Trademarks and Territorial Marketing: Retrospective and Prospective Analyses of the trademark Prodotti di Qualità

Santeramo, Fabio Gaetano and Manno, Roberto and Tappi, Marco and Lamonaca, Emilia

2022

Trademarks and Territorial Marketing: Retrospective and Prospective Analyses of the trademark *Prodotti di Qualità*

Fabio Gaetano Santeramo[a], Roberto Manno[b], Marco Tappi[a], Emilia Lamonaca[a]

[a] University of Foggia, Italy
[b] Web Legal, Italy

Citation: Santeramo, F.G., Manno, R., Tappi, M., & Lamonaca, E. (2022). Trademarks and Territorial Marketing: Retrospective and Prospective Analyses of the trademark Prodotti di Qualità. Economia Agro-alimentare/Food Economy [Accepted February 28, 2022]

Summary: Trademarks are useful territorial marketing policies contributing to the economic growth of a certain region. However, the complexity of these strategies from a marketing and legal perspective requires a deeper understanding of the functioning of trademarks. We investigate these dynamics for the trademark "Prodotti di Qualità" (PQ), a territorial marketing initiative of Apulia Region (Italy) aiming at enhancing agri-food products with regulated high-quality standards, raising awareness among consumers and promoting marketing and sales of such products. We adopt a multidisciplinary approach to conduct a prospective analysis of marketing issues and a perspective analysis on legal issues. We conclude that, in face of some benefits for users in terms of reduced asymmetric information between consumers and producers, a stronger communication and promotion campaign would increase consumers' awareness and producers' confidence, also contributing to avoid the overlap of the PQ trademarks with other legal forms of labelling, such as geographical indications and certification trademarks. Policy interventions in this direction would be beneficial for the future development of the Apulian territorial marketing.

Type: Article
Submitted: 02/11/2021
Accepted: 28/02/2022

JEL Codes: M38; Q13; R58; K11

Keywords: Brand, Geographical Indication, Intellectual Property, Public Policy, Quality Scheme, Region

Introduction

The ability of a region to distinguish its products and services from competitors is a relevant economic driver for that region (Simeon and Buonincontri 2011). Public policies of territorial marketing may contribute to the economic development of a region, by enhancing its image with respect to its competitors and attracting resources and investments (Zbuchea 2014). A fruitful initiative of territorial marketing is the regional promotion of high-quality agri-food products or services through regional trademarks, given the growing interest that consumers attach to the quality of products or services evoked by the origin and the traditionality of production methods and processes (Bryla 2015).

Trademarks are advertising and promotional tools helping firms to signal the quality of their products and services, distinguish them from competitors (Simonson 1994), protect their identity, and increase their competitiveness and revenues (Howard, Kerin, and Gengler 2000). Trademarks are intellectual property (IP) rights that include words, phrases, symbols, designs, colours, smell, sound, or combination thereof used to identify and distinguish one's products and services from those of others (Graham et al. 2013; Crass, Czarnitzki, and Toole 2019). The benefits of trademarks are for both consumers and owners or licensees. Consumers may identify specific quality attributes of products and services boasting a trademark reducing occasions of confusion and economising on their search costs (Moschini, Menapace, and Pick 2008). Owners or licensees of a trademark may obtain benefits in terms of reputation (Ramello 2006). Trademarks may be owned by individual or legal entities representing a group of operators (Charlier and Ngo 2012): this feature confers to trademark the nature of private goods[1] (Drivas and Iliopoulos 2016).

Issues related to the use of IP rights are highly debated among academics and policymakers. The IP rights may help in solving market failures associated with the asymmetric information existing between consumers and producers (e.g., Aprile, Caputo, and Nayga 2012; Menapace and Moschini 2012; Cei et al. 2018). However, some scholars discuss on the trademark genericide which occurs when the consumers use the brand name to describe a generic category (e.g., Taylor and Walsh 2002). Others focus on the trademark infringement due to confusion and genericness: visual, acoustic, and semantic affinity among trademarks, similarity of marketing channels, low degree of buyer care are just some of factors determining the trademark infringement which occurs if the owner of a senior mark is damaged when consumers choose a product with a junior mark confused with the senior mark (e.g., Simonson 1994; Howard 2000). One of the most important principles in the European Union (EU) trademark law relates to the "*risk of association*" in the mind of consumers, which takes place when the senior mark enjoys high reputation. The art 8(5) of the EU Trademark Regulation no. 2017/1001 clarifies

[1] The nature of private goods differentiates trademarks from geographical indications (GIs), an IP rights with the characteristics of a public good. Recognised in 1994 with the signing of the Trade-Related Intellectual Property Rights (TRIPS) agreement of the World Trade Organisation (WTO), GIs are indicative of the quality, reputation, and other characteristics of products attributable to their geographical origin (i.e., defined area, territory, or locality) or to specific production method (Moschini, Menapace, and Pick 2008; Menapace et al. 2011; Drivas and Iliopoulos, 2016). GIs provide to producers an opportunity to differentiate the genuineness of their products, leading a premium price (Deselnicu et al. 2013) and contributing to generate positive externalities on natural resources, cultural heritage, and socio-economic spillover at the territorial level (Arfini et al. 2019). GIs may also lead to an increase of farmers' income fostering rural development (Cei et al. 2018). Trademarks also differ from brands: the former identify a product; the latter identify a business strategy (Desai 2012).

that a trademark "*shall not be registered where it is identical with, or similar to, an earlier trade mark, irrespective of whether the goods or services for which it is applied are identical with, similar to or not similar to those for which the earlier trade mark is registered, where, in the case of an earlier EU trade mark, the trade mark has a reputation in the Union or, in the case of an earlier national trade mark, the trade mark has a reputation in the Member State concerned, and where the use without due cause of the trade mark applied for would take unfair advantage of, or be detrimental to, the distinctive character or the repute of the earlier trade mark*". The European Commission launched in November 2020 an important conference[2] aiming, *inter alia*, to address potential overlap between essential functions of trademarks and other IP rights, such as GIs. In this regard, the Court of Justice of the European Communities has condemned the use of national quality signs to indicate territory of origin, as an alternative to the GIs, considering it a protectionist policy contradicting the free movement of goods in the EU market (Charlier and Ngo 2012). Indeed, the EU has recently restricted the use of trademarks to guarantee the geographical origin of products or services (Song 2018). The introduction in the EU of the Certification Trademarks in 2017 has reserved to these trademarks the (essential) function of guarantee for specific characteristics of the products "*with the exception of their geographical origin*" (art. 83(1) Regulation no. 2017/1001).

The described context highlights the complexity of territorial marketing policies from marketing and legal perspectives. We investigate these dynamics, conducting a retrospective and prospective analysis on the trademark "*Prodotti di Qualità*" (PQ) owned by the Apulia Region (Italy) following with a multidisciplinary approach.

The reminder of the article is organised as follows. The next section provides examples of public policies of territorial marketing in Italy with a focus on Apulian initiatives and the PQ trademark. Section 2 deepens on marketing issues related to quality schemes in general, and to the PQ trademark in particular. We explored marketing issues from different perspectives with different methods: a survey has been conducted to obtain consumers' opinions on quality schemes (e.g., willingness to pay, frequency of purchasing); focus groups discussions have been conducted to detect factors affecting producers' decisions to adhere to quality schemes (e.g., costs and benefits, distribution channels); a Fuzzy Cognitive Map approach has been used for development scenarios and policy analysis related to quality schemes; evidence are provided for the PQ trademark. We adopted a desk analysis approach to deepen on legal issues related to the PQ trademark and its evolution overtime, discussed in Section 3. The last section concludes providing improvement proposals.

1. Public policies of territorial marketing

The impulse given by the Commission Communication (2010/C 341/04) [3], the Regulation (EU) no. 1152/2012, and the procedure under art. 16 of the Regulation (EU) no. 1305/2013 led to the proliferation of initiatives of territorial marketing with the introduction of Regional Quality Schemes. The main objective of Regional Quality Schemes is to enhance agri-food products with regulated high-quality standards, raise awareness among consumers of the high-quality levels of agri-food products, promote and support marketing and sales of such products. Several strategies are adopted by

[2] More details at ec.europa.eu.

[3] EU best practice guidelines for voluntary certification schemes for agricultural products and foodstuffs.

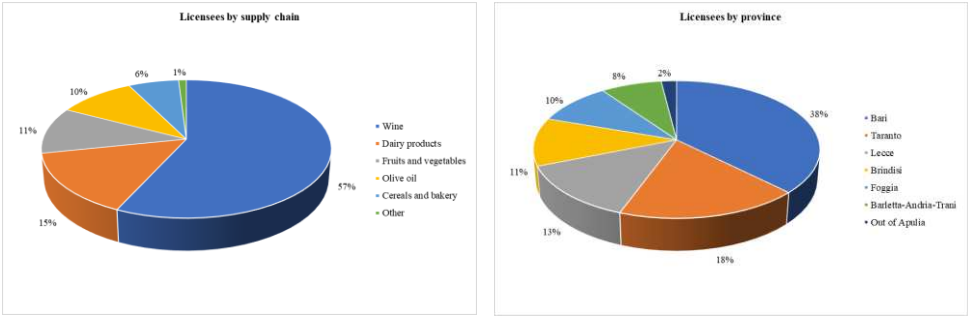
stakeholders to support Regional Quality Schemes. An example is Strenght2Food, an EU-funded project whose aim is to "*assesses the impacts, exchanges knowledge, and informs policy making on sustainable food chains*"[4], through the identification and implementation of strategies for upscaling, that are the creation of new markets for high-quality agri-food products and the expansion of the existing ones. Through the development of an 'economy of quality', these strategies contribute to support stakeholders and policymakers in enhancing the efficacy of public policies on quality schemes and to stimulate the development of new quality markets in regional agri-food supply chains through pilot initiatives and innovative actions. These efforts contribute to understand how public policies of territorial marketing (e.g., trademarks) may be further exploited to positively affect rural development: as emerged from the first Stength2Food forum, stakeholders agree on the primarily touristic and local identity importance of Regional Quality Schemes. From the producers' perspective, it is recommended to increase the innovation in the agri-food sector, improve the cooperation among stakeholders, implement innovative marketing strategies, explore consumers' preferences to develop effective and sustainable local agri-food supply chains. From the policymakers' perspective, it is recommended to facilitate multi-stakeholders' connections, promote public policies of territorial marketing for regional products, establish quality and safety standard control systems (Csillag et al., 2021). As for the establishment of quality and safety standard control systems, in Italy, Regional Quality Schemes are managed by CCPB, a limited company specialised in certification services (i.e., inspection, control, and certification activities related to quality-controlled products) and in quality assessment of agri-food products. The CCPB has been authorised by several Italian Regions to perform inspection and control activities related to their quality-controlled products. It supervises the *Quality Controlled* collective trademark of Emilia Romagna Region (Regional Law no. 28/99), the *Verified Quality* regional trademark of Veneto Region (Regional Law no. 12/2001), the *Guaranteed quality* regional trademark from Marche Region (Regional Law no. 23/2003), the *Patata Felix* collective trademark of Campania Region (Regional Council Deliberation no. 6291/2002). Other examples of territorial marketing initiatives in Italy include *Agriqualità*, a trademark registered by Tuscany Region (Regulation no. 47/2004) to identify and promote agri-food products obtained with integrated pest management techniques; *AQUA*, a collective and voluntary Quality Brand of Friuli Venezia Giulia Region (Regional Law no. 21/2002) managed by the regional Agency for the rural development (ERSA); *Guaranteed Safe Quality*, a trademark of Sicily Region (Regional Law no. 1/2005) enhancing agri-food products with a high-quality standard and promoting their diffusion according to specific production standards. In some cases, Regional Quality Schemes tend to set more stringent quality standards. For instance, the *Quality Controlled* collective trademark of Emilia Romagna Region establishes mandatory requirements for the production of mussels: i.e., limits are defined for total aerobic count (less than 5 x 10^5 CFU/g) and *Escherichia coli* (200 MPN/100 g), and requirements for the total absence of the algal toxin type Paralytic Shellfish Poison (Vernocchi et al., 2007).

