ARTICLE

UNDERSTANDING CONSUMERS AND THEIR PREFERENCES WHEN PURCHASING FOOD WITH PRODUCT QUALITY LABELS: INSIGHTS FROM THE CZECH MARKET

Stoklasa, M., Halaška, M.

Michal Stoklasa / Silesian University, School of Business Administration, Department of Business Economics and Management, Karviná, Czech Republic. Email: stoklasa@opf.slu.cz (corresponding author)

Michal Halaška / Silesian University, School of Business Administration, Department of Business Economics and Management, Karviná, Czech Republic. Email: halaska@opf.slu.cz

Abstract

Companies with product quality labels, often micro-companies or solo entrepreneurs, do not have the marketing know-how of retail chains and are being outpaced in communication in the fast current online environment, especially on social media platforms. Current literature does not provide this specific knowledge, such as what are the important product quality characteristics which should be talked about in marketing campaigns and how these should campaigns be targeted. Thus, the aim of this article is to examine the product quality characteristics important for Czech consumers purchasing food products with a quality label and find suitable consumer characteristics for better targeting of marketing campaigns. The data were gathered using a questionnaire survey by the professional marketing agency Ipsos. The sample of 1,050 Czech consumers was filtered for consumers purchasing regional products or other products with a product quality label. The main statistical method used is the Kruskal-Wallis test with Dunn's test with Bonferroni correction as a post-hoc test. The product quality characteristics are divided into 7 categories and sorted by their importance. The significance of third-party information being the most positively evaluated product quality characteristic suggests a shift in consumer trust. The study identifies demographic variations in quality perception, with older consumers (ages 54–65 and 36–44) valuing brand, composition and price, while younger consumers (ages 18–26) prioritise electronic word of mouth (eWOM) and online availability. Higher education levels correlate with a greater focus on price and communication as quality indicators, while gender differences reveal distinct preferences, such as women favouring traditional packaging and environmental friendliness and men prioritising eWOM and quality processing. Also, the archaic nature of quality labels in the Czech Republic is highlighted.

Implications for Central European audience: The results of this study reveal the most important food product quality characteristics for Czech consumers and might be applicable to neighbouring countries with high preferences for quality labels, such as Poland and

Slovakia. This study also provides consumer characteristics usable in targeting of marketing campaigns, usable as a premise for further research in Central European countries.

Keywords: Product quality; product quality characteristics and cues; extrinsic and intrinsic product quality; quality label; consumer purchasing behaviour
JEL Classification: M31

Introduction

In recent years, growing consumer concerns about healthier lifestyles and environmental sustainability have become key factors influencing food purchasing decisions and perceptions of food quality (Petrescu et al., 2020). This shift has prompted consumers to seek higher quality food (Hsu & Chen, 2014) for a variety of reasons, including a more informed and demanding consumer base (Mascarello et al., 2015), food safety scandals (Liu et al., 2013), prevalence of non-communicable diseases (Sumaedi et al., 2023) and heightened environmental consciousness (Mondelaers et al., 2009). As a result, consumers seek ways to ensure higher quality of the food products they purchase, often turning to indicators such as product quality labels. These may include EU-guaranteed quality labels, state ministry guaranteed brands (e.g., KLASA), regional brands or marketing terms such as bio, organic and farmer.

The decision-making process regarding products is influenced by a variety of factors. Purchasing food products is different for various reasons. Quality of food products is unknown before the consumption, so we use various quality cues (Grunert & Aachmann, 2016) such as brand, price, texture, physical environment, etc.; yet it is unknown which ones are most relevant for consumers (Petrescu et al., 2022). There is a plethora of food choice models for consumer behaviour while purchasing food products (Hsu & Chen, 2014; Zander & Hamm, 2012). The behaviour is complex but can be broken down into certain categories (Shepherd, 1999; Eertmans et al., 2001), such as sensory aspects of food (taste, odour, texture) and non-sensory (sometimes referred to as non-food) effects (cognitive information, physical environment, social factors). Markovina et al. (2015) stated that at an individual level, likes and dislikes, habits, taste and sensory appeal are relevant for food choice.

This article focuses on one area of the food choice model and explores it in more detail: food product quality perceived from own perspective blended with the described theory (sensory and non-sensory factors, intrinsic and extrinsic cues, etc.); the paper follows up on previous research done by one of the authors (Stoklasa, 2015; Stoklasa & Pitrunova, 2020). Food quality is a multi-faceted subjective effect and all food choice is related to it (Ozimek & Żakowska-Biemans, 2011).

Moreover, many holders of product quality labels are micro-companies or solo entrepreneurs who often lack the marketing expertise of large retail chains. As a result, they may struggle to fully grasp the consumer decision-making process and the characteristics necessary to effectively target their audience in communication campaigns. The existing literature does not adequately address these challenges, which we identify as a significant research gap.

