The effects of the legal protection Geographical indications: PDO/PGIs in Tuscany

Belletti Giovanni, Brazzini Alessandro and Marescotti Andrea

Università di Firenze – Dipartimento di Scienze per l'economia e l'impresa

Abstract: Geographical Indications (GIs) are important tools adopted to underline that reputation, qualities and characteristics of a product are strictly linked to its geographical origin. The protection granted to GIs by the law may exert strong effects both on the firms and other stakeholders in the local production system, and also affects the environmental and social sphere of the specific geographic location. Moreover, the use made by firms of the protected GI is in some cases far away from its potentiality, and this clearly affects the effects GI protection can have on different dimensions. The GI level of use by firms depends on different factors, including the cost-benefit analysis, the general strategy pursued by firms, and the characteristics of the Product specifications.

So far, academic literature has not handled this topic in a systematic perspective. The aim of our work is to show the effects of the GI protection through the analysis of two case-studies related to PDO and PGI products in Tuscany, "Fagiolo di Sorana IGP" (Sorana Bean PGI) and "Pecorino Toscano DOP" (Tuscan Sheep-milk cheese PDO). In particular, the attention has been focused on the strategic decisions that lead farmers and processing firms to decide whether and how to use the protected GI for the production and marketing of their products, and on the effects of the GI protection on firms and local agri-food production systems.

The research methodology consisted in some semi-structured interviews to a number of Sorana Bean PGI producers and Tuscan Pecorino-cheese PDO dairies, representative of different firms' typologies. In addition, the representatives of both Consortia were interviewed.

First results show that firms, although not well documented and conscious about real costs and economic benefits, use of PDO-PGI to attain a wide spectrum of results that are often far away from the expected ones. Besides, the way Product Specifications (PSs) have been drawn greatly affects the effects generated by the protection. Much of the real use of PDO/PGI by firms relies on the coherence between firms' characteristics and strategies, and Product Specifications, while the different level of use of PDO/PGI by firms do not depend in the two cases by entry-barriers linked to costs needed to implement the Product Specifications.

Keywords: firms' strategy, Local production systems, Evaluation methods, PDO and PGI

Introduction

The protection of GIs is a tool of growing importance all over the world. Following the TRIPS agreement (1994), all WTO member States are obliged to provide for some regulatory scheme to allow interested parties to apply for a protection of Geographical Indications.

From an economic and social standpoint, interest is growing because of increasing international competition on the level of product quality differentiation, where quality means all attributes, including emotional ones, which help products to stand out and avoid competing purely on price.

As a consequence, many public and private stakeholders at both local and global levels have fostered this new turn to quality. GIs appear to be one of the more interesting and "locally manageable" tools for attaining this aim.

The protection of GIs is advocated to offer opportunities to support to local agrifood systems and to sustainable rural development (Belletti and Marescotti, 2011b; Frayssignes, 2005). Firms using protected GI are expected to observe a reduction of unfair competition due to abuses or misuses of the GI, and have the opportunity to differentiate their production on the market, thus gaining higher prices, higher sales volumes, and/or access to some marketing channels. Moreover, the protection of GIs is often linked to the production of public goods, such as biodiversity preservation, cultural heritage protection, sociocultural development and rural poverty reduction (Vandecandealere et al., 2010).

Notwithstanding this growing "enthusiasm" about GIs, to date there is still a lack of systematic research on the effects of GI protection on firms profitability, on local agri-food systems, and on environmental and social aspects. Although there is some academic research that has recently revised potential methods to evaluate GI protection effects (Réviron and Paus, 2006; Barjolle, Paus, and Perret, 2009) and proposed methodological tools to capture all the possible effects of the protection of a GI (Belletti and Marescotti, 2011.a), so far evidence on GI protection effects are mostly related to single aspects and/or single case-studies. Most important, the outcomes of this line of research often point out problems more than opportunities that GI protection seems to have brought (Mancini, 2013). For example, the most comprehensive study on the implementation of GI protection in EU (London Economics, 2008) showed how firms along the supply-chains of the products observed only an increase of firm's reputation rather than value added or prices, this also due to poor knowledge and understanding by consumers). Generally speaking, there is no direct evidence that the use of PDO/PGI can lead to higher added value to firms, as a recent study underlines (Areté, 2013), rather showing the presence of uneven and contradictory patterns.