A strategy of territorial marketing has been developed also in Apulia Region, ranked seventh in numbers and tenth in economic impacts (about 30 million EUR) of high-quality agri-food products in Italy (Qualivita 2018). The Region owns an EU collective trademark "*Prodotti di Qualità*" (i.e., Quality Products, hereinafter PQ trademark) whose aim is to improve the value of products with a high controlled quality standard, to inform

[4] More details at www.strength2food.eu.

consumers on the quality of products adhering to the Regional Quality Scheme identified by the PQ trademark, to promote the regional quality scheme. The PQ trademark has changed overtime to comply with changing regulations at the EU level[5]. Previously granted only to the EU producers for agri-food products under European (i.e., Protected Designation of Origin –PDO–, Protected Geographical Indication – PGI–) and Italian (i.e., Denomination of Controlled Origin –DCO–, Typical Geographical Indication – TGI–, Denomination of Controlled and Guaranteed Origin –DCGO–) quality schemes, now the Apulia Region licenses use the PQ trademark to the EU producers for the agri-food products (other than PDO and PGI) adhering to the Regional Quality Scheme "*Prodotti di Qualità*". Producers of labelled agri-food products were able to directly require the license of the PQ trademark, which use was conditional to the compatibility with the labelling rules of previous quality schemes[6]. Differently, non PDO or PGI producers may obtain the license for the PQ trademark if their agri-food products are characterised by high qualitative standards in terms of public health, animal welfare, environmental protection, specific characteristics of production process, or belong to the category of Traditional Agri-food Products (TAP)[7]. The user licence is conditional to obtaining the certification by third parties. The licensees are subject to control systems of inspection bodies recognised by the Apulia Region[8].
In 2018, licensees of the PQ trademark were 201, most of which wine producers (57%) and mainly located in Bari (38%) and Taranto (18%) provinces (figure 1).

Figure 1. Licensees of the PQ trademark.



Participating to Regional Quality Schemes may contribute to improve market access and increase market outlets for high-quality agri-food products. It also allows producers to obtain financial supports provided by the measure 3 of the Regional Development Programme (RDP) 2014-2020 to improve competitiveness of producers through the protection of quality schemes, and promotion of high-quality products in local, national, and international markets.
Other examples of public policies of territorial marketing are trademarks created by local authorities at different levels (e.g., Municipalities, Provinces, Mountain communities,

[5] See section 3.2 for more details.
[6] Control systems of inspection bodies designated and monitored by the Italian Ministry of Agriculture to the respect of European or Italian quality schemes were valid also for the PQ trademark.
[7] The TAP is a quality schemes already defined by the Apulia Region more limiting than other Regional Quality Schemes.
[8] Producers (i.e., individual farms producing, processing and marketing products, agri-food processing and marketing firms with supply chain agreements) may apply to obtain the user license of the PQ trademark through digitised systems, by requesting submission to one of the control bodies recognised by the Apulia region.

Park Authorities, etc.) to valorise local high-quality agri-food products. Among these, in Italy, the activity of Chambers of commerce (CCIAA) seems to stand out: "*Bergamo, città dei Mille… sapori*" of CCIAA Bergamo, "*Tradizione e sapori di Modena*" of CCIAA Modena, "*Denominazione di Cucina Ambrosiana*" of CCIAA Milano, "*I Prodotti della Campagna Romana*" of CCIAA Roma are only a few initiatives (Giacomini, 2007). Beyond the municipal or regional boundaries, some initiatives contribute to promote the quality of agri-food product, such as the "*Legambiente per l'Agricoltura Italiana di Qualità*" (LAIQ), a collective trademark for agri-food products under quality schemes set by the Italian environmental association *Legambiente*, "*Demeter*", an international trademark to safeguard biodynamic agri-food supply chain (Giacomini, 2007), "*Presidio Slow Food*", a trademark including agri-food products that meet environmental and social sustainability[9].

2. Retrospective analysis: marketing issues related to the PQ trademark

Consumers' perspective

An online survey allowed us to investigate consumers' opinion on the EU quality schemes[10] and the PQ trademark.

We collected data through a questionnaire consisting of six sections. The first section investigates the frequency of consumption of products with EU quality schemes. The quality schemes under investigation are PDO, PGI, Traditional Speciality Guaranteed (TSG), DCO, TGI, DCGO. The second and third sections analyse the spending habits of consumers. Respondents are asked to quantify, in percentage terms, the premium price they are willing to pay for products with quality schemes with respect to conventional products (i.e., products without quality schemes). Information on the frequency of purchasing in selected distribution channels and the expensiveness (i.e., premium price) of products bought in those channels. The distribution channels investigated are producers (e.g., olive oil mils, winemakers, cheese factories), retailers (e.g., minimarkets, greengrocers, butcher shops, fish shops, bakery), and large retailers (e.g., supermarkets, superstores). The expensiveness of products with quality schemes is measured using a 7-point Likert scale, where 1 is an extremely affordable and 7 is extremely expensive. The fourth section aims at understanding why consumers choose products with quality schemes. Respondents are asked to indicate on a 7-point agree/disagree Likert scale if products with quality schemes support local economies, ensure the origin of products, a quality higher than conventional products, a guarantee higher than products with industrial brands. The fifth section focuses on the PQ trademark and examines the level of knowledge of the trademark and the frequency of consumption of products adhering to the Regional Quality Scheme "*Prodotti di Qualità*". The last section allows for some socio-demographic information.

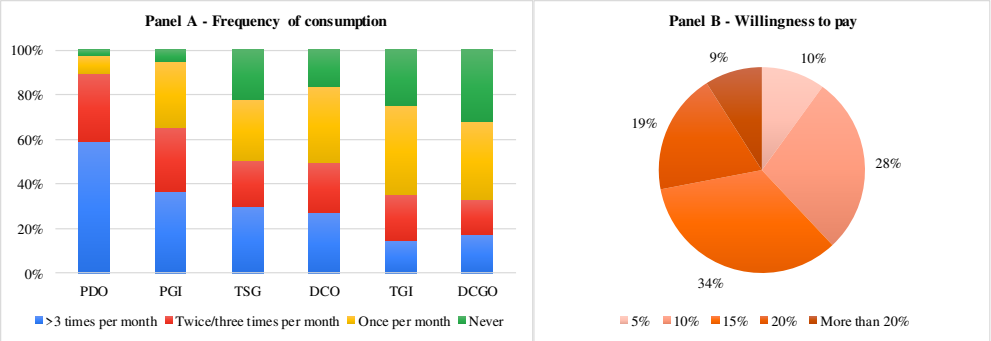
The questionnaire, preliminary tested among selected respondents, was available from July to December 2020 on Google Form and shared via social networks (e.g., Facebook, LinkedIn, Twitter) and e-mail lists (e.g., professional associations, producers' groups,

[9] It represents an opportunity for small farms to enhance and valorise their local products. Although "Slow Food" is not evocative of the territory, it protects and promote local and sustainable systems of ecology, agronomy, and gastronomy by building viable local markets (Chrzan, 2004).

[10] As clarified by the European Commission (2021), "*EU quality policy aims to protect the names of specific products to promote their unique characteristics, linked to their geographical origin as well as traditional know-how. Product names can be granted a 'geographical indication' (GI) if they have a specific link to the place where they are made.*". More details at: ec.europa.eu.

consumers' groups[11]). Adopting a snowball sampling recruitment allowed us to take advantage of interpersonal relations and connections among respondents (McCullough 1998). The final sample consists of 115 respondents. Our typical respondent is a mature woman (36 years old on average) with a Bachelor or Master's degree and an average yearly income ranging between 20,000 EUR and 45,000 EUR, living in the Apulia region. The results show that PDO products are the most consumed: 96% of respondents declare to consume PDO products at least twice or three times per month. Differently, the frequency of consumption of DCO, TGI, or DCGO products tend to be low: more than one-third of respondents consume them only once per month (figure 2, panel A). The result is not surprising considering that DCO, TGI, or DCGO products, such as wines, tend to be consumed (e.g., special occasions) with a frequency lower than mass-market products such as *Prosciutto di Parma* PDO, *Grana Padano* PDO, *Parmigiano Reggiano* DOP.

Figure 2. Frequency of consumption and willingness to pay for EU quality schemes.



Note: Acronyms are PDO (Protected Designation of Origin), PGI (Protected Geographical Indication), TSG (Traditional Speciality Guaranteed), DCO (Denomination of Controlled Origin), TGI (Typical Geographical Indication), DCGO (Denomination of Controlled and Guaranteed Origin).

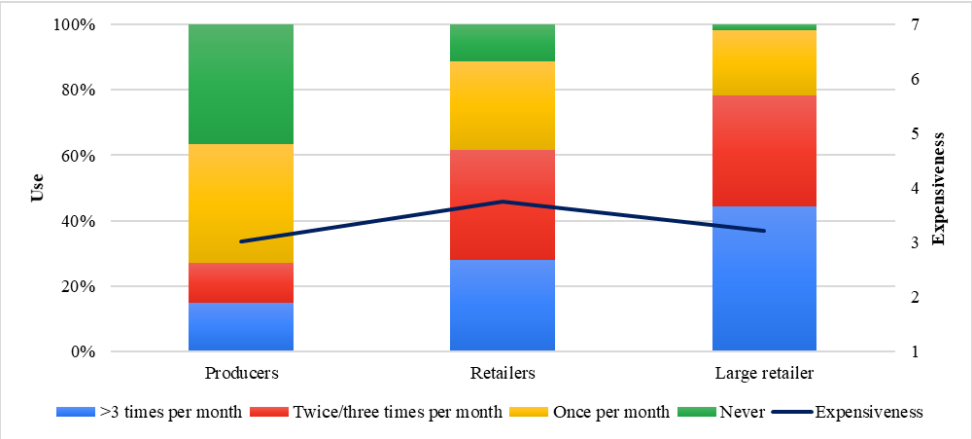
The EU quality schemes are a source of information for consumers and consumers tend to be willing to pay a premium for products with quality schemes (Mérel and Sexton 2012). A state-owned mark triggers a positive willingness to pay (Wongprawmas and Canavari, 2017). Our results show that more than two-third of respondents are willing to pay 10-15% more for products with quality schemes (figure 2, panel B). Findings are consistent with previous studies: a recent meta-analysis shows that consumers are willing to pay, on average, 11.5% more for products with trademarks (i.e., 13.6% for PDO products and 6.2% for PGI products) (Leufkens 2018). The results are also consistent with market trends: according to the ISMEA data[12], *Prosciutto di Parma* PDO has a price 17% higher than conventional ham, whereas TGI wine has a price 25% higher than conventional wine.