The aim of this article is to examine the product quality characteristics important for Czech consumers purchasing products with a quality label and find suitable consumer characteristics for better targeting of marketing campaigns. The data were gathered using a questionnaire survey by the professional marketing agency Ipsos; the sample was filtered for consumers purchasing regional products or other products with a product quality label.

This article begins by outlining the theoretical background of food product quality characteristics, including sensory and non-sensory factors and intrinsic and extrinsic cues, along with relevant consumer characteristics. The next section details the research methodology, describing how the study was conducted, the sample used, the structure of the questionnaire and the statistical methods applied. The research findings follow, categorizing product quality characteristics into seven distinct groups and presenting the results of the Kruskal-Wallis test. The discussion section then addresses the implications of these results, focusing primarily on the demographic profiles of consumers who purchase food products with quality labels. The final section concludes.

1 Literature Review

Product quality when purchasing food products is not easily determined, and consumers look for any cues. These cues can be extrinsic and intrinsic, or sensory and non-sensory. Some of the cues that should help consumers determine the product quality are quality labels, such as regional brands. All these points will be examined in succession in this chapter.

Brecic et al. (2017) defined food choice as “a set of conscious and unconscious decisions“ about the food. This food choice is a complex combination of sensory and non-sensory factors. One of the instruments to test food choice was developed by Steptoe et al. (1995) – the Food Choice Questionnaire; it has been validated and upgraded many times since. Purchasing products where consumers cannot easily assign product quality is always done with uncertainty, which compels consumers to process available product-related cues (Olson & Jacoby, 1972).

Quality is a multidimensional construct based on perceived intrinsic and extrinsic quality cues (Acebrón & Dopico, 2000). These quality cues are bits of information that tell the consumer something about the product (Brecic et al., 2017) and help them determine the quality of the product (Lee & Lou, 2011). These intrinsic and extrinsic cues were defined by Olson and Jacoby (1972), where intrinsic ones are specific to each product, meaning that they perish when the product is consumed and cannot be changed without changing the product, such as ingredients, texture, etc. (Walters & Long, 2012). Extrinsic cues are not physically part of the product and include price, brand, country of origin (Olson & Jacoby, 1972) and marketing messages on packaging (Walters & Long, 2012). Besides extrinsic and intrinsic or sensory and non-sensory quality cues, marketing (price, brand, advertising) and non-marketing (third-party information) controlled cues are defined by some authors (Akdeniz et al., 2012).

Walters and Long (2012) argued that the ability of consumers to evaluate information on product packaging influences how they perceive the quality of the product. This is affected by nutrition knowledge. With higher nutrition knowledge, we are better able to understand marketing messages, such as "healthy", "fitness", etc. compared to product composition. Walters and Long (2012) argued that women are a high-involvement group for nutrition

information and thus are less affected by extrinsic cues, while consumers with lesser nutrition knowledge trust marketing signs on packaging ("all natural") more and attribute higher product quality to them. Wang (2013) stated that visual packaging (verbal and visual cues) influences thinking about product quality, which was supported heavily by Javeed et al. (2022). Wang (2013) pointed out that attitudes towards visual packaging directly influence consumers' perceived food product quality and brand preference and indirectly influence product food value. Their results indicate that visual packaging design is able to generate positive product and brand evaluations, increasing perceived food product. Wang (2013) further stated that visual packaging design is an important predictor of the consumer evaluation of food products and brands. Yim (2020) stated that there is no significant difference between men and women when it comes to the relationship between intrinsic cues (such as the actual quality of the product) and emotional value, meaning that neither gender shows a strong emotional response to the intrinsic quality of the product. However, the study found a gender difference in how extrinsic cues (such as packaging, brand and price) affect emotional value. For men, there is a weak relationship, but for women, there is a strong relationship, meaning that women are more emotionally influenced by external factors of the product.

Akdeniz et al. (2012) argued that all the product quality related cues are often processed by consumers in relation to others, and not solo, to create a final perception of product quality. Some of the cues have direct ties to perceived quality (Akdeniz et al., 2012), e.g., price (higher price should equal higher quality), warranty (longer warranty should equal higher quality), while other cues have indirect ties to perceived quality, e.g., brand (can be only an image, not tied to quality of the product itself), labels, etc. Besides, some cues are more important than others; there are high and low-scope cues based on diagnosticity theory (Purohit & Srivastava, 2001). Jürkenbeck and Spiller (2021) stated that consumers tend to prioritise sensory quality signals over other factors such as nutritional information or price when making food choices, indicating that the immediate sensory experience is a significant determinant in their decision-making process.

Based on this theory, the first research question was formulated – RQ1: What product quality characteristics (ex/intrinsic, non/sensory, non/marketing controlled) are important for consumers?

