

The perception of EU quality signs for origin and organic food products among Polish consumers

P. Bryła

Department of International Marketing and Retailing, University of Łódź, Narutowicza 59a, 90-131 Łódź, Poland;
pbryla@uni.lodz.pl

Received: 22 November 2016 / Accepted: 9 March 2017

© 2017 Wageningen Academic Publishers

RESEARCH ARTICLE

Abstract

The paper aims to examine the perception of European Union quality signs for origin (protected designation of origin, protected geographical indication, traditional speciality guaranteed) and organic food products among Polish consumers and to test selected hypotheses concerning the associations between the perception of quality signs and consumer attitudes toward the consumption of origin and organic food products as well as their willingness to pay a higher price for such products than for conventional food. A survey was conducted in a representative sample of 1000 Polish consumers. It was carried out with the use of computer assisted web interview methodology. The respondents underlined the role of quality signs in positioning origin and organic products in the segment of premium prices, building competitive advantage on the basis of the differentiation strategy, and emphasising authenticity. We confirmed the relationship between the frequency of origin and organic food purchase and the role attributed to quality signs. We also found a strong correlation between the perception of European quality signs and the attitude toward origin and organic food. Finally, we confirmed the relationship between the positive perception of European quality signs and the self-reported willingness to pay a higher price for origin and organic food.

Keywords: quality labels, geographical indications, protected designation of origin, certified quality systems, Poland

1. Introduction

A growing attention paid to quality and safety issues is leading to an increase in the demand for high quality food products (Curzi and Pacca, 2015). The literature of the subject contains a wealth of quality definitions in the product and process approaches and a multiplicity of classifications of its attributes. Quality may be treated both as an objective, verifiable characteristic and a subjective phenomenon, based on individual experiences (Combe and Botschen, 2004; Zeithaml, 1988). A growing role in constructing food product quality is played by systemic conditions (Brunori, 2007; Gay, 2007; Stræte, 2008), cultural factors (Aurier and Sirieix, 2004, p. 44) and public policies (Dobieński, 2013; EC, 2009; Scheffer and Roncin, 2000; Thévenod-Mottet, 2006, p. 43). Food product quality is assessed with the use of functional, ecological, esthetical, ethical and political criteria (Aurier and Sirieix, 2004, p. 29; Becut, 2011; Brunori, 2007; Bryła, 2013; Espejel *et al.*,

2007, 2009; Jahn *et al.*, 2005; Morris, 2000). Demographic factors also play a role regarding a range of safety and quality variables in the food supply chain (Taylor *et al.*, 2012). Consumers' food choices are increasingly influenced by credence cues (Fernqvist and Ekelund, 2014). Quality is expected but never assumed by consumers (Cauvain, 2016). Labelling has a role as an access point to the food system (Tonkin *et al.*, 2016). An increasing popularity and significance of quality signs is observed, in particular of those that refer to the area of origin (Bowen, 2010; Bryła, 2015c; Chryssochoidis *et al.*, 2007; Parra-López *et al.*, 2015; Sylvander and Allaire, 2008, p. 7) and specific manufacturing technologies (Bryła, 2015b; Ilbery and Maye, 2007; Jahn *et al.*, 2005). They facilitate the implementation of the strategy of product differentiation on the market. In many instances, the effectiveness of the strategy of building high quality of a food product depends on the quality of cooperation within production systems and integrated distribution channels. The conceptualisation of product quality in the segment

of origin and organic food requires an understanding of complex interactions of all entities participating in its construction and evaluation. It is worth taking up interest in the perception of the marketing construction of quality of such products from the perspective of consumers (a more comprehensive analysis is available in Polish in a book; Bryła, 2015a). The paper aims to examine the perception of European Union quality signs for origin (protected designation of origin, PDO; protected geographical indication, PGI; traditional speciality guaranteed, TSG) and organic food products among Polish consumers and to test selected hypotheses concerning the associations between the perception of quality signs and consumer attitudes toward the consumption of origin and organic food products as well as their willingness to pay a higher price for such products than for conventional food.

Research hypotheses

Following a review of the literature of the subject, we have identified the following research hypotheses that needed to be tested among Polish consumers:

- H1. Consumers who attach high importance to quality signs in grocery purchases tend to buy origin and organic food more often than those for whom this characteristic is less important.
- H2. The more positive is the perception of European quality signs appealing to the area of origin or production methods, the more positive is the attitude to the consumption of origin and organic food.
- H3. The use of European quality signs appealing to the area of origin or production methods constitutes a value added for origin and organic products, expressed in consumer willingness to pay a higher price for such products than for conventional food.

As far as we know, these hypotheses were tested only for origin products in Western Europe about two decades ago (Van Ittersum *et al.*, 2000). Therefore, it would be

interesting to see if they are still valid and apply to organic food as well, and to Polish consumers.

2. Materials and methods

A survey was addressed to Polish consumers. The sample consisted of 1000 inhabitants of Poland aged 15-65. The sample was representative for the general population, regarding: age, sex, education and the size of the city of origin. The survey was carried out with the use of the computer assisted web interview methodology by a specialised marketing research agency (ARC Rynek i Opinia, Warsaw, Poland) in its online panel (epanel.pl). A more detailed description of the research sample characteristics is available in previous articles stemming from this study (Bryła, 2015c, 2016).

3. Results

The awareness of origin and organic food product quality signs in the study sample is rather low (Table 1), which means that there is a considerable potential to raise the awareness in the Polish society. Our research study encompassed 10 major quality signs used in relation to origin and organic food in Poland. Additionally, the respondents could supply the catalogue of answers with their own suggestions.

The most recognisable signs in the Polish society are national: 'Know Good Food' and 'Quality. Tradition'. Almost 1/3 of the study subjects claim they know them well and further 2/5 declare a weak awareness. The third position was taken by the 'Pearl – the best Polish origin product' sign, followed by the EU logo of organic farming. In both cases, good awareness was reported by over 1/5 of the respondents. To a lesser extent, Polish consumers recognise the registration on the list of traditional products (managed by the Polish Ministry of Agriculture and Rural Development) and the 'Culinary Heritage' sign. Remarkably,

Table 1. The awareness of origin and organic food quality signs (%).