[11] Members of consumers association or professional associations may be more informed than the average consumer. This is a limit of a snowball sampling recruitment. However, we used consumers or professional associations only as 'distribution channels' of the questionnaire. Indeed, the associations shared the questionnaire with their personal (and not only professional) network: in this way we took advantage of interpersonal relations and connections among respondents (e.g., McCullough 1998).

[12] ISMEA is an Italian institute for agricultural and food marketing services.

The large retail is the distribution channel where consumers frequently buy products with quality schemes, whereas producers cover only niche segment markets. Two-third of consumers frequently buy products with quality schemes from retailers although, on average, prices are perceived as more expensive than prices applied to products with quality schemes by producers and large retailers (figure 3).

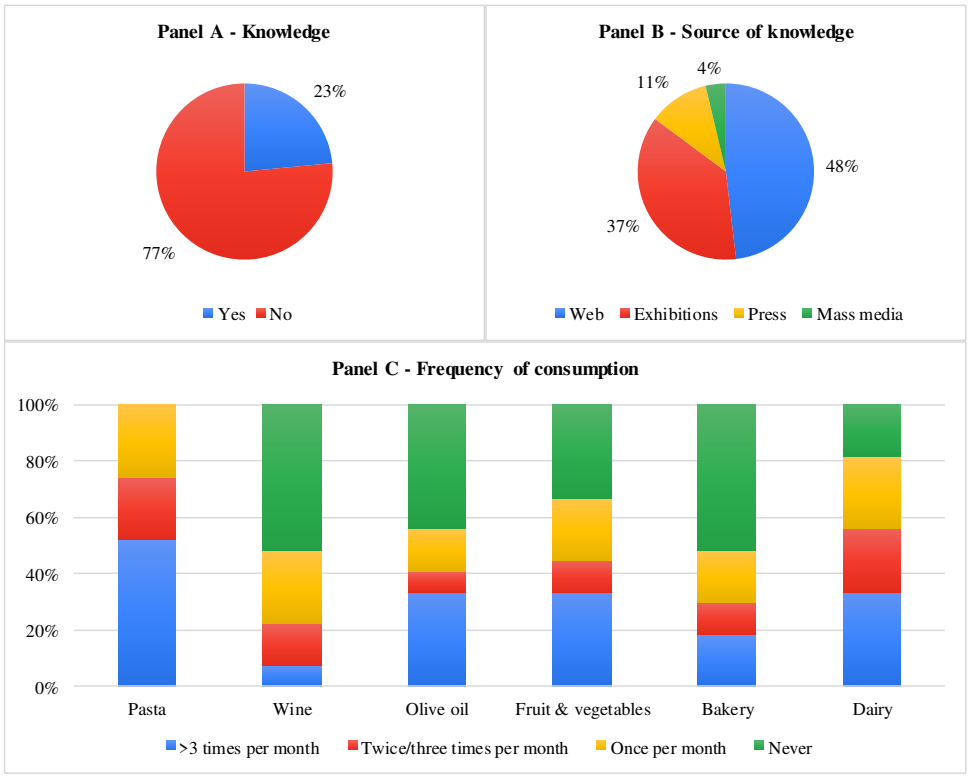
Figure 3. Use of distribution channels for products with EU quality schemes and average premium price.



Note: Expensiveness (i.e., premium price) ranges from extremely affordable (1) to extremely expensive (7) and refers to prices applied in each distribution channel.

The half of respondents declare to consume products with quality schemes because they are considered a support for local economies and a guarantee of the origin of products (in terms of safety and traceability) and of quality levels higher than conventional products or products with industrial brands. As suggested in van Ittersum et al. (2007), consumers tend to prefer and consume products with quality schemes because they provide guarantee on their quality and support the local economies. Quality schemes attract consumers (Resano, Sanjuán, and Albisu 2012) and affect their preferences for regional products (van der Lans et al. 2001; Santeramo et al. 2020). The benefits should be greater for products adhering to the Regional Quality Scheme, but the results show that the EU collective trademark of the Apulian Region is well-known only to a low percentage of respondents (23%) who find information on the PQ trademark mostly on the web or participating to exhibitions in Italy or abroad (figure 4, panels A and B). The most consumed products with the PQ trademark are pasta, olive oil, and dairy products (figure 4, panel C).

Figure 4. Knowledge and frequency of consumption of products with the collective EU trademark *Prodotti di Qualità*.



The large percentage of Apulian respondents in the sample opens a reflection on the limited knowledge of the PQ trademark and highlights the need to plan a vivid promotion and communication of the collective trademark of the Apulia Region. An effective promotion and communication activity would improve the value of products characterised by high and controlled quality standards, expand consumers knowledge and communicate them quality levels and characteristics of products with the PQ trademark, foster the marketing of products adhering to the Regional Quality Scheme (Santeramo and Lamonaca, 2020).

Producers' perspective

We carried out focus groups discussions to investigate technical and economic factors affecting the decision of agri-food producers to adhere to quality schemes.
Schemes under investigation were alternatively the EU quality schemes (e.g., PDO, PGI, TSG, DCO, TGI, DCGO) and the PQ trademark. The focus group discussions were opened to small and medium producers, representative of the Apulian producers and of the major agri-food supply chains. Participants were selected based on well-established criteria according to which producers tend to adopt quality schemes based on their size and supply chain (EU-DG JRC/IPTS 2006; Bouamra-Mechemache and Chaaban 2010). The sample of producers adopting European and Italian quality schemes is heterogeneous in terms of quality schemes (75% PDO, 25% PGI), supply chains (50% olive and olive oil, 17% horticultural products, 17% wine, 8% dairy produce, 8% cereal

and bakery products), whereas the sample of producers adopting the PQ trademark includes different supply chains (29% cereal and bakery products, 29% horticultural products, 29% wine, 13% olive and olive oil).
Following Morgan (1998), the research protocol is based on a set of semi-structured and open-ended questions from a literature review on the issue, included in six sections, synthesised in table 1. Questions are related to the type and magnitude of costs and benefits related to quality schemes, the type of distribution channels and related profit margins, the strategies adopted to communicate and promote quality schemes, the reasons related to the participation to Regional support for quality schemes, the adoption and use of the PQ trademark.

Table 1. Research protocol for focus group discussions.

Section	**Description**
Introduction	Warming up questions to introduce participants
Costs and benefits	Costs and benefits related to quality schemes
Distribution channels	Distribution channels and profit margins achievable for quality schemes
Communication and promotion	Communication and promotion strategies for quality schemes
Regional budget	Reasons to (not) adhere to Regional budget for quality schemes
Regional trademark	Adoption, use, procedures

From the focus group discussions, it emerges that the PQ trademark is beneficial for producers of agri-food products other than PDO and PGI adhering to the Regional Quality Scheme "*Prodotti di Qualità*", whereas it does not lead value added to producers adopting European and Italian quality schemes.
Licensees of the trademark that already adopt the PDO or PGI labels tend to not display the PQ trademark in their labels because of insufficient benefits. Licensees associate insufficient benefits with limited reputation and incisiveness of the PQ trademark both at the national and international level. Some technical issues concern the use of the PQ trademark: sometimes the use of the trademark is incompatible with the labelling rules of EU quality schemes. For instance, the product specification of a PDO olive oil bans the use of extolling wording, such as "quality", in labels.
Licensees of the trademark that do not adopt the PDO or PGI labels declare to obtain benefits due to the evocative capacity of the sound "Made in Puglia".
Overall, it emerges the need to improve communication and promotion of the PQ trademark, both at individual (single producers) and collective (institutions) level. Although communication and promotion activities of the trademark should be a basic entrepreneurial strategy, institutions should guide producers in the growth pathway of the trademark to achieve national and international exposure (Santeramo et al. 2021a, b).
It is worth noting the need to express agri-food excellences of Apulia region through a brand evocative of the Apulian heritage (e.g., Apulian farmhouses). According to producers' opinions, an Apulian brand would enhance the regional agri-food sector.
From the sample of producers adopting the PQ trademark, it emerges that the accession procedure to the trademark is simple, differently from the renewal procedure of the license. For producers of agri-food products other than PDO and PGI adhering to the Regional Quality Scheme "*Prodotti di Qualità*", main issues are related to the switch

from the previous license –*Prodotti di Qualità Puglia*– to the new one –*Prodotti di Qualità – Qualità garantita dalla Regione Puglia*–[13].
Preliminary and direct costs related to the Regional Quality Scheme are frequent, although negligible. More impacting, but less frequent, are indirect costs (e.g., promotional costs, costs related to other quality schemes). As a result of the Regional Quality Scheme, producers collect a variety of different benefits (e.g., higher sale prices, access to niche market segments), quantifiable in monetary terms in an increase of about one-tenth as compared to products without quality schemes. The direct sale and the large-scale distribution are the main driver of products under the Regional Quality Scheme; they serve as first outlet and ensure higher profit margins than the retail. Although the balance between costs and benefits of the quality scheme is positive, the overall impression is that much of the price premium for products under the quality scheme is eaten away by higher production and processing costs.
As for communication and promotion strategies, most producers have an active profile at least on one of the most popular social networks or manage a company website. Producers mainly attend in trade fairs and events both in Italy or abroad or promote their products through press advertising. The sponsorship and mass communication advertising are less adopted. This is in line with trends observed at the national level (Qualivita 2018). As argued in Canavari et al. (2010, p. 321), communication "*brought companies in front of an excellent opportunity to facilitate and improve their business processes or even to build completely new business models*".
The vast majority producers did not adhere to the financial support in favour of products under quality schemes, provided by the Apulia Region through the measures 3.1 and 3.2 of the Rural Development Programme (RDP) 2014-2020. The low rates of adherence are mainly related to the lack of knowledge and skill in selecting regional calls. Other issues are related to the limited efficiency of associations a mandatory requirement to adhere to the financial support provided by the measure 3.2.