Food product quality labels may include EU-guaranteed quality labels, state ministry guaranteed brands (e.g., KLASA), regional brands, consumer brands (e.g., Czech Made) or marketing terms such as bio, organic and farmer. However, what about consumers who purchase products with quality labels? Our previous research (Stoklasa, 2015; Stoklasa & Pitrunova, 2020) suggests that consumers are confused about the hundreds of quality labels and that consumers' demographic characteristics can play a significant role in their purchasing process. The EU, through the European Commission, offers quality labels that can be obtained for products meeting certain conditions, thus assuring consumers of their higher quality. These labels include Protected Designation of Origin (PDO), Protected Geographical Indication (PGI) and Traditional Speciality Guaranteed (TSG). These labels have a positive effect on profitability (Gené et al., 2024). As a result of this policy, many local regional brands have been created. These regional brands, while not guaranteed by the EU, aim to provide similar assurances of quality to consumers. The Czech Republic even has a national regional brand endorsed by the Ministry of Agriculture. Grunert and Aachmann

Volume **14** | Issue **3** | 2025
https://doi.org/10.18267/j.cebr.390

(2016) noted that EU quality labels serve as valuable tools for consumers, helping with decision-making, food control and reducing uncertainty regarding production processes, product characteristics and origin. The European Commission (2020) emphasizes the traditional character, geographical origin, rural development and environmental benefits of labelled products. However, one major challenge is consumer awareness—many consumers do not recognize these labels or understand their meaning, which diminishes their impact on perceived quality. According to Grunert and Aachmann (2016), knowledge of these labels is generally low, except in countries with a higher number of protected products, typically in southern Europe. Verbeke et al. (2012) reached similar conclusions, finding that Italy, France and Spain lead in label awareness, with older women being the most interested.

Margarisová et al. (2018) identified a relationship between the awareness of regional brands and demographic factors such as age, education and the respondents' status towards the region. This suggests that certain demographic groups may be more inclined to recognize and purchase certified regional products. Sadílek (2019) constructed three segments of Czech consumers: quality seekers, unconscious shoppers and impulsive shoppers. Quality seekers (24%) trust food quality labels based on positive past experiences with labels, composition and origin. These are mostly men, university-educated, from two- to five-person households and with above-average income. Impulsive shoppers (26%) prioritise price and composition. These are mostly educated women, from up to four-person households, with average income. Velčovská (2012) suggested that women show more interest in quality labels and are willing to pay more for these products, higher education is a determinant to purchase of quality labels and higher income gives the freedom to purchase higher quality.

Based on this theory, the second research question was formulated – RQ2: What are the characteristics of the consumers purchasing these products with quality labels?

2 Research Process, Methodology and Data

The whole research logic is based on previous research done by one of the authors in the field of regional brands (Stoklasa, 2015; Stoklasa & Pitrunova, 2020). The data were obtained using a questionnaire survey conducted by the professional marketing research agency Ipsos in January 2024, on their Ipsos CASI panel with over 100,000 respondents. Probability sampling was chosen; simple random sampling is a method where each member meeting the selected criteria is randomly selected. Ipsos then guarantees the representative sample across all selected criteria; in this case, it was gender, age categories, education and region. The sample was filtered for consumers purchasing food products with a product quality labels, such as regional products, KLASA, Czech Made or other – meaning that every consumer in this sample has awareness about these issues and purchases these products. The survey used age, gender, education, region (not used in this article), size of place of residence and frequency of online purchases (not used) as the identifiers. The sample consists of 1,050 Czech respondents; the sample profile is shown in Table 1.

The questionnaire was divided into three parts; this article deals only with the first one regarding product quality. The second part consisted of questions focused on online communication, mainly social media, and the third part dealt in detail with availability, both physical and online. The questions were constructed after interviews with producers of

products labelled with regional brands and some other quality labels. A pilot study was conducted on a smaller sample in June 2023. After that, the questions were adjusted with brand and label managers. The introduction with explanation of quality labels had to be adjusted for higher clarity, as well as wording in several questions to not be misleading.

The questions were based on the theory presented in this article – extrinsic and intrinsic product quality cues, sensory and non-sensory cues, marketing and non-marketing controlled cues. They were divided by the professional experts (brand managers) and the author into seven categories: branding (various product quality labels, regional brands, regular brands, etc.), price, visual quality cues (includes physical attributes, packaging, etc.), product composition (including production process), marketing communication, third-party information, and availability (distribution). All these categories had one or more questions, totalling 17, and/or options in a question. The majority (14) of the questions were structured as a statement with a Likert scale of 5 (where 1 is the most desired and 5 is the least desired), while three were multi-choice (choose 3 out of 7–9 variants). The 14 Likert-scale questions were introduced by the question: "What is proof for you that a product is of high quality?" The 14 statements then were: higher price, made from first-class ingredients, traditional production method, honest processing, has a good reputation, extensive promotion – TV commercials, posters, billboards, awarded labels, certificates (e.g., on product packaging), awards won in competitions (e.g., on product packaging), protects the environment, product name directly includes "traditional" or "grandma's", the product name directly includes "quality" or "100%", available in supermarkets, available in specialized shops, handmade. For the results, the questions with multiple choice had the data normalized.