Quality sign	Rank	Good awareness	Weak awareness	No awareness
'Know Good Food' sign	1	32.3	39.7	28.0
'Quality. Tradition' certificate	2	29.4	40.2	30.4
'Pearl – the best Polish origin product' sign	3	20.9	42.2	36.9
The EU logo of organic farming	4	20.5	40.7	38.8
Being registered on the list of traditional products	5	18.5	43.4	38.1
'Culinary Heritage' sign	6	16.4	43.4	40.2
Protected designation of origin	7	16.3	41.1	42.4
Traditional speciality guaranteed	8	15.3	40.8	43.9
Protected geographical indication	9	12.5	37.6	49.9
'Integrated Production' sign	10	10.0	37.6	52.4
Other	11	0.8	0.3	98.9

the three most important EU signs for origin products (PDO, TSG and PGI) occupy a place near the end of the list ordered by recognition. Only the 'Integrated Production' sign ranks lower. Only 0.8% of the study subjects reported they knew well signs not listed in the catalogue of answers, and 0.3% indicated a weak awareness. Thus the list is almost complete. It should be noted that we provided not only the names of the signs in the survey, but also their graphical representations (logos). In some cases, consumers may better recognise the appearance of a sign than its name.

The respondents were asked to what an extent they are directed by quality signs while grocery shopping (Table 2). Three product categories were distinguished: 'ordinary' food, origin food and organic food, and a 5-degree scale of answers was proposed. A very high importance of quality signs was indicated by relatively small shares of respondents: 12% for organic and origin food and 11% for 'ordinary' food. On the other hand, quality signs are without any importance also for few study subjects – below 1/10 in all three categories. It is worth noting that the cumulated percentage share of 'very important' and 'rather important' answers is clearly the highest for origin products, even though the segment of buyers attaching very high importance to quality signs is slightly bigger for organic products. Quality signs constitute one of several attributes taken into account in the process of grocery product selection, and their role varies across consumers. From the marketing management perspective, our findings support the thesis that having quality signs is desirable for origin, organic, and conventional products, because the vast majority of consumers pay attention to them. Nevertheless, a strong emphasis on quality signs in marketing communications should be addressed to a selected group of buyers and adapted to their expectations in order to reach efficiently the market segment for which quality signs have a very high importance.

The surveyed consumers were requested to state their attitude toward selected opinions on quality signs for origin and organic food (Table 3). The highest share of evaluations definitely identifying oneself with a given opinion was observed for the opinion that quality signs lead to higher prices (over ¼ of answers). The second position was taken by the opinion that they distinguish the product from conventional food. 2/3 of the study subjects were definitely or fairly convinced that quality signs protect

product authenticity. Over 3/5 of respondents share the following opinions on origin and organic product quality signs: 'fully guarantee the region of origin of the product', 'reduce the likelihood of fraudulent copycat products', 'guarantee the product is produced in a traditional way', 'guarantee a constant product quality', 'facilitate buyers to identify products and benefits related to their consumption', 'preserve a higher product quality', and 'enable the care for one's health'. The respondents were the least positive about the impact of quality signs on the adoption of vertical and horizontal market channel integration strategies (naturally, the questions were formulated with the use of widely understood terms) and on the possibility for producers to shape prices. But even in these cases there were much more agreeing than denying answers. To sum up, the respondents underlined the role of quality signs especially in the field of positioning origin and organic products in the segment of premium prices, building competitive advantage on the basis of the differentiation strategy, and emphasising the authenticity of such product types. Our results confirm the thesis that quality signs constitute an important element in the process of building the image of origin and organic products, contributing to the marketing construction of quality.

Consumers who attach high importance to quality signs in grocery purchases tend to buy origin food more often than those for whom this characteristic is less important (Table 4). There is a strong statistical association between these variables ($\chi^2=72.1$; $df=4$; $P<0.00001$; $C=0.26$). A similar result was obtained in Western Europe almost two decades before, as reported in the study of Van Ittersum *et al.* (2000). Our findings also confirm the relationship between the frequency of organic food purchase and the role attributed to quality signs. This association has the significance level of $P<0.0001$, which shows its incontestable character ($\chi^2=86.2$; $df=4$; $P<0.0001$; $C=0.28$). Therefore, hypothesis 1 was confirmed both for origin and for organic food products.

The perception of European quality signs was operationalised as the arithmetic mean of evaluations in the 1-5 scale, where 1 means definitely yes, and 5 definitely not, for 22 favourable opinions (all mentioned in Table 3 except 'they lead to higher prices'). Thus the lower the value of this indicator, the more favourable the attitude to European quality signs. The attitude to the consumption

Table 2. The role of quality signs in the process of grocery shopping (%).

The role of quality signs	Very important	Rather important	Average	Rather not important	With no importance
Organic products	12.4	28.8	35.4	14.1	9.3
Origin products	12.2	33.9	34.2	11.8	7.9
'Ordinary' food	11.0	21.4	44.5	13.6	9.5

Table 3. Opinions on European quality signs for origin and organic products (%).

