



Quality Schemes in the View of Telemea Cheese Consumers in Romania: Driver of Change for Competitive Marketing Strategies

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RESEARCH ARTICLE

Abstract

Consumer and producer protection, rural development, preservation of rural culture, uniqueness, and product traceability are some of the characteristics that define quality schemes. Apart from the quality schemes of the European Union, there are national schemes, voluntary certifications at both national and international levels, offering consumers additional information on the quality characteristics of products. The study aimed to understand the level of knowledge of quality schemes, the buying intentions, and the willingness to pay for Telemea Cheese with quality certification label in Romania. Data collected via a questionnaire was analyzed using descriptive statistics and regression analysis. A moderate level of knowledge regarding the quality schemes was found among consumers of Telemea Cheese, with a higher percentage in the case of national quality labels. The presence of the quality certification label on the package of Telemea Cheese was more important as age increased (OR=1.135, $p<0.01$), for female respondents (OR=0.7038, $p<0.01$), and for people living in a household with children (OR=1.2787, $p<0.05$). Initiatives to highlight the advantages of food products with quality schemes are required to raise consumer awareness. The findings provide valuable information to develop marketing strategies to increase the value of locally produced agricultural and food products.

Keywords: Consumer behaviour; marketing; food labelling; willingness to pay; dairy products.

INTRODUCTION

The food market is anything but a predictable market, as it is characterised by diversity and variability. Today's consumers sample a variety of foods - local, regional, national, European. The way food is consumed on a daily basis, visits to delicatessens or supermarket shopping, celebrations with and around food, family traditions, memories, the importance of the contents of the fridge and the use of kitchen utensils, the aesthetics of the table, the atmosphere created by quality food and the attachment to it, food biographies, the orientation towards sustainable and domestic food practices, trust in the producer - all these can contribute to consumer behaviour. Knowledge of consumer behaviour is an important element in determining the strategies of market players. The dynamics of consumption in recent decades and changes in daily eating habits have contributed to a steady increase in consumer interest in food products that come from a specific geographical area and offer a guarantee of safety and quality. Origin certification is an effective means of communicating this information (Garavaglia and Marcoz, 2014).

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Studies on quality systems/labels have emphasised key aspects. Some of the most important are: they serve as an indication of quality to consumers, where awareness is very important as it reduces the uncertainty associated with the purchase of food (Hartmann et al., 2019); it provides protection to producers and it contributes to the development of the region (Angowski and Jarosz-Angowska, 2020) or the rural area (Filipović, 2019); they are important when it comes to ensuring the traceability of products (Grunert and Aachmann, 2016). Sociodemographic characteristics, place of residence, sustainability of the production process, clarity of labelling, which must be easy to understand, and the length of time products have been on the market and on retail shelves (Hartmann et al., 2019) are among the factors that determine differences in consumer perceptions of quality.

Labelling schemes therefore provide a range of information that consumers need to understand and trust to a sufficient degree to guide them in their purchasing decisions. There are both public and private sources of certification (Rupprecht et al., 2020). Trust in the product, together with awareness, is a minimum requirement for a basic understanding of quality systems and the use of quality labels as indicators of excellence (Hartmann et al., 2019). Although there is no universally accepted definition of a quality label, the internationally accepted definition is “any tag, brand, mark, pictorial or other descriptive matter, written, printed, stenciled, marked, embossed or impressed on, or attached to the packaging or container of food” (Regulation EU No. 1169/2011). Quality labels can have an impact on trust in the food system and are a form of direct social interaction with the industry, of direct communication between consumers and producers, and of indirect communication with the government (Tonkin et al., 2016).

Quality labels are credible if the awarding body, which is not linked to producers or traders, is credible (Bryla et al., 2017). The European Union's policy on quality schemes for agri-food products aims to provide producers with optimal tools to better promote and label local, traditional and regional products, protect producers from unfair competitive practices, promote rural development and preserve cultural heritage, reduce consumer information gaps in the market (Chifor et al., 2022), and protect product identity, intellectual property and knowledge related to the production process (Maye et al., 2016).