Development scenarios and policy analyses

The Fuzzy Cognitive Map approach, first developed by Kosko (1986), allowed us to obtain information on interactions among technical and economic factors affecting the decision of agri-food producers to adopt regional trademarks. A Cognitive Map is a qualitative model based on stakeholders' knowledge that describes the functioning of a system and consists of variables and of causal relationships between them. According to Kosko (1986), knowledge is specification of classifications and causes that tend to be uncertain, random, fuzzy: this fuzziness passes into knowledge. The Fuzzy Cognitive Mapping approach allows to model complex systems involving many stakeholders, whose behaviours and actions potentially affect the systems, and to compare the perceptions of different stakeholders. This modelling method is thus able to incorporate stakeholders' opinions about a system, contributing to support management and policy decisions. We use the Fuzzy Cognitive Map approach to obtain the opinions of producers on the opportunity to enhance agri-food products with regulated high-quality standards. The aim is to determine what the most important goals are for the different producers (i.e., higher revenues or margins, development of existing markets, coverage of niche markets) and which (combination of) policies (e.g., Regional support measures, communication and promotion strategies) would increase the benefits of producers. This

[13] See section 3 for a description of changes in the version of the PQ trademark granted by the Apulia Region.

would enable agri-food producers to support and participate in the activities of the management and policy plan.
We applied the protocol detailed in Özesm and Özesmi (2004) to build and analyse a Fuzzy Cognitive Map. First, we identified the system boundaries and relevant variables starting from evidence retrieved by focus group discussions. Relevant variables pertain to a set of macro-themes: i.e., costs and benefits of trademarks, distribution channels used for trademarks, communication and promotion of trademarks, regional budget in support of trademarks, characteristics of the regional trademark. The table 2 lists the system variables and associates them to a univocal label used hereafter. The variables pertain to three categories according to their role within the system: i.e., policy objective, policy driver, context variable. The policy objectives are retrieved from the Regulations governing use of the PQ trademark[14]. Policy drivers include variables susceptible of being used as instruments to achieve the policy objectives. Context variables are factors having impacts on the functioning of the system.

Table 2. Description of system variables.

ID	Variable	Label	Category
1	Higher revenues or margins	REV	Policy objective
2	Development of existing markets	EXS	Policy objective
3	Coverage of niche markets	NIH	Policy objective
4	Direct costs (e.g., certification, inspection)	DIR	Policy driver
5	Indirect costs (e.g., structural adjustments, operational changes)	IND	Policy driver
6	Regional support measures for products under quality schemes	REG	Policy driver
7	Communication strategies (e.g., web, events)	COM	Policy driver
8	Promotion strategies (e.g., sponsor)	PRO	Policy driver
9	Access to distribution channels (e.g., large retailers)	CHA	Context variable
10	Producer groups and organisations	PGO	Context variable
11	Reputation of firms already using trademarks (e.g., private labels)	REP	Context variable
12	Products adopting other quality schemes (e.g., PDO, PGI, Organic)	PQS	Context variable
13	Recognisability of the brand "*Puglia*"	REC	Context variable

In a second phase, we identified the relationships among relevant variables as perceived by involved stakeholders (i.e., small and medium producers adopting the PQ trademark). The stakeholders were identified and recruited via email from the research institution in charge of the research. Each stakeholder was asked to recognise the relationships (i.e., positive, null, negative effects) among relevant variables identified in the first phase. Each stakeholder was endowed with a matrix allowing qualitative comparisons between variables (see figure A.1 in the Appendix). In other terms, for each couple of variables in the system (i.e., variable in row with respect to variable in column[15], for instance the

[14] Art. 1 indicates that the PQ trademark aims at enhancing agri-food products with regulated high-quality standards, raising awareness among consumers of high-quality levels of agri-food products, promoting and supporting marketing and sales of high-quality agri-food products.
[15] Higher revenues or margins (REV) with respect to each of the other variables listed in table 2; Development of existing markets (EXS) with respect to each of the other variables listed in table 2; and so on and so forth.

relationship between "Higher revenues or margins" –REV– and "Development of existing markets" –EXS– or the opposite relationship between EXS and REV), a stakeholder establishes whether, according to its knowledge, a variable (in row, say REV) affects the state of another variable (in columns, say EXS), and whether this effect is positive (e.g., the status of EXS augments the operation of REV), null (e.g., the status of EXS does not affect the operation of REV), negative (e.g., the status of EXS diminishes the operation of REV). The individual evaluations of the relationships among relevant variables were translated into numerical form (i.e., 1 for positive effect, 0 for null effect, -1 for negative effect) and then combined to obtain the social adjacency matrix: if the positive (negative) effect prevails the elements of the matrix are greater (lower) than zero, whereas null elements of the matrix may be associated either to a non-existing relationship between variables (i.e., all the stakeholders attributed 0 to a certain couple of variables) or to a mixed effect of a variable with respect to another one (e.g., half of stakeholders attributed -1 and the remaining attributed 1). The social adjacency matrix was then normalised (i.e., each element of the matrix has been divided by the total number of respondents) so to have elements ranging between -1 and 1 (Lopolito et al. 2020, p. 6). Each element of the normalised social adjacency matrix (figure 5) represents the weight of the relationships between variables based on the perception of the stakeholders. All but two elements (i.e., Products adopting other quality schemes – CHA and Recognisability of the brand "*Puglia*" – IND) of the matrix are non-negative. Different policy objectives are correlated: for instance, higher revenues or margins may be associated with the development of existing markets or with the coverage of niche markets, and vice-versa. Exception made for costs (both direct and indirect), policy drivers tend to have a positive effect on policy objectives (i.e., higher revenues or margins, development of existing markets, coverage of niche markets), with communication strategies exerting the greater influence. Policy objective in their turn positively affect policy drivers: for instance, the higher the revenues or margins are, the greater the adoption of communication and promotion strategies. Policy drivers are interconnected, particularly communication and promotion strategies. Also, context variables such as the access to distribution channels or the membership in producer groups and organisations play a role.

Figure 5. The normalised social adjacency matrix.

			Policy objective			Policy driver					Context variable				
		ID	1	2	3	4	5	6	7	8	9	10	11	12	13
	ID	Variables	REV	EXS	NIH	DIR	IND	REG	COM	PRO	CHA	PGO	REP	PQS	REC
Policy objective	1	Higher revenues or margins		0.11	0.19	0.07	0.07	0.11	0.19	0.22	0.19	0.07	0.11	0.11	0.19
	2	Development of existing markets	0.11		0.07	0.07	0.07	0.07	0.15	0.15	0.07	0.00	0.07	0.04	0.22
	3	Coverage of niche markets	0.11	0.11		0.04	0.00	0.04	0.11	0.04	0.11	0.04	0.07	0.04	0.11
Policy driver	4	Direct costs (e.g. certification, inspection)	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5	Indirect costs (e.g. structural adjustments, operational changes)	0.04	0.00	0.00	0.00		0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.04
	6	Regional support measures for products under quality schemes	0.15	0.19	0.07	0.07	0.07		0.26	0.19	0.11	0.15	0.04	0.07	0.22
	7	Communication strategies (e.g. web, events)	0.37	0.41	0.26	0.04	0.04	0.26		0.33	0.37	0.04	0.26	0.22	0.37
	8	Promotion strategies (e.g. sponsor)	0.11	0.11	0.07	0.07	0.00	0.11	0.11		0.07	0.00	0.15	0.04	0.15
Context variable	9	Access to distribution channels (e.g. large retailers)	0.26	0.26	0.22	0.00	0.11	0.22	0.26	0.26		0.07	0.15	0.19	0.26
	10	Producer groups and organisations	0.11	0.15	0.04	0.04	0.04	0.19	0.15	0.07	0.04		0.07	0.04	0.19
	11	Reputation of firms already using trademarks (e.g. private labels)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00
	12	Products adopting other quality schemes (e.g. PDO, PGI, Organic)	0.04	0.00	0.00	0.00	0.04	0.07	0.04	0.04	-0.04	0.00	0.04		0.04
	13	Recognisability of the brand *Puglia*	0.19	0.33	0.26	0.07	-0.07	0.30	0.37	0.33	0.15	0.19	0.15	0.30	

Notes: Acronyms are Higher revenues or margins (REV), Development of existing markets (EXS), Coverage of niche markets (NIH), Direct costs (DIR), Indirect costs (IND), Regional support measures for products under quality schemes (REG), Communication strategies (COM), Promotion strategies (PRO), Access to distribution channels (CHA), Producer groups and organisations (PGO), Reputation of firms already using trademarks (REP), Products adopting other quality schemes (PQS), Recognisability of the brand "*Puglia*" (REC).

The dynamics of the system have been analysed through the artificial neural network approach[16] (i.e., fuzzy inference) to inform on the importance of the variables of the system and on the potentiality of policy intervention. The modelling of policy interventions is based on two steps: i.e., a natural dynamic simulation and a policy intervention simulation. The artificial neural network calculations have been applied to the variables forming the system (see table 2) and the set of relationships connecting them (see figure 5). The steady state value of system variables, reported in table 3, reflects their importance within the system according to stakeholders' knowledge (without external influence such as policy intervention) and provides an idea of the evolution of the system in an autarchic context (i.e., first step: natural dynamic simulation). It emerges that all the variables have a positive effect: the most important is the development of existing markets and the recognisability of the brand "*Puglia*". Other potential favourable effects are the adoption of strategies for the communication and promotion of the quality scheme and the Regional support measures for products under quality schemes. The variables with a relatively low steady state are the direct and indirect costs associated with quality schemes and the producers' groups and organisations.

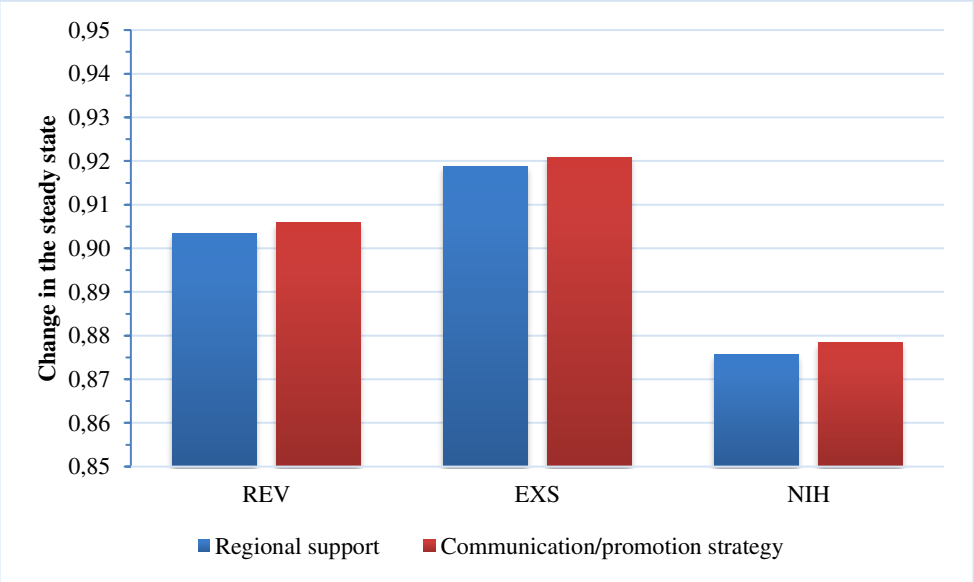
Table 3. The steady state of system variables.