Opinion	Rank	Definitely yes	Rather yes	Don't know	Rather not	Definitely not
Lead to higher product prices	1	25.4	42.4	27.8	3.2	1.2
Differentiate the product from conventional food	2	24.4	43.7	27.2	3.5	1.2
Protect the authenticity of the product	3	22.5	44.7	27.0	4.6	1.2
Fully guarantee the region of origin of the product	4	21.2	40.4	31.6	5.5	1.3
Reduce the likelihood of fraudulent copycat products	5	20.9	40.7	29.8	7.0	1.6
Guarantee the product is produced in a traditional way	6	20.8	43.8	29.8	4.4	1.2
Guarantee a constant product quality	7-8	20.2	43.5	29.7	5.2	1.4
Facilitate buyers to identify products and benefits related to their consumption	7-8	20.2	43.1	30.8	4.3	1.6
Preserve a higher product quality	9	20.0	44.7	28.3	5.7	1.3
Enable the care for one's health	10	19.8	41.8	31.6	5.0	1.8
Preserve the exclusivity of the product	11	18.8	40.4	33.9	5.5	1.4
Increase the prestige of buyers in their environment	12	17.6	38.7	35.8	5.9	2.0
Protect the producers against competition	13	17.1	34.6	37.0	9.1	2.2
Facilitate advertising	14	16.9	40.6	35.0	6.0	1.5
Shorten the process of product information search	15	16.8	37.7	37.0	6.9	1.6
Lead to higher farmer incomes	16	16.1	38.5	35.2	8.4	1.8
Lead to more employment in the region of origin	17	15.1	36.0	39.4	7.6	1.9
Lead to higher loyalty of buyers	18	14.3	39.6	38.7	5.9	1.5
Reduce risk accompanying the purchase	19	14.1	41.7	35.4	6.7	2.1
Guarantee a handcrafted product	20	13.6	32.2	42.1	10.0	2.1
Lead to cooperation between the producer and retailer	21	13.2	36.1	42.3	6.9	1.5
Lead to cooperation among producers	22	12.4	31.1	47.2	7.4	1.9
Increase producer leeway in price setting	23	11.4	36.9	43.7	6.0	2.0

Table 4. The relationship between the frequency of origin and organic food purchase and the role of quality signs.¹

Role of quality signs	Very often	Rather often	Average frequency	Rather seldom	Never	Total
Origin food						
High	n	102	237	231	83	25
	%	15.0	35.0	34.1	12.2	2.7
Low	n	17	62	134	78	31
	%	5.3	19.2	41.6	24.2	9.6
Total		119	299	365	161	56
						1000
Organic food						
High	n	62	195	264	89	68
	%	9.1	28.8	38.9	13.1	10.0
Low	n	8	43	112	78	81
	%	2.5	13.3	34.8	24.2	25.2
Total		70	238	376	167	149
						1000

¹ In order to ensure the applicability of the χ^2 -test, answers: 'very high' and 'rather high' were merged into the 'high' category, and answers: 'average', 'rather low' and 'without importance' were merged into the 'low' category.

of origin and organic products was operationalised as the arithmetic mean of evaluations in the 1-5 scale, where 1 means definitely yes, and 5 definitely not, of 12 favourable opinions (they have a higher quality, are more authentic, taste better, are produced in a more traditional way, are healthier, arouse more trust, are more environmentally friendly, look better, are subject to more strict controls, their advertising is better, I recommend their purchase to my family/friends, I accept their higher price). Thus the lower the value of this indicator, the more favourable the attitude to origin or organic products.

There is a strong positive correlation between the perception of European quality signs referring to the area of origin or production method and the attitude toward the consumption of origin food ($r=0.566$; $P<0.05$). Thus, the relationship observed in the study of Van Ittersum *et al.* (2000) was replicated. We also found a strong positive correlation between the perception of European quality signs and the attitude toward organic food ($r=0.590$; $P<0.05$). Therefore, hypothesis 2 was confirmed both for origin and for organic food products.

The research results confirmed the expected relationship between the positive perception of European quality signs and the willingness to pay a higher price for origin food. Since the measurement scale of the perception attributes the lowest scores to the best evaluations, the correlation coefficient is negative ($r=-0.193$; $P<0.05$). Nevertheless, it is a weak association. It is congruent with the finding of Van Ittersum *et al.* (2000) that the quality sign contributes to higher value added of origin products, augmenting consumer preference for this type of products. An analogous result was obtained for organic food, though the relationship was slightly stronger than for origin products ($r=-0.250$; $P<0.05$). Therefore, hypothesis 3 was confirmed both for origin and for organic food products.

4. Discussion

Research studies on food product quality focus on the process of its provision in the market channel, on its perception by consumers and their expectations. For instance, consumers' knowledge, involvement and nationality appear to be good predictors of wine quality perception (Sáenz-Navajas *et al.*, 2014). Consumers' quality perception of bread is based on sensory, health and nutrition attributes (Gellynck *et al.*, 2009). Consumers may be divided into two main groups depending on their approach to defining the quality of a food product: those who mainly use criteria associated with organoleptic elements, and those who make their choice based on place and methods of production (Mascarello *et al.*, 2015). Another classification revolves around convenience behaviours and reflexive practices. The former are characteristic for pragmatic organic consumers, for whom the products need to be

clearly visible, preferably with an eco-label (Hjelmar, 2011). Intrinsic quality cues are assigned a role similar to that of quality certification (Krystallis *et al.*, 2007). In the Total Food Quality Model, horizontal and vertical dimensions are distinguished. The former concerns time, making the distinction between quality perception before and after the purchase, and the latter – drawing conclusions. The area of interest is the way of inferring quality from various cues and signals. Quality signs are a fuzzy category, as they may be understood in a variety of ways. Moreover, they can be awarded by various entities: producers, their organisations, distributors, governmental agencies and independent organisations, like consumer associations. Naturally, the criteria of awarding them vary considerably (Grunert, 2005).

In the process of accession to the European Union, Polish food-processing industry, especially the dairy and meat sectors, was confronted with the necessity to adjust to the transformation of its legal environment due to the introduction of the highly demanding EU quality standards in the sanitary, veterinary and ecological domains. There was a need to start the implementation of the HACCP quality management system (Bryła, 2012a). In a survey of Polish food-processing enterprises, the most important determinants of competitive advantage on the Polish market included taste, price, and quality assurance, whereas on foreign markets quality assurance was ranked highest, followed by taste and price (Bryła, 2012b). Emphasising high quality of its products and associating the brand with healthy diet contributed to the competitive advantage of a leading Polish yoghurt producer (Domański and Bryła, 2013b).