Moreover, the use firms make of the protected GI is in some cases far away from its potentiality, and this clearly affects the effects GI protection can exert. The protected GI level of use by firms depends on different factors, including the cost-benefit analysis, the general strategy pursued by firms, and the characteristics of the Product Specifications, with particular reference to constraints established in the Product Specification, and degree of internal quality standardization achieved (Barjolle and Sylvander, 2002).

The aim of our work is to show the effects of the GI protection through the analysis of two case-studies related to PDO and PGI products in Tuscany. In particular, the attention has been focused on the strategic decisions that lead farmers and processing firms to decide whether and how to use the protected GI for producing and marketing their products.

The paper proceeds as follows. First, we provide a brief analysis of the main issues of Origin Products (OPs) and Geographical Indications products (GIs) with regards to the analysis of the GI protection. Second, we detail the objectives of the study and the methodological framework. Third, we put in evidence the most significant results for the two case-studies. The paper ends with some concluding remarks.

Origin Products and GI protection

OP production systems and GIs have many specific relevant features that should be carefully considered when the effects of the registration and use of a legally recognized GI by firms are analyzed.

First of all, OPs production systems are complex systems that are strictly interrelated to many typologies of local resources; therefore, they have a multidimensional and very strict link (*ceteris* *paribus*, stricter than other kind of products) with the territory they come from. Not all the actors belonging to the OP system take part to the GI system, and an improvement in the GI part of the GI system could affect (positively or negatively) the non-GI side of the OP system.

GI protection can affect many aspects of both the OP system and the single firms belonging to it, both in a marketing perspective (quantities sold, prices, added value, …) and in an "intra-system" perspective (modification of the production methods; coordination and governance mechanisms inside the local production system and the supply chain …) (Barjolle et al, 1998; Réviron and Chappuis, 2011; Arfini et al., 2011).

GI protection, by modifying the local production system and the behavior of involved firms, can exert many effects on other economic activities outside the local production system, and on local territorial capitals (social, economic, cultural, environmental …). Provided that GI protection schemes are but one of the many tools in the OP valorization processes, firms which are able to comply with the Product Specification (PS) choose whether to or not to use the protected GI when they find it profitable according to their global strategy, depending on the marketing channels and customers preferences and knowledge. Therefore, much of the "success", or put in other terms, much of the extent to which firms will use the protected GI to market their produce depends on the relationship between the contents of PS and firms' characteristics (economic dimension, market positioning, assortment, internal resources availability, etc.).

The PS is a set of requirements, which defines the characteristics of the protected GI product and its production process. Due to its structure, this document is a fully-fledged standard. Indeed, firms which want to use the protected GI have to comply with every norm established in the PS.

The PS is the result of a complex process of negotiation, which involves a great number of stakeholders, from the firms of the different stages of the supply chain to public authorities; therefore, it reflects different point of views and heterogeneous interests (Dentoni et al., 2013). Usually, the debate is based on the definition of the characteristics of three main elements: product, production process, and production area. This decision-making process influences the PS structure and its rules, as the effects on rural development trajectories (Tregear et al, 2007).

Stricter requirements guarantee high level of product reputation and recognizability among consumers, but small or poorly-equipped producers may be excluded, because unable to bear the implementation costs and comply with these rules (Galtier et al, 2013). Moreover, even big firms oriented to mass markets may find not interesting, or too much costly, to insert a so-specialized and different production line. Consequently, the total amount of production may not reach significant levels, relegating the protected GI product to niche markets and/or impeding appropriate collective action, which is identified by some studies as one of the key success factors of PDO/PGIs (Barjolle and Sylvander, 2002).

On the contrary, looser rules simplify the implementation process and increase firms' possibility to use the protected GI. This situation strengthens both the number of firms using the protected GI and total amount of certified product quantity, increasing the opportunity of reaching supermarket and international channels. At the same time, looser PS reduces product standardization and preserves variations of the OP (under the same protected GI many different kinds of product may co-exist), but menacing product identity and reputation and the confidence among buyers and final consumers.

