% in the UK (Lernoud and Willers, 2018).

Differences in recognition of labels can be also observed for national labels. While several national labels are recognized by almost all respondents in the samples (recognition above 95% for five of the 14 labels) others are unknown by the majority of, or in some cases almost all, respondents. The latter holds for the Norwegian PGI label which is recognized by only 8.3% of the survey participants from Norway. On average, however, national labels received a higher level of recognition.

In accordance with our results in section 3.2, where the attributes region and country of origin proved to be especially important in France and Italy, we found that recognition of the PGI and PDO labels in those two countries by far exceeds recognition of the corresponding labels in the other countries. Our results also demonstrate that recognition is the crucial step to its use. In our study we could show that the majority (in general around 70%) of consumers recognizing a label also state that they make use of the label at least sometimes when doing their grocery shopping. This reveals the importance of increasing awareness regarding food quality labels for increasing the market relevance of products promoted by those labels.

The reasons why consumers who recognize the label do not use the label differ between labels and countries but one reason dominates: consumers indicate that they just do not pay attention to product labels while doing their grocery shopping. Other reasons mentioned by a large share of respondents are that the products are too expensive and lack of availability.

Amongst the EU labels, perception of the organic label is the least favourable and only receives on average a neutral score. The other three EU labels are more favourably perceived although less compared to the national/regional labels. Trust is the characteristic of a label perceived by consumers to be most important, however, the level of trust is, while positive for all labels, not very high. In general regarding all EU labels and countries, label perception improves with recognition and further improves with use.

Finally, we investigated consumers' knowledge with respect to the EU and national/regional food quality labels. Our results show that knowledge is relatively low for all considered labels. Perceived knowledge increases for those recognizing and using the label, however, this does not always correspond to factual knowledge. However, if consumers do not know what the label represents and whether it is third party-certified the label cannot help them to make an informed choice. In fact, in their evaluation of the labels the statement 'this label helps me to make an informed choice' receives for most labels a comparably low rating.

Though further in depth analysis of the data is still to come, our results point to the need for action by policy makers and actors in the food value chain. EU and national/regional food quality schemes and their respective logos were introduced to serve as a quality cue for consumers thereby reducing consumers' uncertainty when purchasing food with respect to desired experience and credence attributes such as taste or production methods. Our results indicate that so far most FQS fulfil their key function only to a limited extent: awareness of the EU labels, as well as for the majority of the investigated national/regional labels, remains low. Awareness, however, is a necessary condition for labels to serve as quality cues. But even if awareness exists, a label can only perform its role as a decision-aid supporting consumers in choosing food products according to their preferences if consumers know what the label stands for and have trust in the label. Thus, knowledge and trust are the sufficient conditions for a label to perform its function. However, regarding the former our results reveal a rather disappointing picture as well. Factual knowledge what the label actual stands is rather low, this holds even for those being aware and making use of the label when doing their grocery shopping. Trust in labels differs between FQS and is higher for national compared to EU labels. Well-designed communication campaigns could serve as a tool to raise awareness and consumer knowledge. Especially, for labels such as the EU organic one, which is far from self-explanatory smart campaigns are needed. Communication campaigns that, in addition, provide information on the control system behind the label could help to increase confidence in the credibility and trust of the FQS.

As with all empirical studies, some limitations of this study must be acknowledged. Firstly, the sample structure with respect to some characteristics deviates from the respective structure of the overall population in some countries. Accordingly, conclusions based on our analysis cannot in all cases be considered representative for the whole country. Further analysis based on the survey data will control for those characteristics. Second, this report is primarily a descriptive study providing detailed information regarding consumers' preferences for product and process attributes across products as well as countries and regarding consumers' awareness, use, perception and knowledge with respect to a total of 18 food quality labels. Further analysis based on the obtained survey data is still to come that investigates causalities, e.g. the influence of consumers' trust in a label on label use.

The contribution of this report to the literature is twofold. Our study is the first investigating the relevance of a large number of food attributes across different countries and products using

BWS. Previous studies use rating scales, that though easy for respondents to answer may ineffectually discriminate between rating statements (Hein *et al.*, 2008). This is the case because respondents are not forced to make a choice between items, allowing them to rate multiple items as being of equally high importance. In addition, it is difficult interpreting what the rating scale values actually means (Flynn and Marley, 2014). This holds especially in case of cross-country studies. In addition, no previous study has compared consumers' recognition/ adoption/ perception/ knowledge of the four main EU food quality labels, with varied governmental regulated national and regional labels concurrently in a multi-country setting. This allows for a comparison between EU and national labels of similar or identical standards but also amongst nation labels between different countries.

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The Strength2Food project in a nutshell

Strength2Food is a five-year, €6.9 million project to improve the effectiveness of EU food quality schemes (FQS), public sector food procurement (PSFP) and to stimulate Short Food Supply Chains (SFSC) through research, innovation and demonstration activities. The 30-partner consortium representing 11 EU and four non-EU countries combines academic, communication, SMEs and stakeholder organisations to ensure a multi-actor approach. It will undertake case study-based quantitative research to measure economic, environmental and social impacts of FQS, PSFP and SFSC. The impact of PSFP policies on nutrition in school meals will also be assessed. Primary research will be complemented by econometric analysis of existing datasets to determine impacts of FQS and SFSC participation on farm performance, as well as understand price transmission and trade patterns. Consumer knowledge, confidence in, valuation and use of FQS labels and products will be assessed via survey, ethnographic and virtual supermarket-based research. Lessons from the research will be applied and verified in 6 pilot initiatives which bring together academic and non-academic partners. Impact will be maximised through a knowledge exchange platform, hybrid forums, educational resources and a Massive Open Online Course.

www.strength2food.eu