The statistical methods used are the one-way chi-square test of good compliance, the Kolmogorov-Smirnov (KS) test, Kruskal-Wallis (KW) test and a suitable post-hoc test. These tests were chosen based on the following research logic: the data need to be tested for which of the identifiers are affecting results, then the data need to be tested for the data distribution; based on that, a suitable test for dependencies can be chosen (ANOVA, chi-square, KW, etc.) and finally a suitable post-hoc test to better understand the results.

Based on the theoretical background, research questions and chosen research process, two sets of hypotheses were formulated:

- *Set of hypotheses 1: Sample identifiers (age, gender, education and region) affect research results.*
- *Set of hypotheses 2: Product quality characteristics are affected by consumers' identifying factors.*

Table 1 | Sample profile – gender, age, education

Criterion	Group	Absolute frequency	Relative frequency (in %)
Gender	Male	536	51.05
	Female	514	48.95
Age	18–25	166	15.81
	26–35	202	19.24
	36–45	216	20.57
	46–55	179	17.05
	56–65	287	27.33
Education	Primary	115	10.95
	Skilled	375	35.71
	Secondary	398	37.90
	University	162	15.43
Residence	< 1000	175	16.68
	1,001–5,000	214	20.38
	5,001–20,000	176	16.70
	20,001–100,000	241	22.95
	> 100,001	244	23.23

Source: Own elaboration

The basic characteristics of age, gender, education and size of place of residence are tested first by a one-way chi-square test of good compliance. The test is performed at a significance level α = 0.05, i.e., 5%. Due to space constraints, the four separate hypotheses about the four identifiers are worded into one line.

- *H_0: Age/gender/education/residence do not affect research results.*
- *H_1: Age/gender/education/residence affect research results.*

The values for test criteria are 30.990, 0.461, 239.516 and 21.495. The value of sig. 0.000 is less than the set value of significance level; the null hypothesis (H_0) on the independence of individual characters is rejected and the alternative (H_1) hypothesis that there is a certain influence of age, education and size of place of residence on the research results is accepted. The gender identifier has the value of sig. 0.497; thus, the null hypothesis is accepted. It can therefore be concluded that age, education and size of place of residence affect the research results.

3 Results

This article used questions focused on product quality. The questions were structured into seven categories: branding, price, visual quality cues, product composition, marketing communication, third-party information, and availability. Averages (lower is better) for each product quality dimension are provided for better understanding and simplicity, the numbers of questions are presented, as are importance (number of choices by consumers, 1 is most and 5 is least important) and rank (based on average and importance); see Table 2.

Table 2 | Research results for product quality cues

Category	No. of questions	Average	Importance	Rank
Branding	3	2.3	3	4
Price	2	3.1	3	6
Visual quality cues	4	1.9	1	1
Product composition	1	2.2	1	2
Marketing communication	3	2.9	3	5
Third-party information	2	1.8	2	3
Availability	2	2.8	4	7

Source: Own elaboration

According to the data, the most positively appreciated (sought after) by consumers were third-party information, visual quality cues, product composition and branding. Availability, marketing communication and price all had worse averages. The highest scores were achieved by questions/options focused on the following attributes: made from first-class raw materials, quality processing, good electronic word of mouth (eWOM), obtained labels and/or certificates. Everything connected with price and communication had average scores – the explanation may be connected with the tool used to gather the data, the questionnaire, where consumers' answers were skewed due to wanting to appear price-insensitive and unaffected by marketing. The worst scores were assigned to the following questions/options: available in supermarkets, use of words such as "traditional", TV advertisement. Surprising is the fact how much consumers prefer to get information about product quality from eWOM (social networks mainly). Although consumers prefer visual quality cues, the design of packaging (i.e., traditional black and gold colours for luxury) is not as important as to what it shows, i.e., certain labels/certificates, nature, raw ingredients, farm (tractor), etc. These visual cues tied to product composition are especially important. Contradictory is the preference of labels/brands when research shows that consumers are often confused about what a brand/sign means (Vokáčová et al., 2017; Chalupová & Prokop, 2016). Verbal cues included stories about the production process, history of manufacture, etc. The least important were options that actually some of the brands build on – solidarity with the region, environmental friendliness, availability in big shops.

The seven categories of product quality cues will now be tested with the consumer identifiers (age, gender, size of place of residence and education) to find out the consumer segmentation. First, however, the data distribution needs to be tested in order to choose a suitable statistical tool. A one-sample Kolmogorov-Smirnov test is used; it tests whether the variables follow a normal distribution. The table with all the results had to be omitted due to space constraints, but all the asymptotic significance values (2-tailed) are 0.000, which means that the null hypothesis about normal data distribution is rejected and the alternative hypothesis about data not having a normal distribution is accepted. The ANOVA cannot be used, but the Kruskal-Wallis test will be suitable.