Variable	**Label**	**Steady state**
Higher revenues or margins	REV	0.90
Development of existing markets	EXS	0.92
Coverage of niche markets	NIH	0.87
Direct costs (e.g., certification, inspection)	DIR	0.77
Indirect costs (e.g., structural adjustments, operational changes)	IND	0.74
Regional support measures for products under quality schemes	REG	0.89
Communication strategies (e.g., web, events)	COM	0.91
Promotion strategies (e.g., sponsor)	PRO	0.91
Access to distribution channels (e.g., large retailers)	CHA	0.87
Producer groups and organisations	PGO	0.78
Reputation of firms already using trademarks (e.g., private labels)	REP	0.87
Products adopting other quality schemes (e.g., PDO, PGI, Organic)	PQS	0.86
Recognisability of the brand "*Puglia*"	REC	0.92

To simulate how the system would evolve if subject to external influences, we analysed how two different type of policy interventions impact on the system (i.e., second step: policy intervention simulation). This second step requires the selection of variables that are likely to be used as policy drivers. We assumed as policy drivers a stronger effect of the Regional support for quality scheme in the first scenario, and the adoption of more effective communication and promotion strategies for products under quality schemes in the second scenario. The comparison between the steady state of variables measuring the policy objectives (i.e., higher revenues or margins, development of existing markets, coverage of niche markets) with and without the policy intervention gives a measure of the effect of a policy intervention. The simulated effects of the activation of different policy interventions are summarised in figure 6.

[16] The artificial neural network approach allows to represent the typical causative loops and feedbacks interconnecting the variables of a Fuzzy Cognitive Map by means of its back-forward logic. For a detailed description of the approach see Lopolito et al. (2020).

Figure 6. The effects of policy interventions.



Notes: Acronyms are Higher revenues or margins (REV), Development of existing markets (EXS), Coverage of niche markets (NIH).

The results reveal that both policy interventions would have a positive and increasing impact on the policy objective related to the PQ trademark (i.e., achievement of higher revenues or margins, development of existing markets, coverage of niche markets). A policy intervention aiming at enhancing the communication and promotion strategies for products under quality schemes would have greater benefits than a stronger Regional support in favour of quality schemes. The greater gain would be in terms of coverage of niche markets.

3. Prospective analysis: legal issues related to the PQ trademark

The use of the "*Puglia*" denomination, as a clear indication of origin[17], is likely to call into question the quite complex legal framework introduced in EU Trademark law regulating the interplay between individual, collective and certification trademarks, as well as the public rules governing GIs not only under the apical PDO and PGI (a *sui generis* type of Intellectual Property), but also under the EU/Regional Quality Schemes. Trademarks are constructed around their very "essential functions", which are distinguishing the goods/service provided by the proprietor or under its consent (i.e., individual trademark), allowing the goods/services fulfil the defined and reasonable set of characters as certified by a third party (i.e., certification trademark), ascertaining the goods/services are produced/provided by a member of a collective body according to the relevant disciplinary (i.e., collective trademarks). Traditionally, GIs are able to convey by themselves information and characters of the goods, playing a more informative function ("what you are") than identifying the goods from those of other competitors ("who you are"): it is therefore essential that the conditions for a GI to be part of an

[17] "*Puglia*" is also a registered GI for wines and olive oils.

individual, certification or collective trademark (especially in the case of "geographical" collective trademarks) must be clearly defined to avoid dilution and confusion. Incoherence with the specific "essential functions" of any particular type of trademark is sanctioned by the EU Trademark Regulation with specific grounds for revocation and cancellation.

The PQ trademark is an EU collective trademark, protecting agri-food products and services of licensees of the trademark –the only ones entitled to use it– and, according to art. 74 of the EU Trademark Regulation (EUTMR, Regulation (EU) 2017/1001), distinguishing them from products and services of licensees of other trademarks (i.e., essential function of trademarks, Simonson 1994). The distinctive feature of EU collective trademarks is the membership[18]: the PQ collective trademark is owned by the Apulia Region (art. 3(1) Regulations of Use – RoU) which may grant the use of the trademark to producers and providers of services in the agri-food sector that meet required standards[19]. The collective PQ trademark has been registered at the European Union Intellectual Property Office (EUIPO) n. 010953875 on November 15, 2012, in accordance with the Regulation (EC) no. 207/2009. It consists of a graphical element (i.e., a "*Q*", enclosed in rays of sunshine, containing a bud-like "*p*") and a wording (i.e., "*Prodotti di Qualità Puglia*") (figure 7, logo A). The refence to the graphical and verbal components of the trademark is important due to the general obligation that any trademark shall be used coherently with the elements resulting from the graphical representation displayed at the time of filing according to Articles 4, 31, 41, 49(2) of the EUTMR.

A first legal issue concerns the role of the wording "*Puglia*" (table 4). While it appears as an essential component of the PQ collective trademark (whose full title is "*Prodotti di Qualità Puglia*" according to the RoU), effectively it is a changing element. Indeed, the ® symbol applies only to the graphical element and to the wording "*Prodotti di Qualità*" but the art. 2(2) of the RoU states that the geographical indication should change according to the region of origin of each product or service boasting the PQ collective trademark[20]. For instance, if the Apulia Region grants the PQ trademark to two agri-food products, one originating in Apulia and the other in Tuscany, the PQ trademark should report the wording "*Prodotti di Qualità Puglia*" for the product originating in Apulia and the wording "*Prodotti di Qualità Toscana*" for the product originating in Tuscany. It is not clear, therefore, if the "*Puglia*" element –which is, of course, a clear indication of origin– is a component of the EU collective trademark PQ (as claimed) or if the claimed verbal components consist only in "*Prodotti di Qualità*". Nevertheless, it is important to verify whether "*Puglia*" is an essential part of the collective trademark (as claimed): indeed, according to EUTMR, an indication of origin

[18] The EUIPO Guidelines define the essential function of a collective trademark: i.e., distinguish the goods and services of the members of the association that owns the mark from those of other companies that do not belong to that association (20/09/2017, C-673/15 P & C-674/15 P & C-675/15 P & C-676/15 P, DARJEELING (fig.) / DARJEELING et al., EU:C:2017:702, § 63; 12/12/2019, C-143/19 P, EIN KREIS MIT ZWEI PFEILEN (fig.), EU:C:2019:1076, § 26, 57, 58). Therefore, the EU collective trademark indicates the commercial origin of certain goods and services by informing the consumer that the producer of the goods or the service provider belong to a certain association and have the right to use the mark (EUIPO Giudelines, Part B, Section 4, Chapter 15, Point 1.2).

[19] The fact that the EUTMR allows ownership of collective trademarks to "*legal persons governed by public law*" has been interpreted so far as referring to bodies governed by public bodies such as "*consejos reguladores*" or "*colegios profesionales*" under Spanish law, whereas in the case of the trademark PQ the owner of the collective trademark is the same public body itself.

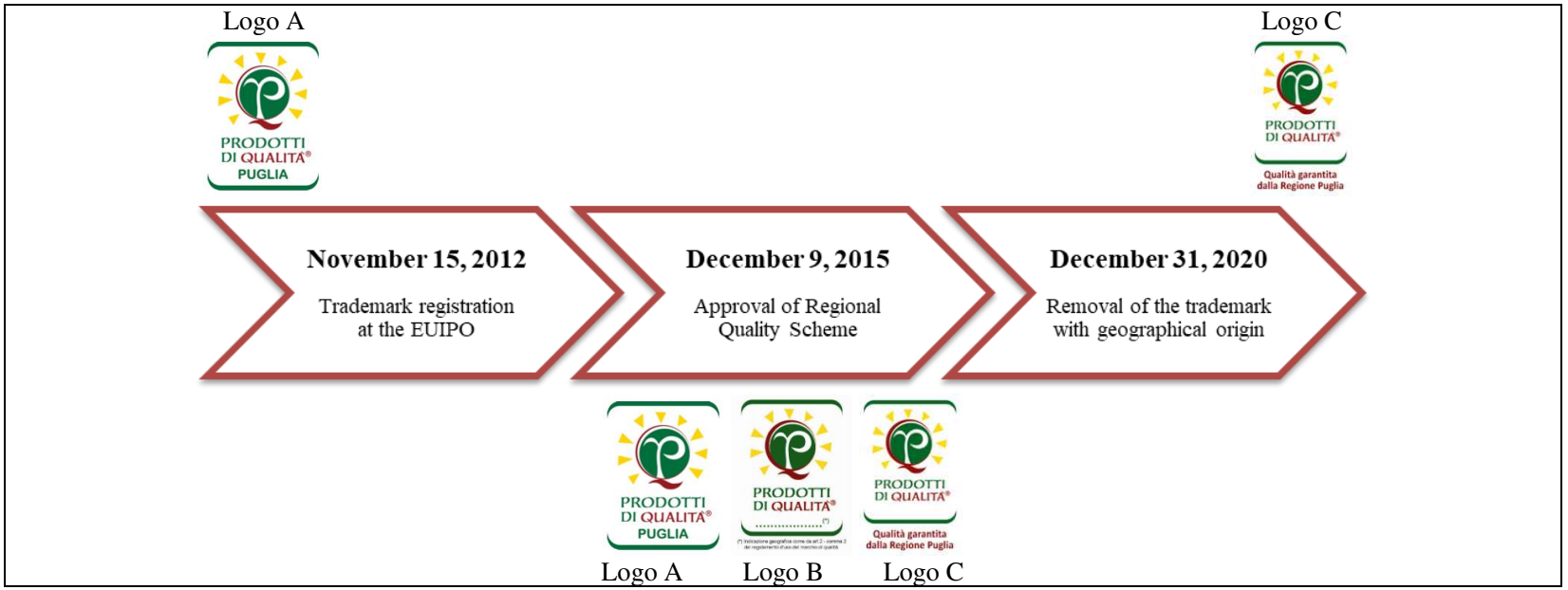
[20] Recall that agri-food products and services originating in any region of the EU may therefore obtain the PQ collective trademark.

(as certainly is "*Puglia*") may be part of a collective trademark. But to eliminate any risk of competition or dilution/misappropriation with the GIs, the article 74(2) EUTMR requires that the proprietor cannot "*prohibit[s] a third party from using in the course of trade such signs or indications, provided that he uses them in accordance with honest practices in industrial or commercial matters; in particular, such a mark shall not be invoked against a third party who is entitled to use a geographical name*". What constitutes "honest practices" is often problematic and may be open to controversy. This point emerged during several orders by the Italian Constitutional Court[21], which annulled regional quality trademarks due the risk, even merely potential or indirect, to influence the consumers' choice on the trademarked goods with restrictive effects on the free movement of goods[22].

[21] Court Orders n. 86/2012 of 12 April 2012; n. 191/2012 of 19 July 2012; n. 260/2014. The collective geographical trademark introduced by the Emilia Romagna Region has been accepted by the EU Commission on the basis that it was open to any producer in the EU insofar the goods respect the regional quality standards, so that the Trademark distinguishes the specific methods of production and not the geographical origin (Germanò, 2016, p. 222).