Objectives and methodology

The main purpose of the study is to understand the effects generated by the legal protection by PDOs and PGIs in Tuscany on firms and local agro-food production systems, and to capture the strategic decision by firms on whether and how to use the protected GI according to their characteristics.

In order to accomplish the research objectives, we in-depth analyzed two specific PDO/PGI in Tuscany: “Fagiolo di Sorana IGP” (Sorana Bean PGI) and “Pecorino Toscano DOP” (Tuscan Pecorino-cheese PDO). In particular, we decided to select these two products because of their opposite characteristics. Sorana Bean PGI is produced in very small quantities by a few firms localized in a small area of Tuscany, even by non-professional farms. It benefits from a high reputation on the market and obtains high prices as compared to conventional beans, mostly using direct sales and traditional distribution channels. Tuscan Pecorino-cheese PDO is one of the most important GIs products in Tuscany. Production is spread all over Tuscany, and most of its production is marketed through mass distribution, and partly exported.

The research methodology consisted in a first step in an analysis of the “logic” followed during the GI recognition, by an exam of the contents of the PS (also compared to “conventional practices”) and other documents; in a second step some semi-structured interviews were conducted with a representative group of Sorana Bean PGI producers (8 out of the 23 registered farmers) and Tuscan Pecorino-cheese PDO dairies (12 out of the 22 registered cheesemakers), in addition to the directors of both Consortia. The aim of these interviews was to understand the motivations underpinning the choice of firms of using the PDO/PGI in marketing their products. The topics investigated during the interviews are the following:

1. Firm's characteristics (history, number and type of products, turnover, certification schemes, etc.);
2. Implementation of PDO/PGI standard (production level, distribution channels, geographical markets);
3. Identification of the main relevant differences between PDO/PGI product and a close substitute product;
4. Costs (implementation costs, raw material costs, production costs, certification costs, consortium costs, etc.);
5. Prices and incomes;
6. Other benefits related to PDO use.

Results

Sorana Bean PGI

The product and its production system

Sorana Bean PGI is a niche product cultivated in a small and marginal valley in Tuscany, characterized by low level of urbanization, industrialization and infrastructures, and for the presence of very small farmers often non-professional (that is retired, hobby or part-time farmers).The production is characterized by a very low quantity (less than 80 quintals in 2012) and an high sale price (22,00 euro/kg compared to 3-4 euro/kg for conventional beans). Sorana Bean PGI is sold mainly through direct marketing and Tuscany is the traditional market. To be noted that a small share of product is sold to famous restaurants and agri-food shops in the north of Italy.

Sorana Bean PGI is a particular local product, not comparable to any other bean variety. Through the last two centuries, the pedo-climatic features of this small valley have affected the Sorana bean quality characteristics, giving its distinctiveness: small, pearly white with pink veins and a very thin skin.

The stakeholders agreed on the request for a Product Specifications – obtained in 2004 - containing a strict definition of the geographical boundaries where the production may take place, the banning of the use of chemical herbicides and a relatively low maximum yield per hectare (20 quintals).

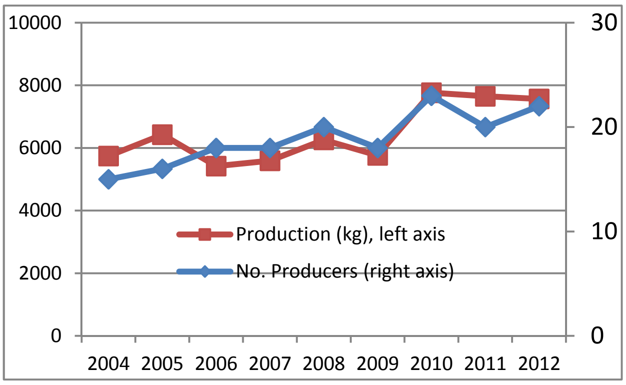
The production area allowed by the production rules is very small, and with paedological characteristics that impede the adoption of modern techniques. It covers around 660 hectares in this valley, from the banks of the Pescia di Pontito creek, called "Ghiareto", to the upper lands, called "Poggio". Moreover, the production rules describe the exact characteristics of the product and the specific harvesting methods.