Out of the 17 total questions, 14 were tested due to the nature of the data and information, two could not be transformed into testable ones as their multi-choice nature did not allow us to meaningfully transcribe them, and two were merged into one (communication had two separate questions that could be merged into one). The non-parametric Kruskal-Wallis test is used to test the set of working hypotheses about the product quality categories and chosen sample identifiers. The working hypotheses are converted to statistical ones in the following wording:

- *H_0: The preferred product quality characteristics do not differ based on consumers' identifying factors.*
- *H_1: The preferred product quality characteristics differ based on consumers' identifying factors.*

Product quality categories and identifying factors (age, gender, education and size of place of residence) are tested. The test is performed at a significance level $\alpha = 0.05$.

Table 3 | Kruskal-Wallis test results for identifier x questions

Identifier	Age		Gender		Education		Size of residence	
Category	Kruskal-Wallis H	Asym p. sig.	Kruskal-Wallis H	Asym p. sig.	Kruskal-Wallis H	Asym p. sig.	Kruskal-Wallis H	Asym p. sig.
Price attitude	42.468	0.000	0.013	0.909	5.589	0.133	2.669	0.615
Composition attitude	20.208	0.000	0.398	0.528	11.940	0.008	1.079	0.898
Process attitude	19.824	0.001	6.723	0.010	11.579	0.009	8.931	0.063
Branding	21.828	0.000	13.732	0.000	9.671	0.022	6.720	0.151
eWOM attitude	3.458	0.484	5.478	0.019	4.050	0.256	2.419	0.659
Communication	21.521	0.000	0.105	0.746	8.253	0.041	3.188	0.527
Obtained labels	13.508	0.009	12.269	0.000	2.920	0.404	9.477	0.050
Obtained awards	5.583	0.233	1.958	0.162	7.029	0.071	2.681	0.613
Visual cues	3.044	0.550	7.160	0.007	3.275	0.351	1.901	0.754
Environment attitude	2.214	0.697	0.110	0.740	8.507	0.037	3.751	0.441
Packaging words	3.133	0.536	15.998	0.000	3.411	0.333	2.533	0.639
Availability online	9.823	0.044	1.523	0.217	12.445	0.006	0.671	0.955
Availability special	7.598	0.107	0.027	0.871	3.742	0.291	7.780	0.100
Processing attitude	13.766	0.008	2.990	0.084	2.350	0.503	5.301	0.258

Source: Own elaboration

The Kruskal-Wallis test results shown in Table 3 manifest that the null hypothesis cannot be rejected and it has to be stated that the preferred product quality characteristics do not differ based on consumers' identifying factors. However, eight of the age results, seven of gender, seven of education and two of size of place of residence warrant further investigation.

The set of hypotheses 1 is accepted, the set of hypotheses 2 is rejected. Even though the null hypothesis was accepted for hypotheses 2, this research process has been specifically chosen for its power to determine the groups of factors that influence the results in post-hoc testing. Out of the 14 tested categories and four identifiers, 24 have shown dependency of variables; that is 43%. If the common significance level $\alpha = 0.1$, i.e., 10% is considered, it grows to 50%.

4 Discussion

Based on previous research (Stoklasa, 2015; Stoklasa & Pitrunova, 2020) and literature review, the following premises were formulated: the most important product quality characteristics would be brand (and brand trust), price and product composition (Sun et al., 2022; Brecic et al., 2017; Akdeniz et al., 2012; Grunert & Aachmann, 2016); the most suitable consumers for products with quality label would be older consumers, with higher education, mainly women (Brecic et al., 2017; Liu et al., 2013; Ozimek & Żakowska-Biemans, 2011).

Volume **14** | Issue **3** | 2025
https://doi.org/10.18267/j.cebr.390

Unexpectedly, the most positively evaluated product quality characteristic category was third-party information; out of this category, consumers chose eWOM (product reviews online, product recommendations by friends/other consumers) as the clear winner. The questionnaire was compiled with professional experts managing quality labels, running regional brands and doing business in this field, yet this category was added at the last minute as something that might influence the perceived quality of products that are mainly purchased offline at farmers' markets, specialized shops or fairs. The situation with products with a quality label in Czechia is rather archaic (Stoklasa, 2015), as the biggest labels are run by state officials through the Ministry of Agriculture and thus are not in line with current market trends; other labels are run by small companies or enthusiasts without any real budget (consumers/owners trying to help the region in which they do business). This result, coupled with some other results of recent studies, such as the preference for online availability (Stoklasa & Pitrunova, 2020), general trend of online shopping (Bauerová & Klepek, 2018) and others, are pointing to the need for a big change in the operation of these labels/brands. Consumers also positively evaluated the categories of visual quality cues, product composition and branding. Specifically, out of these categories, the most preferred were use of first-class raw materials, quality processing and obtained labels/certificates.