Protected Designation of Origin contributes to higher product value, as it possesses equity (in analogy to a brand). It is expressed in: (1) brand value – an asset in accounting terms; (2) brand strength – a measure of consumer attachment to a brand; and (3) brand perception – consumer attitude toward a brand. For a PDO, marketing rather than accounting aspects of brand equity are crucial. The strength of the sign is expressed in consumer willingness to pay a higher price (Fotopoulos and Krystallis, 2003). Ilbery and Kneafsey (2000) indicate that the registration policy of PDOs and PGIs supports marketing strategies based on four interrelated quality attributes. First, the use of a logo and certification ensures that the government and professional organisations set high standards, carry out audits, and monitor production processes. Second, the system ensures a specification of production methods, raw materials and ownership. Third, it assumes a link between the product and a territory, place or history, tradition and culture. Finally, fourth, it generates attractiveness by subconscious appeals to consumer desires regarding sensory characteristics or even premium pricing. According to Espejel and Fandos (2009), a PDO may be considered an extrinsic attribute of

wine quality, alongside prestige of the area of origin, sale in the best outlets, attractive brand name and elegance of the bottle and label. Galli *et al.* (2011) identified the following objectives of PDO and PGI labels: (1) an improvement of the bargaining strength of producers; (2) promoting differentiation of production; (3) providing consumers with reliable information on origin and other quality attributes of typical products; (4) an improvement of market outcomes; (5) promotion of local development.

A certain inflation of food product quality signs can be observed. A multiplication of official quality signs, labels, mentions, medals, etc., which are hardly known to consumers and mixed on product packages, leads rather to further confusion than constitutes an indication for buyers. Limited visibility and a proliferation of brand attributes, quality signs and certifying bodies generate a risk of consumer indifference to quality signs. The recognition of EU signs for origin and traditional products (PDO, PGI, and TSG) amounted to 36.3% in the Mazowieckie region of Poland (Tomaszewska *et al.*, 2014). The value of a quality sign diminishes if it is accompanied by another sign on the same product (Hassan and Monier-Dilhan, 2006). Furthermore, there is a growing incidence of situations in which quality signs suffer from usurpation of producers breaking the law. For instance, because of 1 out of 2,500 producers of Boeuf Charolais Terroir, the brand, and 'Label Rouge' quality sign were associated with products containing hormones (Trognon, 2005, p. 139). The proliferation of labels, weak connection between European and national systems of awarding them and a lack of recognition on foreign markets belong to the weaknesses of the current system of signalling quality (Aurier and Sirieix, 2004, pp. 50-51). Consumer confusion was considered the greatest problem for the system of European quality signs by Aragrande *et al.* (2005, pp. 72-74). According to Grunert and Achmann (2016), the role of EU quality labels in consumer decision-making is still relatively low. Similarly, sustainability labels (Fair Trade, Rainforest Alliance, Carbon Footprint, and Animal Welfare) currently do not play a major role in consumers' food choices (Grunert *et al.*, 2014). Samant and Seo (2016) demonstrated that the effects of sustainability-related label claims on quality perception became significantly more pronounced when consumers understood and trusted the label claims. Multisensory experience may alter consumer scepticism toward food labels and thus product evaluation and consumer choice (Fenko *et al.*, 2016). In the United States, there is a differential diffusion of policies in the realm of organic food policy certification across states (Mosier and Thilmany, 2016). The role of specific labels depends on the product category, e.g. for the majority of Flemish consumers the organic label seems to become superfluous when selecting a self-indulgent treat such as chocolate (Rousseau, 2015). The demand for reliable information as well as the low degree of awareness of many labels amongst

consumers appear in multiple studies on organic food consumption (Schleenbecker and Hamm, 2013).

Quality sign functions may be analysed from the perspective of various stakeholder groups: producers (higher competitiveness, image effects, strategic considerations), consumers (information, ethics, loyalty, trust), authorities (care for economic interests of consumers by reducing information asymmetry, sustainable development policy, implementation, trade policy instruments) and non-governmental organisations (stimulating public discussion, opposition against consumerism) (Boer, 2003). Brand trust is positively associated with consumer confidence in brand quality and safety, largely via trust in the food system. Furthermore, confidence in credence attributes leads to brand loyalty (Lassoued and Hobbs, 2015). The adoption of quality signs constitutes an opportunity to increase sales by differentiating one's offer, growing responsibility and extending the range of options for consumers. In reality, however, ethics may lead to an excess of general information accompanied by a shortage of independent, accessible and comprehensible information (Horne, 2009). According to Stanciani (2008), multiple quality signs which are justified by consumer interest protection aim to provide a group of producers with a rent stemming from their position and institutional framework. Sometimes the signs serve to ensure fair competition among producers.

The credibility of quality signs depends on the credibility of institutions that award them. In order to be credible, a quality sign should originate from an external body, not related to the manufacturer and reseller and not having an interest in the sales of a product with such a sign. Quality signs reduce information asymmetry between the buyer and the seller. Moussa and Touzani (2008) tested a scale to measure perceived credibility of quality labels among 602 consumers. It consists of 6 items assessed in 7-degree Likert scale. The impact of perceived credibility of quality signs on perceived quality and product purchase intention was examined as well. An experiment by Carpenter and Lerceneux (2008) proved that values-based labelling schemes, such as the PGI, act as effective market signs only when they are known to consumers. When their logic had been explained, perceived quality and purchase intention changed. In Spain, consumers valued labelling schemes that are regulated by EU law: the most preferred one was the PDO indication, closely followed by the nutritional fact panel and the EU organic logo (Gracia and De Magistris, 2016). Meanwhile, Belgian consumers prefer the national Belgian organic food logo, certified by a private organisation, to the newly-introduced EU organic food logo. At the same time, a vast majority of Belgian consumers would welcome the introduction of an EU level animal welfare label (Van Loo *et al.*, 2014). In a Swedish study, labels with specific country-of-origin information instead of a wider EU/non-EU designation were the most determining

attribute (Lagerkvist *et al.*, 2014). We should also take into consideration the so-called cultural authenticity, i.e. the ethnic congruency between product and producer (Casey *et al.*, 2014). Country image exerts a significant influence on practitioners' credibility assessments of food standards (Wongprawmas *et al.*, 2015). It is recommended to continuously strive to reduce the transaction costs of all actors in the organic certification process, implement a risk-based inspection system based on the collection of adequate farm data by certification bodies and harmonise the supervision of the certification system within the EU (Dabbert *et al.*, 2014). Labelling benefits virtue and vice products in distinct aspects – the organic virtue products have better expected taste while the organic vice products have higher expected nutrition. Moreover, retailers are a crucial factor that moderates the evaluation of organic products (Ellison *et al.*, 2016).