These specific elements, guaranteed by the PGI scheme, give a strong identity to the product and, consequently, increase Sorana bean reputation and recognizability among consumers, thus justifying the high resale price on the market.

The number of producers has slightly grown over the year, but it still remains very small: from 15 producers of 2004 (first year of implementation), the PGI is used by 22 farmers in 2012 (fig.1). The production too has grown, from 57 q. of certified beans in 2004 up to 76 q. in 2012, following the growth of surfaces (4,78 ha in 2004, to 5,22 ha in 2012).

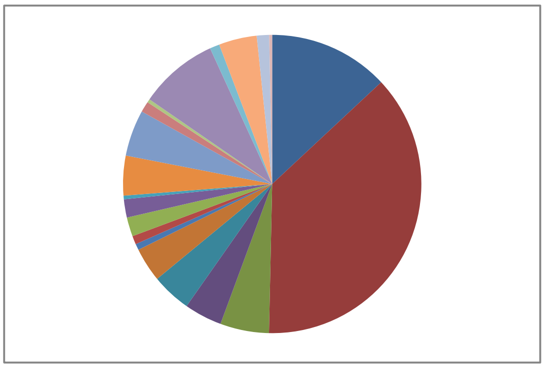
Farmers produce on average 378 kg of dry bean (that means approximately an average turnover of 8.000 euro, value at final consumption), ranging from a maximum of 2.822 kg to a minimum of 25 kg (2012), signaling a high heterogeneity of producers (fig.2). Indeed, the production system is composed by a few big (relatively speaking) professional farms, where the production of Sorana Bean PGI accounts for a high percentage of total farmer's income, flanked by many small farmers, often non professional, who keep on producing the bean for income integration or just for the pleasure to have this special production.

Figure 1: Sorana Bean PGI - evolution of the number of producers and production



Source: Authors' elaboration on official data by ICEA

Figure 2: Sorana Bean PGI –share of each farmer's production 2012



Source: Authors' elaboration on official data by ICEA

The production area, although small, is further divided into two sub-areas: the Ghiareto (a small area along the creek down in the valley) and the Poggio area (all the other area). Indeed, the Product Specifications allow farmers located in the Ghiareto area, more reputed on the market due to special paedo-climatic characteristics that seem to give the bean a particular texture and flavor, to add a special mention on the label, and gain a higher price than average. Professional farmers are mostly located in the Poggio area, potentially getting higher yields than the Ghiareto area, even more than the maximum yield as stated in the Product Specifications (20 quintals/ha).

Strategic use of the PGI

First results of the research show a high interest to produce Sorana Bean PGI, essentially due to the fact that market price is really high compared to conventional beans, while additional production costs (included inspection and certification costs) are small. It is worth mentioning that the morphological characteristics of the production area (in particular the cultivation carried out on the torrent banks) and the limited extension of available fields, coupled to the fact that most farmers are pensioners, hobby, or part-time farmers, do not allowed the use of less expensive production methods. Therefore, producing a different bean variety with “free” cultivation practices costs as much as producing Sorana Bean PGI, but the sale price is undoubtedly lower.

Producers underline that Sorana Bean PGI plays an important role in the economy of the area. The protection as PGI succeeds in reducing imitations on the market (very widespread due to the price differential) and supports promotion and marketing activities of the farmers. Indeed, the PGI increased the fame of this particular bean and, consequently, favored the strengthening of direct marketing. Producers assert that, at the beginning, their own firm brand had no importance in direct sales as personal knowledge and reputation was at the basis of market relationships on short supply-chains and direct sales, while PGI mark was crucial to capture new customers, especially on intermediate markets and distant consumers. On the contrary, frequent consumers evaluate much more the firm brand then the EU logo, because of the organoleptic differences between beans coming from different producers. Moreover, consumers perceive the PGI mark as a sign of high quality and particular characteristics of the bean. It is for that reason that producers normally succeed in selling the whole production of the year in 5 months despite the high price.

Secondly, Sorana Bean PGI is an important retention tool for consumers. After the first consumption, most customers keep buying year after year. Furthermore, this bean is the driving force for other farmers’ products. Producers underline that the excellent impact of Sorana Bean PGI on consumers increases their confidence on consumers and, consequently, the chance of selling other products raises.