The PDO (Protected Designation of Origin), PGI (Protected Geographical Indication), TSG (Traditional Speciality Guaranteed) and GI (Geographical Indication) certifications used in Europe are significant because they are mainly intended to protect producers and consumers and to encourage the development of rural areas, thus contributing to the preservation of the diversity of rural culture (Angowski and Jarosz-Angowska, 2020) and to the development of new food markets (Maye et al., 2016). European quality schemes have great potential and can contribute to the development of rural areas and the preservation of the particularly rich rural culture (Angowski and Jarosz-Angowska, 2020), promote sustainable dietary habits, provide information on product traceability, make use of specific skills and knowledge (Grunert and Aachmann, 2015), strengthen local economies (Verbeke et al., 2012), maintain product authenticity (Bryla et al., 2017) and increase consumer confidence (Borda et al., 2021).

In addition to the quality systems already known in the European Union, there are national systems, voluntary national and international certifications supported by private actors, that can provide consumers with additional information on the quality characteristics of products and, at the same time, represent a real consumer support in the area of food safety. These include “DLG getestet” in Germany, „Appellation of Controlled Origin (ACO)” or “Label Rouge” in France, „Produs Tradițional” and „Produs Montan” in Romania, GLOBALGAP, the most commonly used certification system for fresh and organic products on the international market (Wongprawmas et al., 2015). The optional certification „Produs Tradițional”, established on the Romanian market and recognised by the European Union, helps producers to better understand the requirements for registering a PDO quality system (Popa and Nica, 2021).

The impact of quality schemes on consumers is as much a function of product characteristics and product type as of consumer characteristics, but the degree of consumer awareness and understanding of quality schemes is of great importance (Grunert and Aachmann, 2015). Label influence varies by country and product (Kos Skubic et al., 2018), and one negative perception is enough to negatively evaluate the label and reduce trust in the industry (Tonkin et al., 2016).

Consumers' perception of food quality is an important factor in their willingness to buy and pay for a (regionally) protected product (Van Ittersum et al., 2007). Studies reveal that the demand for quality labelled products is increasing and that consumers are willing to pay a higher price (even a premium - Aprile et al., 2012) for certified products with quality labels such as PDO or PGI. One of the most important attributes contributing to the success of a certified product (PDO, PGI) is its higher quality compared to non-certified products (Teuber, 2011).

Products holding European certification are often used for the branding of a country, facilitating access to international markets for certified food products, while celebrating a country's culinary heritage (Bardone and Spalvěna, 2019). The image of the country of origin can play an important role in this regard (Wongprawmas et al., 2015). For example, the Italian PDO production system for Parmigiano Reggiano cheese makes a particular contribution to rural development, not only by creating jobs in rural areas but also by using artisanal production

methods (De Roest and Menghi, 2000). Velčovská and Sadílek (2015) also mentions certification through quality labelling as an important tool for EU cheese producers to improve product quality.

In this context, the study aims to examine Romanian consumers' behaviour regarding the consumption of Telemea Cheese. More specifically, it reveals the level of knowledge of quality schemes, the buying intentions and the willingness to pay for Telemea Cheese with quality certification label in Romania. The remainder of the paper is organized as follows: the methodology is presented in the next section, followed by findings and discussions. The work ends with conclusions.