Moschini *et al.* (2008) presented an advanced economic interpretation of the role of quality signs referring to an area of origin (geographical indications, GI). They concluded that such labels adopt characteristics of club good and shared brands (see also Domański and Bryła, 2013a, pp. 36-43), support the competition mechanism in the provision of quality, and consumers are their main beneficiaries. Nevertheless, producers may also reap benefits because of them if the production of high quality goods is based on scarce resources in their possession. Due to the shortage of certainty on the quality of the purchased good, GI-type labels may help to overcome the problem of insufficient information. They are particularly useful when the production structure is dispersed, and individual farmers are unable to issue credible quality signals. Thus the market structure justifies the need of cooperation among producers. Quality signs promote a competitive supply of quality on the food market. The market equilibrium leads to an undersupply of high quality goods. This market imperfection may be corrected by the policy of subsidising certification of high-quality products (Moschini *et al.*, 2008). Bouamra-Mechemache and Chaaban (2010) presented an attempt to evaluate the economic effectiveness of the system of quality signs of the PDO type with the use of sophisticated algebraic methodology. The conclusions stemming from these analyses seem quite controversial. They argue that the society would gain by replacing the system of European quality signs with private, less rigorous and cheaper certification methods. According to a research study in Greece, the most important benefits of quality certification are market share growth and accessing new markets. The internal definition of quality in a given company should take into account expectations of its customers (Achilleas and Anastasios, 2008). O'Reilly and Haines (2004) underline the importance of cooperating in a network as a condition of effectiveness of marketing activities in relation to high quality food products. A research study among French producers using the

appellation d'origine contrôlée quality sign identified two fundamental mechanisms of network management: reputation management and institutional engagement. In the former case, the existence of common values is key, especially quality. A manufacturer of high quality products tends to be respected by other members of the network and can be very influential. The second mechanism concerns regulations (enforcing and encouraging), participation, and habit (Guibert, 2006).

The image of regional quality signs among consumers consists of two dimensions: 1) quality guarantee and 2) economic support, which influence purchase intention and willingness to pay for a protected origin product (Van Ittersum *et al.*, 2007). Three types of willingness to pay for products fitting the concept of sustainable development may be distinguished: altruistic, instrumental, and induced (Lankoski, 2010). French consumers are willing to pay 28% more for cheese of which they know the origin and are certain that its quality is controlled, as it has a quality sign referring to the area of origin. The consumers' willingness to pay a higher price entails benefits for all market channel participants and contributes to the implementation of the sustainable development concept in the rural areas. The higher price of such a cheese enables to pay producers higher prices for milk (30-90% more than the market average) (Richard, 2005, p. 183). The willingness to pay higher prices for local food products in the American state of Maine ranged from 17 to 72%. 80% of respondents from the north-eastern states confirmed their readiness to accept a price premium for local products. In Nebraska, 34% of respondents were willing to pay 10% more for local products compared to conventional food, but a price premium of 25% and more was acceptable to fewer than every fiftieth study subject. A price premium of 10% may turn out insufficient to support local producers effectively, all the more as an incentive to change the production system (Schneider and Francis, 2005). The willingness to pay among Greek consumers of Zagora apples was estimated with the use of two comparisons: (1) the acceptable price of Zagora apples with a PDO and the price of conventional apples; and (2) the price of Zagora apples with a PDO and the price of apples with a geographical indication, but without the European quality sign. In the former situation, the price premium amounted to as much as 41.1%, but in the latter, it was only 6.2% (Fotopoulos and Krystallis, 2003). Traditional food products can command a substantial premium, albeit contingent on effective quality certification, authentic product composition and effective choice of the retail outlet (Balogh *et al.*, 2016).

In relation to organic products and those that are produced with natural methods, the strategy of prestigious pricing may be used, which is characteristic for high quality products being a symbol of luxury. It applies to products positioned in the premium and super-premium segments

(Górska-Warsewicz *et al.*, 2013, p. 266). The willingness to pay a higher price for organic products is contingent on consumer attitudes to organic production, extrinsic quality attributes, comfort and health as well as on the level of trust in organic production, frequency of consumption of fruit and vegetables, and to a lesser degree on socio-economic factors. Married people exhibit a higher willingness to pay for organic products (Botanaki *et al.*, 2006). Gender, shopping venues, education, expenditure in the product category and knowledge of the labelled products affect purchase intention and willingness to pay for green- and eco-labelled seafood in China (Xu *et al.*, 2012). In 2006, the majority of clients of organic food shops in Poland declared their willingness to pay only up to 10% more for organic products compared to conventional food. 23.5% of the study subjects were willing to pay a higher price by 11-25%, and 6.3% accepted a higher price premium (Łuczka-Bakuła, 2007, p. 218). The price premium estimated by grocery shop managers in Poland was 11.7% for origin food and almost 20% for organic food (Bryła, 2014). A survey in a representative sample of 1000 Polish consumers showed that they are willing to pay 17.4% more on average for organic products than for their conventional counterparts ('ordinary food') (Bryła, 2016). Failure to account for retailer heterogeneity will over- or under-estimate a label's premium (Asche *et al.*, 2015). The willingness to pay may be estimated for a variety of governmental organic labels and farmers' association labels (Janssen and Hamm, 2014). For both local and organic labels, which are valued as partial substitutes, positive willingness to pay is conditional on distrusting the governmental food agencies (Costanigro *et al.*, 2014).