Thirdly, producers believe that Sorana Bean PGI selling price is sufficiently profitable, in respect of particular production conditions. Moreover, they highlight that PGI certification legitimize the high price to consumers, scarcely valid in a period of recession.

Fourthly, the profitability of PGI bean has allowed the survival of agriculture in this valley, which otherwise would have been abandoned due to difficult growing conditions, thus generating positive effects in terms of environment and landscape.

Product specifications have been built on the basis of traditional modes of production (banning the use of chemical herbicides, setting a maximum yield), typical of non-professional farmers with less productive land, but that has historically given the reputation of the product.

Some conflicts emerge between “Poggio” and “Ghiareto” producers, due to the higher average production per hectare in Poggio and consequently different production costs, allowing producers from “Poggio” to sell their product at a lower price.

The extension of the production area to other historically less traditional areas (the “Poggio” ones), while it has helped to strengthen the system by increasing the quantity produced, the visibility in the market, and the possibility to carry out collective promotional initiatives, on the other hand introduced tensions among producers: the professional farmers, who are located outside the more traditional production area, ask for the increase of the maximum yield, also at least to partly compensate for the lower price they get on the market.

But Ghiareto farmers, underlining the superior quality of their products as compared to those from Poggio, complain about the excessively low prices set by professional farmers, that are likely to confuse the average consumer and to reduce the reputation of the Sorana Bean IGP on the market.

Tuscan Pecorino-cheese PDO

The product and its production system

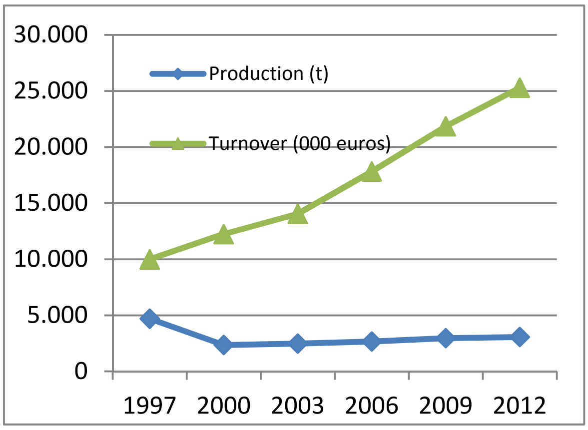
Tuscan Pecorino-cheese is a processed product, which obtained the PDO protection in 1996. Before the introduction of the UE protection system, a national law guaranteed its defense against frauds and misuses. Due to the ancient origins which link this product with an extended area as Tuscany, a wide range of different typologies were sold as Tuscan Pecorino-cheese, these reflecting some specificities in production methods in different areas of Tuscany, although linked by some common characteristics, such as a milder taste as compared to other reputed Italian Pecorino-cheeses (i.e. Pecorino Romano, Pecorino Sardo).

Product Specifications aimed at including all these production areas and product diversity, also due to the high value of the brand “Tuscany” on the market. The result was that both milk production and cheese processing must take place in Tuscany (and some bordering municipalities of Umbria and Lazio regions), but the rules regulating Pecorino-cheese production methods were not highly detailed. For instance, the final product characteristics are defined in a very flexible way indeed: shape diameter is between 15 and 22 cm, overall height between 7 and 11 cm and weight between 1 and 3,5 kg. Moreover, the color of the rind can vary in shades of yellow, but it may even be black or reddish. Despite that, two elements distinguish this product: the provenance of the sheep-milk (Tuscan Pecorino-cheese PDO can be produced only with milk coming from sheep breeding in the allowed production geographical area) and the use of only native lactic ferments approved by the Consorzio.

After a significant drop at the end of the nineties, from 4.696 tons in 1997 to 2.356 tons in 2000, Tuscan Pecorino-cheese PDO production has gradually grown, reaching 3.067 tons in 2012.