The managerial implications from the preferred product quality characteristics are as follows. The eWOM result has started further investigation into this problematic and some changes are already happening. A proposed change would be to accept and support third-party information, i.e., create a space on a product website to have consumer reviews, experiences, etc. (obviously moderated) and promote sharing of product experience on social networks. The first recommendation is already being implemented and the first Google Analytics data suggest that it helps the sales. The second recommendation will be harder to implement in practice as the products with quality labels are often run by enthusiasts (such as regional brands operating under the Association of Regional Brands in Czechia), who do not have enough skills/time to properly execute this idea.

Another proposal is aimed at the visual cues and information communicated. The important information that the label managers should communicate to their consumers is through the packaging: visually include the ingredients and environment where it is grown/processed. The rear of the packaging should include a clearly readable list of ingredients, with explanations, the production process explained in a story or with pictures. A lot of the products use space on packaging to promote the region, solidarity with the region, environmental friendliness and similar traits which is supported by studies (Petrescu et al., 2022); however, these are not working in the Czech Republic as they used to.

The KW test with the influence of identifiers was used to construct recommendations about consumers. The KW post-hoc test using pairwise comparison, Dunn's test with Bonferroni correction, can find statistically significant differences, rank groups and assign values. It is used to find, for example, which age category is influencing the results and how. The influence of size of place of residence was minimal; this identifier was added because it was not observed in other articles in WoS and Scopus, yet it seemed that consumers purchase products with quality labels differently in cities compared to towns (fairs) or villages (farmers' markets). This idea did not prove to be true in the data. The results for age partially support

the premise formulated at the beginning of this chapter, as the age groups of 54–65 and 36–44 were the most positive about the product quality characteristics, while consumers 18–26 were the most negative. Older age groups preferred brands, composition and even price; younger one were more focused on eWOM, online availability and even environmental friendliness. Genders showed no difference in half of the categories, but in the others they showed the greatest differences, mainly in the preference of use of words such as “traditional” on packaging (women), environmental friendliness (women), obtained labels (women), eWOM (men), quality processing (men), traditional production process (men). In regard to education, with higher education, the consumers again were more positive in their answers regarding product quality; trained consumers had higher affinity for price and communication, but it played almost no role to consumers with higher education.

Based on the data, the recommended consumer segments to approach would be men aged 36–53 with secondary education who like traditionally processed products, like to read about them online, are interested in product composition and are not price-sensitive. The second segment would be women aged 54+ and 36–44 with university education preferring all-natural products that are protective of nature and have good composition, which is also communicated on the packaging. The third segment would be aged 27–35, both genders, higher education, preferring product quality cues in eWOM, visual cues and labels.

Conclusion

The aim of this article was to examine the product quality characteristics important for Czech consumers purchasing products with a quality label and to find suitable consumer characteristics. The data were gathered using a questionnaire survey by the professional marketing agency Ipsos. The sample of 1,050 Czech consumers was filtered for consumers purchasing regional products or other products with a product quality label. The econometric methods used were a one-way chi-square test of good compliance, a Kolmogorov-Smirnov test, a Kruskal-Wallis test and Dunn's test with Bonferroni correction as a post-hoc test.

The product quality characteristics were divided into seven categories: branding (various product quality labels, regional brand, regular brand, etc.), price, visual quality cues (includes physical attributes, packaging, etc.), product composition (including production process), marketing communication, third-party information, and availability (distribution). The questionnaire was constructed together with professional experts in this field. Yet unexpectedly, consumers preferred third-party information (eWOM) the most, followed by expected categories: visual quality cues, product composition and branding. Price, marketing communication and availability were not as important to consumers. Due to the preference for eWOM (product reviews online, product recommendations by friends/other consumers), it was suggested to accept and support third-party information, i.e., create a space on a product website to have consumer reviews, experiences, etc. (obviously moderated) and promote sharing of product experience on social networks. Another proposal is to communicate through the packaging, visually include the ingredients and environment where it is grown/processed. The rear of the packaging should include a clearly readable list of ingredients, with explanations, the production process explained in a story or with pictures. Many products use space on packaging to promote the region, solidarity with the region, environmental friendliness and similar traits, but these are not working as they used to anymore and need to be replaced.

Volume **14** | Issue **3** | 2025
https://doi.org/10.18267/j.cebr.390

The consumers that are the most willing to listen to these quality product characteristics and should be targeted for the marketing campaigns were described in three segments: men aged 36–53 with secondary education who like traditionally processed products, like to read about them online, are interested in product composition and are not price-sensitive; women aged 54+ and 36–44 with university education preferring all-natural products that are protective of nature and have good composition, which is also communicated on the packaging; and people aged 27–35, both genders, higher education, preferring product quality cues in eWOM, visual cues and labels.

The results of this study can be used to improve the functioning of products with quality labels in the Czech Republic and can serve as guidelines for other markets. The limitations of this study include the chosen means of obtaining data – the questionnaire survey. It may influence the results obtained, mainly for price and marketing communication. Another limitation might be the chosen data analysis techniques, as all of them have their advantages and disadvantages and there might be better ones to use that were not tried. Future research should focus on comparing the results with other markets and other customer segments.