5. Conclusions

The construction of quality of food products, especially origin and organic products, may comprise such elements as: authenticity (related to both the area of origin of the raw materials and the specificity of the production process), ethics (e.g. environmentally-friendly production methods, the impact of shared brands appealing to the area of origin on the sustainable development of certain territories), biological aspects, sensory aspects, nutritional value, etc. A trend toward a growing importance of traceability may be discerned (see e.g. Menozzi *et al.*, 2015) Significant characteristics of quality are also: perfection of management processes (e.g. ISO standards), awarding quality signs (e.g. eco-labelling, signs granted to origin products by the European Commission) or other marketing instruments aiming to position one's offering (e.g. the premium pricing policy, packaging, advertising). These means enable to differentiate the offering in a way appreciated by consumers and in turn ensure market benefits, usually expressed by price premiums. Therefore, the differentiation of food products with the use of marketing signals that communicate quality attributes may contribute to the creation, or preservation, of competitive advantage

of producers, or rather of entire value chains (market channels), in particular thanks to vertical integration systems (cooperation with suppliers and distributors) and horizontal ones (producer organisations, shared brands, common marketing undertakings).

Although the awareness of origin and organic food product quality signs among Polish consumers is rather low, quality signs constitute one of attributes taken into account in the process of grocery product selection. The respondents underlined the role of quality signs especially in the field of positioning origin and organic products in the segment of premium prices, building competitive advantage on the basis of the differentiation strategy, and emphasising the authenticity of such product types. Our findings confirm the relationship between the frequency of origin and organic food purchase and the role attributed to quality signs. We also found a strong positive correlation between the perception of European quality signs and the attitude toward origin and organic food. Finally, we confirmed the expected relationship between the positive perception of European quality signs and the willingness to pay a higher price for origin and organic food.

Acknowledgements

Our research study was funded by the Polish Ministry of Science and Higher Education within a Iuventus Plus research grant no. IP 2011 004371 and the National Science Centre within an Opus research grant no. 2015/17/B/HS4/00253.

References

- Achilleas, K. and Anastasios, S., 2008. Marketing aspects of quality assurance systems. The organic food sector case. *British Food Journal* 110: 829-839.
- Aragrande, M., Segré, A., Gentile, E., Malorgio, G., Giraud Heraud, E., Robles, R., Halicka, E., Loi, A. and Bruni, M., 2005. Food supply chains dynamics and quality certification. European Commission, Brussels, Belgium, 115 pp.
- Asche, F., Larsen, T.A., Smith, M.D., Sogn-Grundvåg, G. and Young, J.A., 2015. Pricing of eco-labels with retailer heterogeneity. *Food Policy* 53: 82-93.
- Aurier, P. and Sirieix, L., 2004. *Le marketing des produits agroalimentaires*. Dunod, Paris, France, 362 pp.
- Balogh, P., Békési, D., Gorton, M., Popp, J. and Lengyel, P., 2016. Consumer willingness to pay for traditional food products. *Food Policy* 61: 176-184.
- Becut, A., 2011. Apples, quality signs and trademarks for local products. *International Review of Social Research* 1: 65-83.
- Botanaki, A., Polymeros, K., Tsakiridou, E. and Mattas, K., 2006. The role of food quality certification on consumers' food choices. *British Food Journal* 108: 77-90.

Bouamra-Mechemache, Z. and Chaaban, J., 2010. Protected designation of origin revisited. *Journal of Agricultural and Food Industrial Organization* 8: 5.

Bowen, S., 2010. Embedding local places in global spaces: geographical indications as a territorial development strategy. *Rural Sociology* 75: 209-243.

Brunori, G., 2007. Local food and alternative food networks: a communication perspective. *Anthropology of Food* S2. Available at: <http://tinyurl.com/ko75bqz>.

Bryła, P., 2012a. The characteristics of farmers applying for the EU investment support in Poland. *Agricultural Economics – Czech* 58: 21-33.

Bryła, P., 2012b. The impact of EU accession on the marketing strategies of Polish food companies. *British Food Journal* 114: 1196-1209.

Bryła, P., 2013. Marketing of ecological food products – results of a research study among Polish processors. *Rocznik Ochrona Środowiska* 15: 2899-2910.

Bryła, P., 2014. Rola oznaczeń regionalnych i ekologicznych produktów żywnościowych – w świetle opinii kierowników sklepów spożywcznych. In: Czubała, A., Hadrian, P. and Wiktor, J. (eds.) *Marketing w 25-leciu gospodarski rynkowej w Polsce*. PWE, Warsaw, Poland, pp. 281-304.

Bryła, P., 2015a. Marketing regionalnych i ekologicznych produktów żywnościowych. *Perspektywa sprzedawcy i konsumenta*. Lodz University Press, Lodz, Poland, 441 pp.

Bryła, P., 2015b. The development of organic food market as an element of sustainable development concept implementation. *Problemy Ekorozwoju* 10: 79-88.

Bryła, P., 2015c. The role of appeals to tradition in origin food marketing: a survey among Polish consumers. *Appetite* 91: 302-310.

Bryła, P., 2016. Organic food consumption in Poland: motives and barriers. *Appetite* 105: 737-746.

Carpenter, M. and Larceneux, F., 2008. Label equity and the effectiveness of values-based labels: an experiment with two French Protected Geographic Indication labels. *International Journal of Consumer Studies* 32: 499-507.

Casey, A., Slugoski, B. and Helmes, E., 2014. Cultural authenticity as a heuristic process: an investigation of the distraction hypothesis in a consumer evaluation paradigm. *Food Quality and Preference* 38: 75-82.

Cauvain, S.P., 2016. Editorial – Food safety and quality. *Quality Assurance and Safety of Crops and Foods* 8: 1.

Chryssochoidis, G., Krystallis, A. and Perreas, P., 2007. Ethnocentric beliefs and country-of-origin (COO) effect: impact of country, product and product attributes on Greek consumers' evaluation of food products. *European Journal of Marketing* 41: 1518-1544.

Combe, I. and Botschen, G., 2004. Strategy paradigms for the management of quality: dealing with complexity. *European Journal of Marketing* 38: 500-523.

Costanigro, M., Kroll, S., Thilmany, D. and Bunning, M., 2014. Is it love for local/organic or hate for conventional? Asymmetric effects of information and taste on label preferences in an experimental auction. *Food Quality and Preference* 31: 94-105.

Curzi, D. and Pacca, L., 2015. Price, quality and trade costs in the food sector. *Food Policy* 55: 147-158.