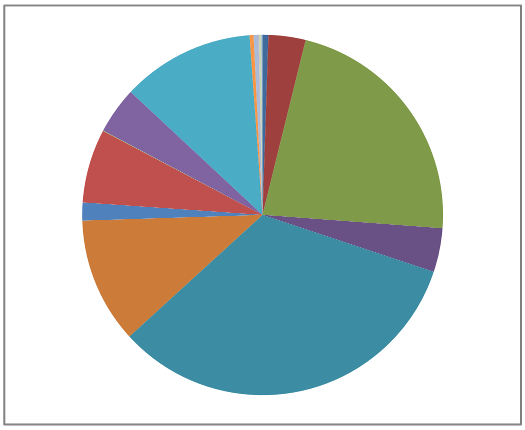
The same trend involves cheesemakers’ turnover linked to Tuscan Pecorino-cheese, from 5 million euros in 1997 to 22 million in 2012. In 2012, the 17 registered cheesemakers produced on average 162 tons (92 tons of mature pecorino-cheese and 70 tons of fresh pecorino-cheese), ranging from a maximum of 857 tons to a minimum of 0,77 tons (2012), signaling a high heterogeneity of processing firms and especially a diversity in the importance of PDO production for each cheesemaker (fig.4).

Figure 3 – Tuscan Pecorino-cheese PDO - evolution of production



Source: Authors' elaboration on data by Consorzio Pecorino Toscano DOP

Figure 4 – Tuscan Pecorino-cheese PDO - share of each cheesemaker PDO turnover, 2012



Source: Authors' elaboration on data by Consorzio Pecorino Toscano DOP

All the diaries, which produce Tuscan Pecorino-cheese PDO, are associated to the Consortium, that numbers among its member also 245 breeders, one cheese maturing firm and one packer. Main consortium's activities concern the protection of the PDO, the control of the supply-chain, technical assistance provision to members, and promotion through press releases, events and advertising campaigns. Diaries are concentrated in Maremma (south of Tuscany), because of the highest sheep farming concentration, and they can be classified in two groups: one characterized by well structured firms with a high production level, the other composed by small diaries without an intensive and structured production process.

Strategic use of the PDO

The high differentiation/variability among different typologies of Tuscan Pecorino-cheese PDO, which from one side reduces the possibility to reach a strong characterization of the product to consumers, on the other side allows for a relevant number of Tuscan cheesemakers to produce a PDO cheese. Various motivations support the choice of using PDO, but most of them are linked to firms' marketing strategies.

Indeed, an uneven situation can be depicted as regards the importance of PDO product for each cheesemaker. Two main groups can be highlighted.

The first group, which can be named as "the big users", is composed by a few firms with high cheese production volumes, where a big share of the total cheese production is PDO (roughly, 4 out of 17 registered cheesmakers produce 90% of the total amount of Tuscan Pecorino-cheese PDO). Tuscan Pecorino-cheese PDO is the most important product, the opportunity of reaching supermarket channels being the most important benefit, due to the PDO certification. In fact, the high value bestowed by consumers, linked to the large production volumes, made this cheese economically interesting for supermarkets, becoming the first sale channel. Moreover, the high reputation achieved by this cheese and the name of Tuscany, coupled to the distinction offered by PDO certification, opened the possibility of establishing international trading channels. In particular, USA, UE, United Arabian Emirates and Australia represent the most important international markets for the Tuscan Pecorino-cheese PDO.

A second group, “the low users”, declares that PDO production is not so important for their business. This group is composed by small-medium cheesemakers, that do not succeed in producing Tuscan Pecorino-cheese PDO at costs, which make it profitable to access supermarkets and to compete with big cheesemakers, as they cannot reach equal scale economies. They produce small amounts of certified Tuscan Pecorino-cheese PDO both to enhance supply in their own direct sale shops (to have a complete assortment) and to fulfill buyers and consumers' specific requests. In these cases, PDO production is used as a sort of “ticket-to-trade”, in the sense that the supply of a complete portfolio of cheeses allow them to access some markets that need to deal with limited amounts of suppliers and ask for high-quality and differentiated production. The low users therefore focus their business strategy on high-quality market segments of non-PDO certified cheeses, using small amounts of PDO products to qualify the assortment and enter some distribution channels.