[22] See section 3.1 of Commission Communication — EU best practice guidelines for voluntary certification schemes for agricultural products and foodstuffs, n. 2010/C 341/04

Figure 7. The EU collective trademark *Prodotti di Qualità*.



Notes: EUIPO stands for the European Union Intellectual Property Office.

It is worth noting that the "logo A" version of the PQ collective trademark is granted only to PDO or PGI agri-food products. This may create potential misunderstanding in the use of the geographical origin (i.e., "*Puglia*") as it may overlap with the specific regime of GIs. Notwithstanding the coherent and legitimate use of the "*Puglia*" geographical indication according to art. 2(2) of the RuO and artt. 74(2) and 75(2) EUTMR, the risk exists that the public may attach the PQ collective trademark the function certifying the geographical origin of products/services to which the logo A is applied. This, however, is in contrast with the distintictive feature of the collective trademark (i.e., "*Puglia*" should refer to the owner of the PQ collective trademark that is the Apulia Region) and with art. 76(2) EUTRM which states that an EU collective trademark shall "*be refused if the public is liable to be misled as regards the character or the significance of the mark, in particular if it is likely to be taken to be something other than a collective mark"*. In other words, the wording "*Puglia*" together with the expression "*Prodotti di Qualità*" clearly suggest a "quality certification" function of the collective trademark for products originating in the Apulia region[23].

Table 4. Legal issues related to the PQ trademark.

Issue	Description	Status
1	Role of the wording "*Puglia*"	Resolved (removal of logos A and B)
2	Use of multiple PQ logos	Resolved (removal of logos A and B)
3	Effective and purported use of the PQ trademark	Resolved (removal of logos A and B)
4	Overlap between collective and certification trademarks	Partially resolved (logo C not officially registered at the EUIPO; no provisions for Regional Quality Scheme in Regulation governing use of PQ)
5	Overlap between EU quality scheme and Regional Quality Scheme	Potential (e.g., strategic behaviour of producers)

Notes: EUIPO stands for the European Union Intellectual Property Office.

Three years after the registration of the PQ collective trademark at the EUIPO, the Apulian Region approved the Regional Quality Scheme "*Prodotti di Qualità*" (Regional Determination n. 2210/2015[24]), referred to more than 180 agri-food products grouped in 9 agri-food chains[25]. The Regional Quality Scheme complies with the Regulation (EU) no. 1305/2013 (art. 16(1b)) notified to the European Community under the Directive 98/34/CE no. 2015/0045. Since December 9, 2015, the PQ collective trademark has been granted in a two-fold version: (i) the logos reporting the geographical origin of products to which the trademark refers (i.e., "*Puglia*" or any other region in the EU) automatically granted to PDO or PGI agri-food products (figure 7, logos A and B), and (ii) the logo

[23] New rules introduced in the EU trademark regulations with respect to "certification trademarks" discipline the signs performing the essential function of guaranteeing consumers about certain characters of the products, which are certified by the trademark proprietor. These characters may be material, mode of manufacture of goods or performance of services, quality, accuracy or other characteristics, with the exception of geographical origin, so to not overlap with PDO and PGI. Further exceptions and limitations relate to the "duty of neutrality" of the owners of the certification trademarks.
[24] More details at rqr.iamb.it.
[25] The 9 chains are cereals and bakery, nursery products, fishery, dairy, fruit and vegetables, processed fruit and vegetables, meat-based products, animal-based products, animal husbandry for meat.

with the wording "*Qualità garantita dalla Regione Puglia*" granted to other agri-food products than PDO and PGI under the Regional Quality Scheme (figure 7, logo C). The "blanket" element in the logo B has been introduced to comply with art. 2(2) of the RoU of PQ. In the logo C, the ® symbol applies to the graphical element and to the wording "*Prodotti di Qualità*", whereas the wording "*Puglia*" is no longer used as an indication of geographical origin but as a guarantee of the quality of agri-food products adhering to the Regional Quality Scheme.

With changes introduced in 2015, the first legal issue (i.e., the role of the wording "*Puglia*") remains and, *de facto*, is strengthened. The wording "*Puglia*" is not uniformly represented and holds different (and contrasting) roles: i.e., essential element in the logo A, changing element in the logo B, guarantee element in the logo C. It is indeed evident that the further wording "*Qualità garantita dalla Regione Puglia*" is indicating that the goods passed some quality certification made by the Apulia Region, and this is clearly a function reserved to certification trademarks, not to the collective (even geographical) trademarks. Rules governing certification trademarks introduced in the EU on October 1st, 2017, include the prohibition to certify the geographical origin of goods and services (a prohibition applying to sign, the regulations governing use and the list of goods and services). The slight differences between the logos are therefore able to invest their very essential functions so to cause confusion and dilution with the reserved functions of GIs[26].

Further concerns, related to the first legal issue, is the use of multiple PQ logos (second legal issue) and the effective and purported use of the PQ collective trademark (third legal issue) (table 4). The three logos used for the PQ collective trademark share many of their essential elements (i.e., the graphical elements "*Q*" and "*p*", and the wording "*Prodotti di Qualità*"), which is sufficient to establish potential confusion in the users[27]. The confusion arises from the mismatch between the aim of the PQ collective trademark that, according to art. 1 of the RoU of the trademark, is to enhance high-quality agri-food products and the misleading association of the wording "*Puglia*" with the geographical origin of agri-food products (logo A) rather than with the ownership of the trademark. This kind of confusion seems buffered by the introduction of the logo C, but it is worth noting that only the logo A is the official logo registered the the EUIPO[28].

The three logos are graphically similar, but formally and substantially different: their effective and purported use is an issue. While the logos A and B may be granted to any PDO or PGI products, the logo C may be granted only to non-PDO or PGI agri-food products and services complying with product specifications approved under the

[26] The origin of the term dilution dates back to 1926 when Frank Schechter first advocated the idea that trademark law protects against "*the gradual whittling away or dispersion of the identity*" (Schechter, 1926). In other words, the junior user, or second user of the trademark, lessens the value of the senior trademark, which subsequently constitutes an injustice and wrong against the senior user's good reputation and property. The possibility, rather than the actuality, of consumer confusion is held to be the relevant element in modem trademark decisions incorporating the dilution doctrine. MILLER & DAVIS.

[27] Consistent with the EUTMR, in case of reputation, the confusion may occur if "*a company uses the same or a similar sign as a trade name in such a way that a link is established between the company bearing the name and the goods or services coming from that company*".

[28] "*The likelihood of confusion is conceived as 'the risk that the public might believe that the goods or services in question come from the same undertaking or, as the case may be, from economically-linked undertaking*" Case C-39/97 Canon Kabushiki Kaisha v. Metro Goldwyn- Mayre Inc EC:C:1998:442, (29-30).

Regional Quality Scheme "*Prodotti di Qualità*"[29]. As a result, the "dilution" of geographical indication may occur among producers. Consider as an example the *Pane di Altamura*, a prestigious PDO granted to the Apulian bread produced in Altamura and responding to specific protocols as recognised by the EU Commission (Regulation (EC) no. 1291/2003). An Altamura bread producer not adhering or fulfilling the standards entitling the use of the *Pane di Altamura* PDO, may still have full title to use bread (commercial denomination) and Altamura (place of origin) information in the labelling of its products, with the exclusion of the official *Pane di Altamura* PDO. This phenomenon is not rare and many "famous" PDO may decide to speculate (or even cannibalise) the important market acknowledgment of their own denomination, increasing the quantity of the productions/sales to the detriment and dilution of the "quality uniformity" which made the historical success of the same PDO and which should be expected by customers (e.g., the drying process of the *Pasta di Gragnano* PDO –one of the most important and characterising phase of its production– may vary "*from 4 to 60 hours*"). Differently, it appears that the essential function of the logo C falls under the "certification" function as it deals with the fulfillemt of a particular characteristic (i.e., quality). If a producer is entitled to pass the Regional Quality Scheme (which are much broader than the PDO or PGI rules), this could amount to a sort of "intra-GI" competition, to the detriment of consumers and possible dilution of the efforts put by the virtuous PDO and PGI to safeguard their products' quality.

The certification function of the PQ collective trademark in the version granted for products adhering to the Regional Quality Scheme associates it with EU certification trademarks (table 4). The distinctive feature of EU certification trademarks are the neutrality commitment (i.e., the owner shall certify products and services of the licensees, but shall notit cannot be owned by a person carrying out a business involving the supply of the goods and services of the kind certified)[30] and the exclusion of grographical origin (i.e., the trademark shall not certify the grographical origin of products and services)[31]. While the the PQ trademark granted in the logo C version fullfills all the requirements of EU certification trademarks, it is defined as an EU collective trademark (although not officially registered in this version at the EUIPO). Thus, the fourth legal issue is related to the conflict with the artt. 76(2) and 85(2) EUTMR, according to wich EU collective and certification trademarks shall be refused if they are likely to be confused with something other than a collective and a certification mark, respectively (Song 2018). At the national level, collective trademarks performing the "essential functions" reserved by the law to the newly introduced certification trademarks needed to decide between collective or certification trademarks within December 31, 2020. The Apulia Region opted for the removal of the logos with the geographical indication and the remaining version of the PQ trademark (logo C) seems having the characteristics attributed to EU collective trademarks (figure 7). However, it seems that the PQ regime still lacks coherence and needs to find a balance between the

[29] Recall that, as explained below in the section, today the only version of the PQ collective trademark granted is the logo C.

[30] "*Any natural or legal person, including institutions, authorities and bodies governed by public law, may apply for EU certification marks provided that such person does not carry on a business involving the supply of goods or services of the kind certified*" (art. 82(3) EUTMR).

[31] "*An EU certification mark shall be an EU trade mark which is described as such when the mark is applied for and is capable of distinguishing goods or services which are certified by the proprietor of the mark in respect of material, mode of manufacture of goods or performance of services, quality, accuracy or other characteristics, with the exception of geographical origin, from goods and services which are not so certified*" (art. 82(1) EUTMR).

various aspects of its trademarks and establish a system which is not conflicting with itself. Currently the system performs functions such as certification function, representation of GI and the Quality scheme which is legally contradictory because of the issues discussed above.

The last concern is the potential overlap between the EU quality scheme (PDO or PGI) and the Regional Quality Scheme "*Prodotti di Qualità*" (table 4). After the last changes introduced in 2020, the PDO or PGI products are left outside any PQ labelling and continue to benefit only of the strong protection ensured by PDO or PGI labels, to avoid potential conflicts between the PQ trademark and both the EU collective and certification trademarks. However, if a certain product is eligible to obtain both the EU quality scheme and the Regional Quality Scheme "*Prodotti di Qualità*", producers not adhering to the EU quality scheme may still result compliant to the Regional Quality Schemes. In such cases, especially in the long run, the PQ trademark –which seems to focus prominently in the "*made in Puglia*" concept, with narrow quality prescriptions– may potentially erode and/or compete with the stronger, commercially acknowledged EU quality schemes.