MATERIALS AND METHODS

Data was collected via an online questionnaire during August 2023-July 2024, respondents being consumers of Telemea Cheese from Romania (n=1119). To validate the sample size, a post-hoc power analysis was conducted using the software G*power: effect size 0.3 with 99% power and alpha 0.05 (Faul et al., 2007). Data referred to the consumer buying behavior, the level of knowledge of quality schemes, the buying intentions and the willingness to pay for Telemea Cheese with quality certification label. Descriptive statistics and hypothesis testing was used to analyze the data. Ordered logit model was used to investigate the effects of sociodemographic data (gender, age, and education) and the type of household (with or without children) on the importance of the presence of the quality certification label on the package, a factor that may influence the purchase of Telemea Cheese. The analyses were conducted using STATA version 15.0 (StataCorp, College Station, TX, USA). A P-value<0.05 was considered significant.

RESULTS AND DISCUSSIONS

Consumers buying behaviour

The respondents' age varied from 18 to 79 years old, with half falling between 40 and 59 years old. In terms of level of education, the majority had at least a university degree (62.6%), with varying household income. 41.4% had children under the age of 18 living in their households and 67.7% were female.

The buying behavior of consumers of Telemea Cheese was measured in terms of the frequency of buying, place of purchase, monthly quantity purchased, amount of money spent monthly. Consumers revealed their buying behavior in relation with all four types of Telemea Cheese.

A higher purchase frequency can be observed for at least on a weekly basis for the Cow Telemea Cheese (74.0% of respondents) and Sheep Telemea Cheese (60.1% of respondents), whereas the frequency is much lower for the Goat Telemea Cheese (42.5%) and Buffalo Telemea Cheese (32.1%). A significant percentage of respondents who selected "I do not buy it" was observed for Buffalo Telemea Cheese (44.1%) (Table 1). For the Goat and Buffalo Telemea Cheese, a reason for the high percentage of consumers who reported they are not purchasing these cheeses might be the lack of availability of these products in the market and in stores. This situation was observed during field research in several grocery stores in Romania.

Table 1. Frequency of buying

Frequency of buying	Sheep Telemea Cheese		Cow Telemea Cheese		Goat Telemea Cheese		Buffalo Telemea Cheese	
	No.	%	No.	%	No.	%	No.	%
Daily	63	5.6	105	9.4	30	2.7	32	2.9
2 - 3 times/ week	204	18.2	270	24.1	124	11.1	79	7.1
Weekly	405	36.2	453	40.5	322	28.8	248	22.2
Monthly	190	17.0	158	14.1	119	10.6	74	6.6
A few times/ year	140	12.5	86	7.7	224	20.0	193	17.2
I do not buy it	117	10.5	47	4.2	300	26.8	493	44.1

Regarding the location of purchase, respondents in this study prefer supermarkets or hypermarkets, food markets, and direct purchases from producers for all four categories of Telemea Cheese (Table 2). Online shopping ranks lowest in the respondents' preferences. Specialized stores are far behind supermarkets/hypermarkets in terms of location purchase preference. Such a result might indicate limited presence of these products in stores other than supermarkets/hypermarkets, a lack of specialized stores, and insufficient sales and promotion channels by the producers. European Regulation 1151/2012 "local farming and direct sales labelling scheme" is an initiative that pertains to the purchasing channel used (Regulation (EU)

1151/2012), and using this label on food products can provide real support to food producers, as direct sales are very important for local and regional products (Bonadonna et al., 2017).

For Sheep Telemea Cheese, purchases from food markets rank first (30.0% of respondents), followed by direct purchases from producers (28.3%) and supermarket purchases (25.5%). Several possible explanations for this buying behavior can be mentioned: the sheep cheese market is not that well-organized, the quantity of milk produced is low, and more often producers prefer to make cheese rather than sell milk, with cheese sales being an important source of income for many producers. Additionally, sheepfolds are often located in less accessible areas for normal milk collection conditions, with few milk processing factories willing to cover the higher costs of the collection process. Direct sales from producers are often the result of buyers knowing and trusting the producer, considering that the producer may not have the most reliable production means, especially from a food safety perspective.