Acknowledgement

Funding: No special funding.

Conflict of interest: The authors hereby declare that this article was neither submitted nor published elsewhere. The authors do not have any conflicts of interest.

References

Acebrón, L. B., & Dopico, D. C. (2000). The importance of intrinsic and extrinsic cues to expected and experienced quality: an empirical application for beef. *Food Quality and Preference*, *11*, 229–238. https://doi.org/10.1016/S0950-3293(99)00059-2.

Akdeniz, B., Calantone, R. J., & Voorhees, C. M. (2012). Effectiveness of Marketing Cues on Consumer Perceptions of Quality: The Moderating Roles of Brand Reputation and Third-Party Information. *Psychology and Marketing*, *30*(1), 76–89. https://doi.org/10.1002/mar.20590.

Bauerová, R., & Klepek, M. (2018). Technology Acceptance as a Determinant of Online Grocery Shopping Adoption. *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis*, *66*(3), 737–746. https://doi.org/10.11118/actaun201866030737.

Brecic, R., Mesic, Z., & Cerjak, M. (2017). Importance of intrinsic and extrinsic quality food characteristics by different consumer segments. *British Food Journal*, *119*(4), 845–862. https://doi.org/10.1108/BFJ-06-2016-0284.

Chalupová, M., & Prokop, M. (2016). Awareness of the Vysočina regional food labels with context of their media presence. *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis*, *64*(1), 223–234. https://doi.org/10.11118/actaun201664010223.

Eertmans, A., Baeyens, F., & Van den Bergh, O. (2001). Food likes and their relative importance in human eating behaviour: Review and preliminary suggestions for health promotion. *Health Education Research*, *16*, 443–456. https://doi.org/10.1093/her/16.4.443.

European Commission. (2020). *Quality schemes explained*. Retrieved 18 April 2023 from https://ec.europa.eu/info/food-farming-fisheries/food-safety-and-quality/certification/quality-labels/quality-schemes-explained#geographicalindications.

Gené, J. M., Puiggené, S. S., & Larraz, J. L. G. (2024). Determining the influence of belonging to a wine protected designation of origin on profitability. *Agribusiness*, 1–20. https://doi.org/10.1002/agr.21947.

Grunert, K. G., & Aachmann, K. (2016). Consumer reactions to the use of EU quality labels on food products: A review of the literature. *Food Control*, *59*, 178–187. https://doi.org/10.1016/j.foodcont.2015.05.021.

Hsu, CH., & Chen, M. (2014). Explaining consumer attitudes and purchase intentions toward organic food: Contributions from regulatory fit and consumer characteristics. *Food Quality and Preference*, *35*, 6–13. https://doi.org/10.1016/j.foodqual.2014.01.005.

Javeed, A., Aljuaid, M., Khan, Z., Mahmood, Z., & Shadid, D. (2022). Role of Extrinsic Cues in the Formation of Quality Perceptions. *Frontiers in Psychology*, *13*, 913836. https://doi.org/10.3389/fpsyg.2022.913836.

Jürkenbeck, K., & Spiller, A. (2021). Importance of sensory quality signals in consumers' food choice. *Food Quality and Preference*, *90*, 104155. https://doi.org/10.1016/j.foodqual.2020.104155.

Lee, M., & Lou, Y. C. (2011). Consumer reliance on intrinsic and extrinsic cues in product evaluations: a conjoint approach. *Journal of Applied Business Research*, *12*(1): 21–29. https://doi.org/10.19030/jabr.v12i1.5833.

Liu, R., Pieniak, Z., & Verbeke, W. (2013). Consumers' attitudes and behaviour towards safe food in China: A review. *Food Control*, *33*(1), 93–104. https://doi.org/10.1016/j.foodcont.2013.01.051.

Margarisová, K., Vokáčová, L., Kuralová, K., & Hlavsa, T. (2018). Regional Branding: Customer's Experience with the Certified Products. Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis, *66*(6), 1549–1556. https://doi.org/10.11118/actaun201866061549.

Markovina, J., Stewart-Knox, B. J., Rankin, A., Gibney, M., de Almeida, M. D. V., Fischer, A., & Frewer, L. J. (2015). Food4Me study: Validity and reliability of Food Choice Questionnaire in 9 European countries. *Food Quality and Preference*, *45*, 26–32. https://doi.org/10.1016/j.foodqual.2015.05.002.

Mascarello G., Pinto A., Parise N., Crovato S., & Ravarotto, L. (2015) The perception of food quality. Profiling Italian consumers. *Appetite*, *89*, 175–182. https://doi: 10.1016/j.appet.2015.02.014.

Mondelaers, K., Verbeke, W., & Huylenbroeck, G. V. (2009). Importance of health and environment as quality traits in the buying decision of organic products. *British Food Journal*, *111*(10), 1120–1139. https://doi.org/10.1108/00070700910992952.

Olson, J. C. & Jacoby, J. (1972). Cue Utilization in the Quality Perception Process. Proceedings of the Third Annual Conference of the Association for Consumer Research, 167–179.