To sum up, the first three legal issues (i.e., the role of the wording "*Puglia*", the use of multiple PQ logos, the effective and purported use of the PQ trademark) have been definitively resolved with changes introduced in 2020, resulting in the removal of logos A and B[32]. Since December 31, 2020, the PQ trademark is no longer associated with any PDO or PGI product, but only to agri-food products and services complying with product specifications approved under the Regional Quality Scheme "*Prodotti di Qualità*". Whether this change encompasses the requirements and conditions to ensure the coherence between the essential functions played by the sign and the relevant legal regimes (especially with regards to the specific conditions relating the certification trademark, its ownership and the "duty of neutrality") is questionable. Same doubts persists also with regards to the fourth legal issue (i.e., overlap between collective and certification trademarks): the remaining PQ trademark (logo C) still performs a mixed function of quality scheme and certification function carrying over the diluted reputation of the "*Puglia*" wording (either as a GI and as part of the trademark "*Prodotti di Qualita Puglia*"), which could lead to possible confusion on the mind of consumers. The occurrence of the fifth legal issue (i.e., Overlap between EU quality scheme and Regional Quality Scheme "*Prodotti di Qualità*") cannot be excluded in the next future, if potential benefits (e.g., higher margins, niche markets, recognisability of the "Made in Puglia") will induce producers to adopt strategic behaviours to obtain the PQ trademark rather than the PDO or PGI labels due to less bureaucracy.

[32] Legal issues raised around the use of the PQ trademark have directly affected the owner of the trademark (i.e., the Apulia Region). Other stakeholders, such as the producers (i.e., licensees of the PQ trademark), are only indirectly affected by legal issues: they have simply introduced changes proposed by the owners to cope with potential issues. For instance, a concern relates to the use of multiple PQ logos. The three logos used for the PQ trademark by different producers (i.e., producers under EU quality schemes, producers under the Regional quality scheme of the Apulia Region, producers under the Regional quality scheme of other Regions), sharing many of their essential elements, may induce potential confusion in the users (i.e., consumers). Anyway, neither producers nor consumers have sufficient information to be able to affect the evolution of legal issues. Indeed, the issues have been definitively resolved by the owner with changes introduced in 2020, resulting in the removal of two out of three logos for the PQ trademarks.

4. Conclusions and improvement proposals

The promotion of agri-food products through territorial marketing policies, such as trademarks, is a fruitful opportunity to improve the visibility and competitiveness of a region (Zbuchea 2014). However, the success of these policies depends on the efficacy of marketing communications and the compliance of these initiatives with regulations for the IP rights (Simonson 1994). We conducted retrospective and prospective analyses on the trademark "*Prodotti di Qualità*" (PQ) owned by the Apulia Region (Italy) to identify both marketing and legal issues related to the use of this label. The retrospective analysis on marketing issues related to quality schemes revealed that the PQ trademark offers several benefits to both consumers and producers reducing the asymmetric information between them. Enhancing the quality of agri-food products, the PQ trademark increases the awareness of consumers and their willing to pay a premium price for labelled products. This improves producers' revenues and margins and allows them to further develop existing markets and cover niche markets. However, the results highlight the need to strengthen strategies of communication and promotion of the PQ trademark: policy interventions in this area appear to be a potential solution. The prospective analysis on legal issues was related to the use of the PQ trademark and to its evolution overtime. The PQ trademark is evocative of the "Made in *Puglia*" concept, but as an EU collective trademark it does not indicate the geographical origin of labelled products and services, according to recent changes in the EU trademark regulation. As argued in Trestini and Stiletto (2020, p. 16), "*there is a real difference between the declaration of "made in" and the origin of agricultural products used to produce foods*". A potential legal issue is the overlap of the Regional Quality Scheme "*Prodotti di Qualità*" and the EU quality schemes with the geographical indication. Again, a stronger communication and promotion campaign implemented by regional policymakers would be beneficial.

The analysis highlights that quality is a relevant attribute for consumers in the choice of products and for producers as well in the negotiation of prices of their products. Accordingly, policymakers both at the international level (e.g., European Commission) and at the local level (e.g., Regions) should encourage the adoption of quality schemes in order to protect products with distinctive quality characteristics. Quality is associated to products with certain desirable attributes, such as place of origin and traditional know-how. A major challenge for policymakers is to inform consumers on the relevance of quality schemes and on what a quality scheme represents: i.e., the linkage between quality and a specific production area or method. A greater awareness of consumers is likely to translate into larger benefits for producers and rural communities, such as higher prices for quality products, preservation of traditional practices in the agri-food sector, creation of job opportunities throughout the supply chain. Quality is also associated to products without any defects and adulterations[33]. Safety and traceability issues figure among the objectives of Regional quality schemes and also of the PQ trademark. These objectives are indeed at the basis of any quality labels which are the expression of traditional systems consisting in setting quality standard conditions (e.g., ingredients, processing methods, origin), seals (e.g., collective/certification trademarks), and controls. In the EU, the Department of Central Inspectorate for the protection of quality and anti-fraud of agri-food products works daily to prevent and repress frauds in the trade of agri-food products, supervise registered quality productions, contrast the irregular marketing

[33] Details at: knowledge4policy.ec.europa.eu.

of agri-food products and the fraudulent phenomena[34]. Several practices have been developed to avoid fraudulent behaviours and strengthen the power of trademarks. For instance, agri-food identities may be defined at a molecular DNA basis[35]. It is important to consider the achievements made in terms of biodiversity and genetic classification[36]: an example in this direction is the "Born in Sicily" project[37] whose aim is to safeguard and promote genetic resources 'Born in Sicily' for the agri-food sector. A further method used to cover safety and traceability issues of agri-food products is the use of the blockchain technology[38] that has been successfully applied in a series of project in the Italian agri-food sector, such as the "Wine Blockchain" project[39] that builds trust and transparency between the producer and the final consumer, by controlling the wine production chain from the origin of grapes to the transformation into the bottle. Consistent with the EU "From Farm to Fork" strategy, the blockchain technology allows to trace the path of products throughout every stage of the supply chain. The use of a QR code to instantly check the correspondent information stored in the blockchain allows to satisfy the demand for traceability and to control for the compliance of products with protocols of quality and source of origin. Policymakers should take inspiration from these successful initiatives and encourage their adoption in different agri-food supply chains. Stronger actions against frauds and adulterations have a key role in enhancing trust of producers and consumers in quality schemes.

Acknowledgements

Omissis.

References

Aprile, M.C., Caputo, V., & Nayga Jr, Rodolfo M. (2012). Consumers' valuation of food quality labels: the case of the European geographic indication and organic farming

[34] Frauds are unfortunately common in the agri-food sector, and they are not limited to domestic market but often involve the international arena, where the counterfeit of agri-food production is quite sensitive. Fraudulent malpractices may create unfair competition and lead to market distortions (Ulberth 2020). In 2014, the infringement of quality schemes totalled approximately 4.3 billion EUR, corresponding to 9% of the total market for quality schemes (EUIPO 2016). If, in general, the falsification of agri-food products aims at achieving economic benefits and profit margins without affecting human health (Ulberth 2020), potential adverse effects cannot be excluded: a few examples are the cases of milk with melamine in China (Pei et al. 2011) and spirit with methanol in Czech Republic (Mika, Weissmannova-Dolezalova, and Fiserova 2014).

[35] Genotype and phenotype are a strong link between any living plant or material to a particular territory. Several methods based on chemometrics (e.g., elemental, microbial, and metabolomic fingerprinting, stable isotope ratio analyses, spectroscopies, separation techniques, mass spectrometry, DNA-PCR methods to identify species/varieties of agri-food products) have been proposed for food authentication and geographical origin determination (Danezis et al. 2016; Camin et al. 2017; Galvez, Mejuto, and Simal-Gandara 2018).

[36] Provided that this would be the scope of a Quality scheme in the agri-food sector.

[37] Details at: www.iusetnorma.it.

[38] Strongly required by consumers, the blockchain technology is an encrypted digital dataset where all transactions (e.g., records as farm origination details, production batch, factory and processing data, shipping details) are registered and shared by all participants (e.g., farmers, processors, distributors, grocers) without any manipulation risk, also ensuring end-to-end traceability across the agri-food chains and allowing consumers to know the story of agri-food products through their smartphones (Galvez, Mejuto, and Simal-Gandara 2018).

[39] Details at: www.ezlab.it.

labels. *International Journal of Consumer Studies*, 36(2), 158-165. doi: 10.1111/j.1470-6431.2011.01092.x.

Arfini, F., Cozzi, E., Mancini, M.C., Ferrer-Perez, H., & Gil, J.M. (2019). Are geographical indication products fostering public goods? Some evidence from Europe. *Sustainability*, 11(1), 272. doi: 10.3390/su11010272.

Bouamra-Mechemache, Z., & Chaaban, J. (2010). Determinants of adoption of protected designation of origin label: Evidence from the french brie cheese industry. *Journal of Agricultural Economics*, 61(2), 225-239. doi: 10.1111/j.1477-9552.2009.00234.x.

Bryła, P. (2015). The role of appeals to tradition in origin food marketing. A survey among Polish consumers. *Appetite*, 91, 302-310. doi: 10.1016/j.appet.2015.04.056.

Camin, F., Boner, M., Bontempo, L., Fauhl-Hassek, C., Kelly, S D., Riedl, J., & Rossmann, A. (2017). Stable isotope techniques for verifying the declared geographical origin of food in legal cases. *Trends in Food Science & Technology*, 61, 176-187. doi: 10.1016/j.tifs.2016.12.007.

Canavari, M., Fritz, M., Hofstede, G.J., Matopoulos, A., & Vlachopoulou, M. (2010). The role of trust in the transition from traditional to electronic B2B relationships in agri-food chains. *Computers and Electronics in Agriculture*, 70(2), 321-327. doi: 10.1016/j.compag.2009.08.014.

Cei, L., Stefani, G., Defrancesco, E., & Lombardi, G.V. (2018). Geographical indications: A first assessment of the impact on rural development in Italian NUTS3 regions. *Land Use Policy*, 75, 620-630. doi: 10.1016/j.landusepol.2018.01.023.

Charlier, C., & Ngo, M.A. (2012). Geographical indications outside the European Regulation on PGIs, and the rule of the free movement of goods: lessons from cases judged by the Court of Justice of the European Communities. *European Journal of Lw and Economics*, 34(1), 17-30. doi: 10.1007/s10657-012-9333-4.

Chrzan, J. (2004). Slow Food: What, Why, and to Where? *Food, Culture & Society*, 7(2), 117–132. doi: 10.2752/155280104786577798.

Crass, D., Czarnitzki, D., & Toole, A.A. (2019). The dynamic relationship between investments in brand equity and firm profitability: Evidence using trademark registrations. *International Journal of the Economics of Business*, 26(1), 157-176. doi: 10.1080/13571516.2019.1553292.

Csillag P., Stojanović Z.,Bojović R., Filipovic J., Quarrie S., Ristić B., Simmons R., & Torok A. (2021). Pilot actions on regional food labelling and producer coooperation. Strength2Food, Deliverable n. 9.5.