There are several reasons why online sales rank last in respondents' preferences (between 0.2% and 0.5%). These include the lack of modern payment methods among private producers, the distance from production locations which are often in mountainous areas, and lack of specialized transportation means. However, various ideas for marketing local products have recently emerged (e.g., ROMO, ROA). For example, creating communities with local producers to facilitate direct sales to the consumers. The exchange is done through social media; the producer posts the offer and consumers place orders through a simple comment on the producer's posts. Orders are picked up 1-2 times a week at a designated location, where the buyer meets and interacts with the producer. This method of selling, situated at the border between online and physical sales at a specific location, can be of real help to smaller local producers and artisans who do not produce large quantities of products and do not have continuous production, depending on the seasonality of certain agricultural products.

A study conducted in Spain (Tendero and Bernabeu, 2005) showed consumer behavior regarding cheese purchases in Spain similar to the results of this research, with purchases being made from supermarkets and hypermarkets and to a much lesser extent from specialized stores, with purchase frequency being more than once a week. The study examined Spanish cheese consumers' behaviors, with selected characteristics being price, quality certification, and the type of cheese. In another study conducted in Romania by Strambu-Dima (2022), it was shown that only 23% of respondents in the study make purchases from agro-food markets, while 27% buy from stores in their proximity. The same study indicates that proximity stores are preferred (81% of respondents rated this as very important & important), and 64% consider it important and very important for products to be produced in Romania (Strambu-Dima, 2022).

Table 2. Place of purchase

Place of purchase	Sheep Telemea Cheese		Cow Telemea Cheese		Goat Telemea Cheese		Buffalo Telemea Cheese	
	No.	%	No.	%	No.	%	No.	%
Supermarket / Hypermarket	285	25.5	482	43.1	336	30.0	260	23.2
Food markets	336	30.0	240	21.4	210	18.8	180	16.1
Specialised store	62	5.5	87	7.8	64	5.7	61	5.5
Directly from producer	317	28.3	257	23.0	206	18.4	119	10.6
Online	2	0.2	6	0.5	3	0.3	6	0.5
I do not buy it	117	10.5	47	4.2	300	26.8	493	44.1

Table 3. Monthly quantity purchased

Monthly quantity purchased	Sheep Telemea Cheese		Cow Telemea Cheese		Goat Telemea Cheese		Buffalo Telemea Cheese	
	No.	%	No.	%	No.	%	No.	%
<250 g	191	17.1	121	10.8	296	26.5	287	25.6
251 – 500 g	223	19.9	225	20.1	191	17.1	143	12.8
501 – 750 g	165	14.7	170	15.2	124	11.1	91	8.1
751 – 1.000 g	211	18.9	289	25.8	123	11.0	90	8.0
> 1.000 g	225	20.1	277	24.8	100	8.9	45	4.0
I do not consume it	104	9.3	37	3.3	285	25.5	463	41.4

To understand consumption behavior, respondents were asked to specify the quantity purchased monthly, as well as the amount spent monthly, for these four categories of Telemea Cheese (Table 3). It is observed that for Cow Telemea Cheese, 50.6% of respondents prefer to purchase the product in larger quantities, 751 – 1000 g and over 1000 g, while only 10.8% make purchases in smaller quantities of less than 250 g per month. The same results cannot be observed for Goat and Buffalo Telemea Cheese, where most respondents (26.5% for Goat Cheese and 25.6% for Buffalo Cheese) prefer to purchase less than 250 g monthly.

The amount respondents reported spending monthly on purchases also varies significantly depending on the type of Telemea Cheese preferred (Table 4). For Sheep and Cow Telemea Cheese, more than 26% of respondents allocate more than 60 lei for monthly purchases. Significant percentages are noted for Sheep and Cow Telemea Cheese in the amounts allocated for monthly purchases between 26 - 60 lei (44.7% for Sheep Cheese and 50.1% for Cow Cheese). Out of 1119 respondents, only 60, or 5.4%, reported spending less than 15 lei monthly on Cow Telemea Cheese. Regarding Buffalo Telemea Cheese, 41.4% reported not being consumers, while 15.0% allocate less than 15 lei monthly for this type of cheese.