Dabbert, S., Lippert, C. and Zorn, A., 2014. Introduction to the special section on organic certification systems: policy issues and research topics. *Food Policy* 49: 425-428.

De Boer, J., 2003. Sustainability labelling schemes: the logic of their claims and their functions for stakeholders. *Business Strategy and the Environment* 12: 254-264.

Dobieński, K., 2013. Ewolucja podejścia do jakości żywności oraz podstawowe cechy systemów jakości produktów rolnych i środków spożywcznych w Unii Europejskiej. *Zeszyty Naukowe SGH w Warszawie. Problemy Rolnictwa Światowego* 13: 65-75.

Domański, T. and Bryła, P., 2013a. *Marketing produktów regionalnych na europejskim rynku żywności*. Lodz University Press, Lodz, Poland, 296 pp.

Domański, T. and Bryła, P., 2013b. The fragile strength of a leading Polish yoghurt company (case study of Bakoma). *British Food Journal* 114: 618-635.

Ellison, B., Duff, B.R.L., Wang, Z. and White, T.B., 2016. Putting the organic label in context: examining the interactions between the organic label, product type, and retail outlet. *Food Quality and Preference* 49: 140-150.

Espejel, J. and Fandos, C., 2009. Wine marketing strategies in Spain. A structural equation approach to consumer response to protected designations of origin (PDOs). *International Journal of Wine Business Research* 21: 267-288.

Espejel, J., Fandos, C. and Flavián, C., 2007. Spanish air-cured ham with Protected Designation of Origin (PDO): a study of intrinsic and extrinsic attributes influence on consumer satisfaction and loyalty. *Journal of International Food and Agribusiness Marketing* 19: 5-30.

Espejel, J., Fandos, C. and Flavián, C., 2009. The influence of consumer involvement on quality signals perception. An empirical investigation in the food sector. *British Food Journal* 111: 1212-1236.

European Commission (EC), 2009. Impact assessment report for a communication on agricultural product quality policy. EC, Brussels, Belgium, 74 pp.

Fenko, A., Kersten, L. and Bialkova, S., 2016. Overcoming consumer skepticism toward food labels: the role of multisensory experience. *Food Quality and Preference* 48A: 81-92.

Fernqvist, F. and Ekelund, L., 2014. Credence and the effect on consumer liking of food – a review. *Food Quality and Preference* 32C: 340-353.

Fotopoulos, C. and Krystallis, A., 2003. Quality labels as a marketing advantage. The case of the 'PDO Zagora' apples in the Greek market. *European Journal of Marketing* 37: 1350-1374.

Galli, F., Carbone, A., Caswell, J. and Sorrentino, A., 2011. A multi-criteria approach to assessing PDOs/PGIs: an Italian pilot study. *International Journal on Food System Dynamics* 2: 219-236.

Gay, S., 2007. Economics of food quality assurance and certification schemes managed within an integrated supply chain. European Commission, Brussels, Belgium.

Gellynck, X., Kühne, B., Van Bockstaele, F., Van de Walle, D. and Dewettinck, K., 2009. Consumer perception of bread quality. *Appetite* 53: 16-23.

Górská-Warsewicz, H., Świątkowska, M. and Krajewski, K., 2013. *Marketing żywności*. Oficyna Wolters Kluwer business, Warsaw, Poland, 566 pp.

Gracia, A. and De Magistris, T., 2016. Consumer preferences for food labeling: what ranks first? *Food Control* 61: 39-46.

Grunert, K.G. and 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.

Grunert, K.G., 2005. Food quality and safety: consumer perception and demand. *European Review of Agricultural Economics* 32: 369-391.

Grunert, K.G., Hieke, S. and Wills, J., 2014. Sustainability labels on food products: consumer motivation, understanding and use. *Food Policy* 44: 177-189.

Guibert, N., 2006. Network governance in marketing channels. An application to the French Rhône Valley AOC wines industry. *British Food Journal* 108: 256-272.

Hassan, D. and Monier-Dilhan, S., 2006. National brands and store brands: competition through public quality labels. *Agribusiness* 22: 21-30.

Hjelmar, U., 2011. Consumers' purchase of organic food products. A matter of convenience and reflexive practices. *Appetite* 56: 336-344.

Horne, R., 2009. Limits to labels: the role of eco-labels in the assessment of product sustainability and routes to sustainable consumption. *International Journal of Consumer Studies* 33: 175-182.

Ilbery, B. and Kneafsey, M., 2000. Producer constructions of quality in regional speciality food production: a case study from south West England. *Journal of Rural Studies* 16: 217-230.

Ilbery, B. and Maye, D., 2007. Marketing sustainable food production in Europe: case study evidence from two Dutch labeling schemes. *Tijdschrift voor Economische en Sociale Geografie* 98: 507-518.

Jahn, G., Schramm, M. and Spiller, A., 2005. The reliability of certification: quality labels as a consumer policy tool. *Journal of Consumer Policy* 28: 53-73.

Janssen, M. and Hamm, U., 2014. Governmental and private certification labels for organic food: consumer attitudes and preferences in Germany. *Food Policy* 49: 437-448.

Krystallis, A., Chryssochoidis, G. and Scholderer, J., 2007. Consumer-perceived quality in 'traditional' food chains: the case of the Greek meat supply chain. *Appetite* 48: 54-68.

Lagerkvist, C.J., Berthelsen, T., Sundström, K. and Johansson, H., 2014. Country of origin or EU/non-EU labelling of beef? Comparing structural reliability and validity of discrete choice experiments for measurement of consumer preferences for origin and extrinsic quality cues. *Food Quality and Preference* 34: 50-61.

Lankoski, L., 2010. Customer willingness to pay for sustainability in the food sector: an examination of three WTP types. Discussion Papers no. 46. University of Helsinki, Helsinki, Finland. Available at: www.helsinki.fi/taloustiede/Abs/DP46.pdf.

Lassoued, R. and Hobbs, J.E., 2015. Consumer confidence in credence attributes: the role of brand trust. *Food Policy* 52: 99-107.