Danezis, G.P., Tsagkaris, A.S., Camin, F., Brusic, V., & Georgiou, C.A. (2016). Food authentication: Techniques, trends & emerging approaches. *TrAC Trends in Analytical Chemistry*, 85, 123-132. doi: 10.1016/j.trac.2016.02.026.

Desai, D.R. (2012). From trademarks to brands. *Fla. L. Rev.*, 64, 981.

Deselnicu, O.C., Costanigro, M., Souza-Monteiro, D.M., & McFadden, D.T. (2013). A meta-analysis of geographical indication food valuation studies: What drives the premium for origin-based labels? *Journal of Agricultural and Resource Economics*, 204-219.

Drivas, K., & Iliopoulos, C. (2017). An empirical investigation in the relationship between PDOs/PGIs and trademarks. *Journal of the Knowledge Economy*, 8(2), 585-595. doi: 10.1007/s13132-016-0386-4.

EU-DG JRC/IPTS (2006). Economics of food quality assurance and certification schemes managed within an integrated supply chain. Brussels: DG JRC/IPTS.

EUIPO (2016). Infringement of protected geographical indications for wine, spirits, agricultural products and foodstuffs in the European Union. Available at link: euipo.europa.eu (accessed May 10, 2021).

Gabel, T.G., & Scott, C.D. (2011). Toward a public policy and marketing understanding of lobbying and its role in the development of public policy in the United States. *Journal of Public Policy & Marketing*, 30(1), 89-95. doi: 10.1509/jppm.30.1.89.

Galvez, J.F., Mejuto, J.C., & Simal-Gandara, J. (2018). Future challenges on the use of blockchain for food traceability analysis. *TrAC Trends in Analytical Chemistry*, 107, 222-232. doi: 10.1016/j.trac.2018.08.011.

Germanò, A. (2016). Manuale di diritto agrario. G. Giappichelli.

Giacomini, C. (2007). Lo sviluppo dei marchi geografici collettivi e dei segni distintivi per tutelare e valorizzare i prodotti freschissimi (Vol. 554). FrancoAngeli.

Graham, S.J., Hancock, G., Marco, A.C., & Myers, A.F. (2013). The USPTO trademark case files dataset: Descriptions, lessons, and insights. *Journal of Economics & Management Strategy*, 22(4), 669-705. doi: 10.1111/jems.12035.

Howard, D.J., Kerin, R.A., & Gengler, C. (2000). The effects of brand name similarity on brand source confusion: Implications for trademark infringement. *Journal of Public Policy & Marketing*, 19(2), 250-264. doi: 10.1509/jppm.19.2.250.17131.

Ismea-Qualivita (2018). RAPPORTO 2018 ISMEA – QUALIVITA sulle produzioni agroalimentari e vitivinicole italiane DOP, IGP e STG.

Kosko, B. (1986). Fuzzy cognitive maps. *International Journal of Man-Machine Studies*, 24(1), 65-75. doi: 10.1016/S0020-7373(86)80040-2.

Leufkens, D. (2018). The problem of heterogeneity between protected geographical indications: a meta-analysis. *British Food Journal*, 120(12), 2843-2856. doi: 10.1108/BFJ-12-2017-0710.

Lopolito, A., Falcone, P.M., Morone, P., & Sica, E. (2020). A Combined method to model policy interventions for local communities based on people knowledge. *MethodsX*, 7, 100877. doi: 10.1016/j.mex.2020.100877.

McCullough, D. (1998). Web-based market research: The dawning of a new age. *Direct Marketing*, 61(8), 36-39.

Mérel, P., & Sexton, R.J. (2012). Will geographical indications supply excessive quality? *European Review of Agricultural Economics*, 39(4), 567-587. doi: 10.1093/erae/jbr056.

Menapace, L., & Moschini, G. (2012). Quality certification by geographical indications, trademarks and firm reputation. *European Review of Agricultural Economics*, 39(4), 539-566. doi: 10.1093/erae/jbr053.

Menapace, L., Colson, G., Grebitus, C., & Facendola, M. (2011). Consumers' preferences for geographical origin labels: evidence from the Canadian olive oil market. *European Review of Agricultural Economics*, 38(2), 193-212. doi: 10.1093/erae/jbq051.

Mika, O.J., Weissmannova-Dolezalova, H., & Fiserova, L. (2014). Mass methanol poisonings in the Czech Republic. *Toxin Reviews*, 33(3), 101-106. doi: 10.3109/15569543.2014.883408.

Morgan, D.L. (1998). *Focus Groups as Qualitative Research*. Beverly Hills: Sage Publications.

Moschini, G., Menapace, L., & Pick, D. (2008). Geographical indications and the competitive provision of quality in agricultural markets. *American Journal of Agricultural Economics*, 90(3), 794-812. doi: 10.1111/j.1467-8276.2008.01142.x.

Özesmi, U., & Özesmi, S.L. (2004). Ecological models based on people's knowledge: a multi-step fuzzy cognitive mapping approach. *Ecological modelling*, 176(1-2), 43-64. doi: 10.1016/j.ecolmodel.2003.10.027.

Pei, X., Tandon, A., Alldrick, A., Giorgi, L., Huang, W., & Yang, R. (2011). The China melamine milk scandal and its implications for food safety regulation. *Food Policy*, 36(3), 412-420. doi: 10.1016/j.foodpol.2011.03.008.

Ramello, G.B. (2006). What's in a sign? Trademark law and economic theory. *Journal of Economic Surveys*, 20(4), 547-565. doi: 10.1111/j.1467-6419.2006.00255.x.

Resano, H., Sanjuán, A.I., & Albisu, L.M. (2012). Consumers' response to the EU Quality policy allowing for heterogeneous preferences. *Food Policy*, 37(4), 355-365. doi: 10.1016/j.foodpol.2012.03.006.

Santeramo, F.G., & Lamonaca, E. (2020). Evaluation of geographical label in consumers' decision-making process: a systematic review and meta-analysis. *Food Research International*, 131, 108995. doi: 10.1016/j.foodres.2020.108995.

Santeramo, F.G., Lamonaca, E., Carlucci, D., De Devitiis, B., Seccia, A., Viscecchia, R., & Nardone, G. (2020). On the relevance of the Region-Of-Origin in consumers studies. *Bio-based and Applied Economics*, 9(2), 137-154. doi: 10.13128/bae-8337.

Santeramo, F.G., Lamonaca, E., De Devitiis, B., Viscecchia, R., & Nardone, G. (2021a). Assessing the role of regional labels for consumers. *Acta Horticolturae*, 1311, 201-207. doi: 10.17660/ActaHortic.2021.1311.25.

Santeramo, F.G., Lamonaca, E., Carlucci, D., De Devitiis, B., Seccia, A., Viscecchia, R., & Nardone, G. (2021b). Innovative quality-based strategies for the agri-food sector. *Acta Horticolturae*, 1311, 233-239. doi: 10.17660/ActaHortic.2021.1311.29.

Schechter, F.I. (1926). Rational Basis of Trademark Protection, *The Harvard Law Review*, *40*, 813.

Simeon, M.I., & Buonincontri, P. (2011). Cultural event as a territorial marketing tool: The case of the Ravello Festival on the Italian Amalfi Coast. *Journal of Hospitality Marketing & Management*, 20(3-4), 385-406. doi: 10.1080/19368623.2011.562425.

Simonson, I. (1994). Trademark infringement from the buyer perspective: Conceptual analysis and measurement implications. *Journal of Public Policy & Marketing*, 13(2), 181-199. doi: 10.1177/074391569401300201.

Song, X. (2018). The role played by the regime of collective and certification marks in the protection of geographical indications—Comparative study of law and practice in France, the EU and China. *The Journal of World Intellectual Property*, 21(5-6), 437-457. doi: 10.1111/jwip.12111.

Taylor, C.R., & Walsh, M.G. (2002). Legal strategies for protecting brands from genericide: Recent trends in evidence weighted in court cases. *Journal of Public Policy & Marketing*, 21(1), 160-167. doi: 10.1509/jppm.21.1.160.17609.

Trestini, S., & Stiletto, A. (2020). Does Italian origin really determine a price premium for fluid milk? Evidences from a hedonic price analysis. *Economia Agro-alimentare/Food Economy*, 22(1). doi: 10.3280/ecag1-2020oa10064.

Ulberth, F. (2020). Tools to combat food fraud–a gap analysis. *Food Chemistry*, 330, 127044. doi: 10.1016/j.foodchem.2020.127044.

van der Lans, I.A., van Ittersum, K., De Cicco, A., & Loseby, M. (2001). The role of the region of origin and EU certificates of origin in consumer evaluation of food products. *European Review of Agricultural Economics*, 28(4), 451-477. doi: 10.1093/erae/28.4.451.

van Ittersum, K., Meulenberg, M.T., van Trijp, H.C., & Candel, M.J. (2007). Consumers' appreciation of regional certification labels: a Pan - European study. *Journal of Agricultural Economics*, 58(1), 1-23. doi: 10.1111/j.1477-9552.2007.00080.x.

Vernocchi, P., Maffei, M., Lanciotti, R., Suzzi, G., & Gardini, F. (2007). Characterization of mediterranean mussels (Mytilus galloprovincialis) harvested in

Adriatic Sea (Italy). *Food Control*, 18(12), 1575-1583. doi: 10.1016/j.foodcont.2006.12.009.

Wongprawmas, R., & Canavari, M. (2017). Consumers' willingness-to-pay for food safety labels in an emerging market: The case of fresh produce in Thailand. *Food Policy*, 69, 25-34. doi: 10.1016/j.foodpol.2017.03.004.

Zhao, G., Liu, S., Lopez, C., Lu, H., Elgueta, S., Chen, H., & Boshkoska, B.M. (2019). Blockchain technology in agri-food value chain management: A synthesis of applications, challenges and future research directions. *Computers in Industry*, 109, 83-99. doi: 10.1016/j.compind.2019.04.002.

Zbuchea, A. (2014). Territorial marketing based on cultural heritage. *Management and Marketing*, 12(2).

Appendix

Figure A.1. Fuzzy Cognitive Map.

			Policy objective			Policy driver					Context variable				
		ID	1	2	3	4	5	6	7	8	9	10	11	12	13
	ID	Variables	REV	EXS	NIH	DIR	IND	REG	COM	PRO	CHA	PGO	REP	PQS	REC
Policy objective	1	Higher revenues or margins													
	2	Development of existing markets													
	3	Coverage of niche markets													
Policy driver	4	Direct costs (e.g. certification, inspection)													
	5	Indirect costs (e.g. structural adjustments, operational changes)													
	6	Regional support measures for products under quality schemes													
	7	Communication strategies (e.g. web, events)													
	8	Promotion strategies (e.g. sponsor)													
Context variable	9	Access to distribution channels (e.g. large retailers)													
	10	Producer groups and organisations													
	11	Reputation of firms already using trademarks (e.g. private labels)													
	12	Products adopting other quality schemes (e.g. PDO, PGI, Organic)													
	13	Recognisability of the brand *Puglia*													