Table 4. Amount of money spent monthly

Amount of money spent monthly	Sheep Telemea Cheese		Cow Telemea Cheese		Goat Telemea Cheese		Buffalo Telemea Cheese	
	No.	%	No.	%	No.	%	No.	%
<15 lei	105	9.4	60	5.4	164	14.7	168	15.0
16 – 25 lei	109	9.7	137	12.2	138	12.3	122	10.9
26 – 40 lei	220	19.7	275	24.6	210	18.8	145	13.0
41 – 60 lei	280	25.0	286	25.6	181	16.2	129	11.5
> 60 lei	301	26.9	324	29.0	141	12.6	92	8.2
I do not consume it	104	9.3	37	3.3	285	25.5	463	41.4

Level of knowledge of Quality schemes

The quality of a product is the most important factor that brings the consumer into the store (Mancini et al., 2019). An important factor that determines consumers to use quality-labelled food is their belief that foods with PDO, PGI, and GI labels are of higher quality (Verbeke et al., 2012). These labels are both a tool for consumers to make decisions and a way to control food quality, as the label on the packaging can provide clues about a production area or a specific process. Romania's accession to the European Union in 2007 also meant the introduction of food certification systems into the Romanian market. National legislation was aligned with European legislation, one example being the requirements for the certification of "traditional products," which are similar to those for PDO or PGI certification. The registration of products in the National Register of Traditional Products has allowed the identification of those products that have the potential to receive European certification (Popa and Nica, 2021).

In this study, we aimed to identify how well-known the European Union's quality schemes are, as well as certain national labels, logos, and voluntary certification schemes (Figure 1).

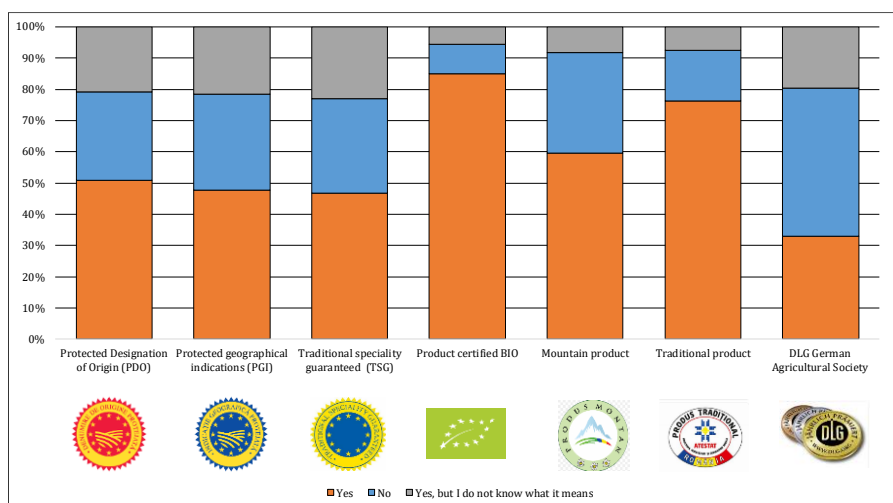


Figure 1. Level of knowledge of Quality schemes.

Among the 1119 respondents to the study, 50.9% (570 respondents) stated that they are familiar with the PDO logo, while 47.8% (535 respondents) with the PGI certification and 46.8% (524 respondents) with the TSG certification. Almost half do not know what signifies or what benefits a certification scheme can bring to consumers. Like most European consumers, Romanian consumers are not fully aware of the benefits of quality certification systems either. The situation changes when it comes to products bearing the "BIO" label, as it is the most well-known among consumers, with 84.9% of respondents stating that they recognize the logo (950 respondents). After recognizing the BIO-labelled products, the next most recognized logos are the "Traditional Product" and "Mountain Product" labels. Of the 1119 respondents, 854 (76.3%) recognize the "Traditional Product" logo, while 668 (59.7%) the "Mountain Product" logo.