Luczka-Bakuła, W., 2007. Rynek żywności ekologicznej. Wyznaczniki i uwarunkowania rozwoju. PWE, Warsaw, Poland, 244 pp.

Mascarello, G., Pinto, A., Parise, N., Crovato, S. and Ravarotto, L., 2015. The perception of food quality. Profiling Italian consumers. *Appetite* 89: 175-182.

Menozzi, D., Halawany-Darson, R., Mora, C. and Giraud, G., 2015. Motives towards traceable food choice: a comparison between French and Italian consumers. *Food Control* 49: 40-48.

Morris, C., 2000. Quality assurance schemes: a new way of delivering environmental benefits in food production? *Journal of Environmental Planning and Management* 43: 433-448.

Moschini, G., Menapace, L. and Pick, D., 2008. Geographical indications and the competitive provision of quality in agricultural markets. *American Journal of Agricultural Economics* 90: 794-812.

Mosier, S.L. and Thilmany, D., 2016. Diffusion of food policy in the U.S.: the case of organic certification. *Food Policy* 61: 80-91.

Moussa, S. and Touzani, M., 2008. The perceived credibility of quality labels: a scale validation with refinement. *International Journal of Consumer Studies* 32: 526-533.

O'Reilly, S. and Haines, M., 2004. Marketing quality food products – a comparison of two SME marketing networks. *Acta Agriculturae Scandinavica, Section C: Food Economics* 1: 137-150.

Parra-López, C., Hinojosa-Rodríguez, A., Sayadi, S. and Carmona-Torres, C., 2015. Protected designation of origin as a certified quality system in the Andalusian olive oil industry: adoption factors and management practices. *Food Control* 51: 321-332.

Richard, A., 2005. Rolnik a jakość żywności: znaki jakości, nazwy pochodzenia. In: Chylińska, A. (ed.) *Wyzwania Wspólnej Polityki Rolnej po rozszerzeniu Unii Europejskiej 1 maja 2004 roku*. Scholar Academic Press, Warsaw, Poland.

Rousseau, S., 2015. The role of organic and fair trade labels when choosing chocolate. *Food Quality and Preference* 44: 92-100.

Sáenz-Navajas, M.-P., Ballester, J., Peyron, D. and Valentin, D., 2014. Extrinsic attributes responsible for red wine quality perception: a cross-cultural study between France and Spain. *Food Quality and Preference* 35: 70-85.

Samant, S.S. and Seo, H.-S., 2016. Quality perception and acceptability of chicken breast meat labeled with sustainability claims vary as a function of consumers' label-understanding level. *Food Quality and Preference* 49: 151-160.

Scheffer, S. and Roncin, F., 2000. Qualification des produits et des terroirs dans la reconnaissance en AOC. *Economie Rurale* 258: 54-68.

Schleenbecker, R. and Hamm, U., 2013. Consumers' perception of organic product characteristics. A review. *Appetite* 71: 420-429.

Schneider, M. and Francis, C., 2005. Marketing locally produced foods: consumer and farmer opinions in Washington County, Nebraska. *Renewable Agriculture and Food Systems* 20: 252-260.

Stanciani, A., 2008. La définition de la qualité des produits dans une économie de marché. *L'Économie Politique* 37: 95-112.

Straete, E., 2008. Modes of qualities in development of speciality food. *British Food Journal* 110: 62-75.

Sylvander, B. and Allaire, G., 2008. Conceptual synthesis. SINER-GI WP3 Report, 69 pp.

Taylor, A.W., Coveney, J., Ward, P.R., Dal Grande, E., Mamerow, L., Henderson, J. and Meyer, S.B., 2012. The Australian food and trust survey: demographic indicators associated with food safety and quality concerns. *Food Control* 25: 476-483.

Thévenod-Mottet, E., 2006. Legal and institutional issues related to GIs. SINER-GI WP1 Report, 67 pp. AGRIDEA, Lindau, Switzerland. Available at: <http://tinyurl.com/kffv63l>.

Tomaszewska, M., Bilska, B., Grzesińska, W. and Szymańska-Radecka, M., 2014. Rozpoznawalność oznaczeń produktów tradycyjnych i regionalnych wśród konsumentów województwa mazowieckiego. *Marketing i Rynek* 6 (CD): 757-773.

Tonkin, E., Webb, T., Coveney, J., Meyer, S. and Wilson, A., 2016. Consumer trust in the Australian food system – the everyday erosive impact of food labelling. *Appetite* 103: 118-127.

Trognon, L., 2005. Contribution à l'étude des stratégies de la petite entreprise agro-alimentaire. Stratégie de distinction par la construction de la typicité. PhD thesis, Université de Montpellier I, Montpellier, France, 520 pp.

Van Ittersum, K., Candel, M. and Torelli, F., 2000. The market for PDO/PGI protected regional products: consumers' attitudes and behavior. In: Sylvander, B., Barjolle, D. and Arfini, F. (eds.) *The socio-economics of origin labeled products in agri-food supply chains: spatial, institutional and co-ordination aspects*, Vol. 1. INRA, Paris, France.

Van Ittersum, K., Meulenberg, M., Van Trijp, H. and Candel, M., 2007. Consumers' appreciation of regional certification labels: a pan-European study. *Journal of Agricultural Economics* 58: 1-23.

Van Loo, E.J., Caputo, V., Nayga, R.M. and Verbeke, W., 2014. Consumers' valuation of sustainability labels on meat. *Food Policy* 49: 137-150.

Wongprawmas, R., Padilla Bravo, C.A., Lazo, A., Canavari, M. and Spiller, A., 2015. Practitioners' perceptions of the credibility of food assurance schemes: exploring the effects of country of origin. *Quality Assurance and Safety of Crops and Foods* 7: 789-799.

Xu, P., Zeng, Y., Fong, Q., Lone, T. and Liu, Y., 2012. Chinese consumers' willingness to pay for green- and eco-labeled seafood. *Food Control* 28: 74-82.

Zeithaml, V., 1988. Consumer perceptions of price, quality and value: a means-end model and synthesis of evidence. *Journal of Marketing* 52: 2-22.