Ozimek, I., & Żakowska-Biemans, S. (2011). Determinants of Polish consumers' food choices and their implication for the national food industry. *British Food Journal*, *113*(1), 138–154. https://doi.org/10.1108/00070701111097394.

Petrescu, D. C., Vermeir I., & Petrescu-Mag, R. M. (2020). Consumer Understanding of Food Quality, Healthiness, and Environmental Impact: A Cross-National Perspective. *International Journal of Environmental Research and Public Health*, *17*(1):169. https://doi.org/10.3390/ijerph17010169.

Petrescu, D. C., Vermeir, I., Burny, P. & Petrescu-Mag, R. M. (2022). Consumer evaluation of food quality and the role of environmental cues. A comprehensive cross-country study. *European*

Research on Management and Business Economics, *28*(2). https://doi.org/10.1016/j.iedeen.2021.100178.

Purohit, D., & Srivastava, J. (2001). Effect of manufacturer reputation, retailer reputation, and product warranty on consumer judgements of product quality: A cue diagnosticity framework. *Journal of Consumer Psychology*, *10*(3), 123–134. https://doi.org/10.1207/s15327663jcp1003_1.

Sadílek, T. (2019). Consumer preferences regarding food quality labels: the case of Czechia. *British Food Journal*, *121*(10), 2508–2523. https://doi.org/10.1108/BFJ-03-2019-0150.

Shepherd, R. (1999). Social determinants of food choice. *Proceedings of the Nutrition Society*, *58*(04), 807–812. https://doi.org/10.1017/S0029665199001093.

Steptoe, A., Pollard, T. M., & Wardle, J. (1995). Development of a measure of the motives underlying the selection of food: the food choice questionnaire. *Appetite*, *25*(3), 267–284.

Stoklasa, M. (2015). Možnosti využití regionálního značení produktů v Moravskoslezském kraji pohledem cross-kulturního marketingu. Karviná: SU OPF.

Stoklasa, M., & Pitrunová, E. (2020). Understanding regional product characteristics and consumers purchasing them in the Czech Republic. *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis*, *68*(1), 243–253. https://doi.org/10.11118/actaun202068010243.

Sumaedi, S., Rakhmawati, T., Astrini, N. J., Yarmen, M., Bakti, I. G. M. Y., & Damayanti, S. (2023). Key Company Success Factors in Creating High-Quality Innovative Food Products. *Sage Open*, *13*(1). https://doi.org/10.1177/21582440221148145.

Sun, Y., Huang, Y., Fang, X. & Yan, F. (2022). The Purchase Intention for Agricultural Products of Regional Public Brands: Examining the Influences of Awareness, Perceived Quality, and Brand Trust. *Mathematical Problems in Engineering,* 1–10. https://doi.org/10.1155/2022/4991059.

Velčovská, Š. (2012). Food Quality Labels and their Perception by Consumers in the Czech Republic. World Academy of Science, Engineering and Technology. *International Journal of Social, Behavioral, Educational, Economic, Business and Industrial Engineering*, 6(6), 1046–1052.

Verbeke, W., Pieniak, Z., Guerrero, L., & Hersleth, M. (2012). Consumers Awareness and Attitudinal Determinants of European Union Quality Label Use on Traditional Foods. *Bio-based and Applied Economics*, *1*(2), 213–229. https://doi.org/10.22004/ag.econ.141970.

Vokáčová, L., Margarisová, K., Huml, J., & Čerkasov, J. (2017). Regional bands as an attribute of product quality. *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis*, *65*(6), 2131–2140. https://doi.org/10.11118/actaun201765062131.

Walters, A., & Long, M. (2012). The effect of food label cues on perceptions of quality and purchase intentions among high-involvement consumers with varying levels of nutrition knowledge. *Journal of Nutrition Education and Behavior*, *44*(4), 350–354. https://doi.org/10.1016/j.jneb.2011.08.008.

Wang Edward, S. T. (2013). The influence of visual packaging design on perceived food product quality, value, and brand preference. *International Journal of Retail & Distribution Management*, *41*(10), 805–816. https://doi.org/10.1108/IJRDM-12-2012-0113.

Yim, M. S. (2020). The Relationships between Product Quality Cues and Perceived Values based on Gender Differences at a Food Select Shop. *The Journal of Industrial Distribution & Business*, *11*(10), 59–73. https://doi.org/10.13106/jidb.2020.vol11.no10.59.

Zander, K., & Hamm, U. (2012). Information search behaviour and its determinants: The case of ethical attributes of organic food. *International Journal of Consumer Studies*, *36*, 307–316. https://doi.org/10.1111/j.1470-6431.2011.00998.x.

The research article passed the double-blind review process. | Received: 4 August 2024**; Revised:** 6 October 2024**; Accepted:** 4 November 2024**; Available online:** 27 March 2025**; Published in the regular issue:** 30 July 2025.