Romania has potential for certifying products that meet some of the European certification criteria, but the trend is not positive (Chifor et al., 2022). Financial requirements, bureaucracy, market knowledge, and the dynamics of the local quality products market are among the causes of the small number of Romanian food products certified at the European Union level (Stroe, 2021).

Private voluntary schemes can greatly contribute to informing consumers, and the impact is even greater when the institution/organization awarding them is well-known and provides consumers with a higher level of trust. Our study included among the quality schemes the voluntary scheme "DLG getestet," the holder of which is a German association founded in 1885, DLG e.V., which has been present in Romania under this name since 2009. 33.0% of the respondents know the DLG logo.

Importance of Quality Scheme in the buying decision and WTP more for Telemea Cheese with quality label

A quality certification label on the package is a factor that may impact the purchase of Telemea Cheese. The effects of respondents' age, gender, income, and education, along with the type of household (with or without children) on the importance of the presence of the quality certification label were examined using an ordered logit model. The level of education and the level of income were not found as significant factors, whereas age, gender and type of household were significant (Table 5). The presence of the quality certification label on the package of Telemea Cheese was more important as age increased (OR=1.135, $p<0.01$) and for female respondents (OR=0.7038, $p<0.01$). Moreover, the quality certification label is more important for people living in a household with children (OR=1.2787, $p<0.05$).

Table 5. Ordered logistic regression results—dependent variable: "Quality certification label on the package"

Independent Variables	Coefficient (Std. Error)	Odds Ratio
Age	0.1267 (0.0429)**	1.1351
Gender (Male =1)	-0.3512 (0.1138)**	0.7038
Education	-0.0505 (0.1110)	0.9507
Income	-0.0752 (0.0472)	0.9275
Household with children (Yes=1)	0.2459 (0.1141)*	1.2788
Cut point 1	-2.1752 (0.4094)	
Cut point 2	-1.4354 (0.4053)	
Cut point 3	-0.3355 (0.4037)	
Cut point 4	0.9528 (0.4043)	
Log likelihood	-1689.7509	
LR chi-square (5)	26.30	
Pseudo R-squared	0.0077	

Note: * Significant at 5% level; ** Significant at 1% level.

The three identified factors (age, gender, type of household) were considered to characterize respondents who are willing to pay more for Telemea Cheese with quality label. The additional percentages offered for Telemea cheese with a label certifying its quality were 5%, 10%, 20%, and 30%. In general, as the suggested thresholds rise, the proportion of respondents ready to pay extra for high-quality certified Telemea Cheese declines (Figure 2). In every instance, the majority of responders—approximately 60%—are female. Regarding age, it was discovered that almost 53% of the respondents were in the 40–59 age range. As the proposed bid rises, the percentage of individuals who live in homes with children slightly increases. The concern about providing children higher-quality food products might be the reason behind these findings.

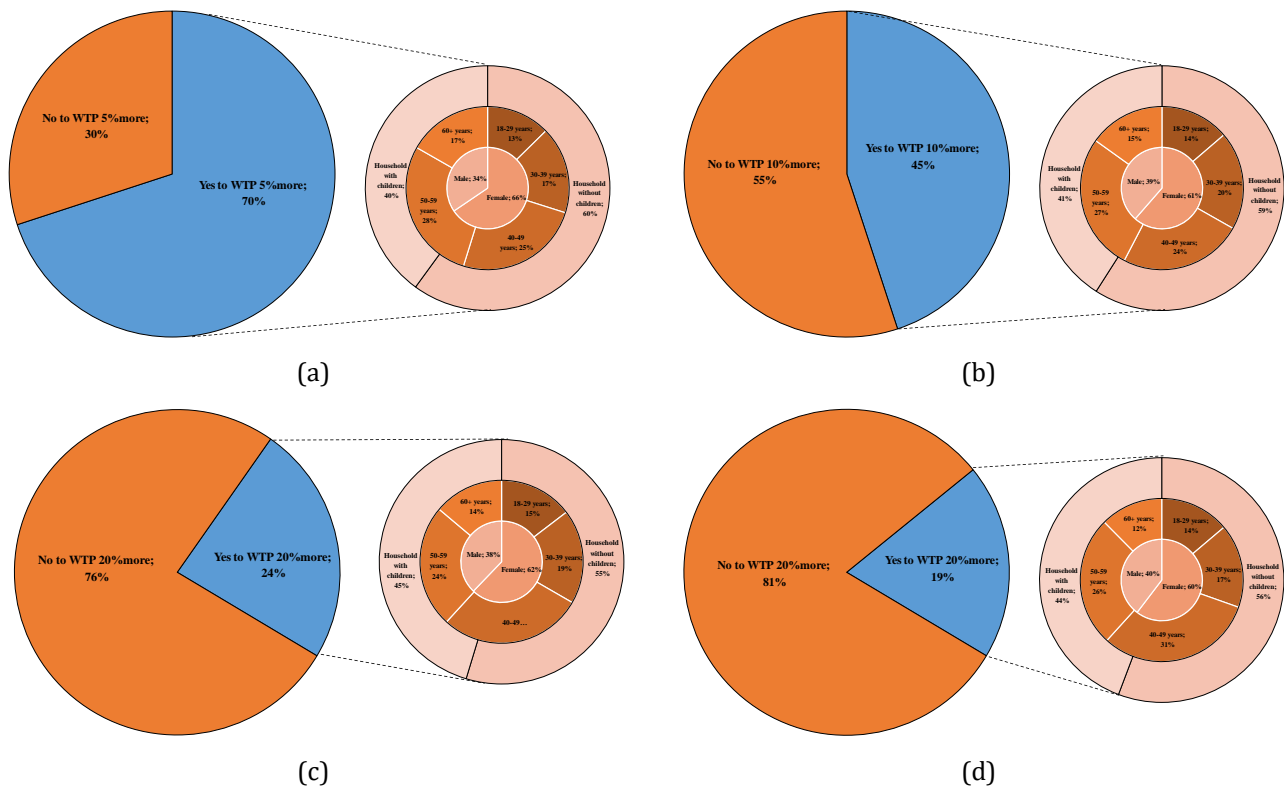


Figure 2. Willingness to pay for Telemea cheese with quality label: (a) with 5% more; (b) with 10% more; (c) with 20% more; (d) with 30% more.

CONCLUSIONS

Quality is one of the most important characteristics that consumers look for when choosing a food product, but the way in which quality is perceived varies greatly from one consumer to another. The variety and diversity of products on the market drives consumers to look for food that is safe, healthy and environmentally friendly. Initiatives to highlight the advantages of food products with quality schemes are required to raise consumer awareness. Kaczorowska et al. (2021) also emphasizes that the quality labels play an important role in shaping consumer perceptions of quality, with awareness, experience and understanding of sustainability issues. Thus, the findings of the current research could contribute to developing an innovative certification system for local agricultural and food products that complies with EU regulations and builds consumer trust. The findings may also be used to develop marketing strategies to increase the value of locally produced agricultural and food products. A necessity in the development of marketing strategies involves attracting the consumers' attention to certain information regarding quality, culinary traditions, the origin of food, food culture, and the development of the local economy. There is a need to educate the modern consumer and to include in marketing strategies campaigns that raise awareness of the benefits provided by quality labels, especially in terms of food safety and, consequently, consumer health. Strengthening the legislative framework regarding quality schemes, geographical indications, mandatory origin indications, and mandatory nutritional information is also very important.

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Conflicts of Interest

The authors declare that they do not have any conflict of interest

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