This result is an outcome of the relationship between the contents of the Product Specifications and the heterogeneity of firms’ characteristics. Indeed, the loose contents of the Product Specifications allow cheesemakers to label products with different quality under the same name. The big users, operating on mass market and supermarket channels, can count on scale economies and offer “standard quality” PDO products. Tuscan Pecorino-cheese PDO is often sold at discount rate on supermarkets shelves (like other reputed and famous cheeses, such as Parmigiano Reggiano and Grana Padano), playing the role of capturing consumers’ interest. Actually, most of Tuscan Pecorino-cheese PDO is sold within promotions and cuts to price. On the other hand, the low users are not able to neither compete on the cost-side, nor sufficiently differentiate their Tuscan Pecorino-cheese PDO from the big users’ ones, being sold with the same name.

Consequently, a few big cheesemakers supply the bulk of Tuscan Pecorino-cheese PDO, and their cheese production is concentrated on PDO production (roughly 60-70%), while the others cheesemakers use the PDO only to a very limited extent, preferring to focus on high-quality non-PDO productions and complete their assortment with some quantities of PDO production.

The result is that average quality level of PDO production is lower than potential, and overall the use of the PDO by firms is quite low as compared to its potential, too. The paradox is that in many cases low user pecorino cheese production, even in the case of close similarity to PDO one, do not label it as PDO although potentially they could. At the same time, the market of the generic pecorino cheese (not certified as Toscano PDO) is very confusing and risky for consumers, and for firms too: alongside cheeses made with 100% sheep's milk from Tuscany and not necessarily sold with reference to Tuscan places and traditions, there are cheeses made from sheep-milk (or even mixtures cow-sheep milk) by other provenience but often sold with geographical identifiers of Tuscan places, mostly pointing out cheesemaking tradition rather than the origin of the milk.

The PDO has contributed not only to support the regional dairy sector, but also to the survival of sheep husbandry in Tuscany, threatened by the competition of sheep milk from neighboring regions (Lazio, Sardinia), but increasingly by production from abroad, too (France, Eastern Europe). Given its characteristics in Tuscany sheep breeding have positive effects on the environment and on the preservation of rural culture and traditions.

On the other side, the “generic” identity of Tuscan Pecorino-cheese PDO explains some recent attempts to differentiate and qualify other Pecorino-cheeses made in Tuscany with more territorial-specific quality hallmarks. On the one hand, there have been some applications for a PDO related to pecorino cheeses produced in smaller areas of Tuscany (“Pecorino delle Balze Volterrane PDO” and “Pecorino a Latte Crudo della Montagna Pistoiese PDO”). On the other hand, some reputed pecorino-cheese productions of Tuscany decided not to apply for a PDO because of the many limits they might face with a certified production (Pecorino di Pienza).

Concluding remarks

Capturing higher added value in PDO/PGI products is not an easy task for firms, as recently highlighted by a EU commissioned study (Areté, 2013), which identified the "intrinsic product differentiation (i.e. presence of significant differences in the intrinsic features – quality parameters, organoleptic characters, etc. – of a GI product versus the corresponding standard product)" as key factor for obtaining a positive differential margin in GI production. As this study pointed out, "in general, GI products with only slight differences in intrinsic features from the corresponding standard products achieve relatively limited advantages in gross margins, or even no advantage at all, whereas GI products which are significantly different from the corresponding standard products tend to achieve more important advantages; only few exceptions to these trends emerged from case-study work" (Areté, 2013: 10).

Although often advocated to exert positive effects on firms' profitability, distribution of value added, collective action enhancement, social and environmental benefits, so far not many study deal with how firms decide whether to use or not to use protected geographical indications.

This paper attempted to highlight some reasons why firms decide if and to what extent to use PDO/PGI in EU, and why in many cases PDO/PGI are under-utilized as compared to their potential. Apart from the trivial consideration that the use of a PDO or a PGI depends on the reputation of the geographical indication associated to the product and therefore to market and consumers' recognition - many newly established PDO/PGI, in wine too, register a very low degree of use by firms (Carbone, 2003.a) -, that can only be built in time and/or with important communication actions, much of the real use of PDO/PGI by firms relies on the coherence between firms' characteristics and strategies, and Product Specifications (Carbone, 2003.b; Arfini et al., 2010).

In the case of the Sorana Bean PGI the aim of the PGI protection was first of all to preserve a very specific, well defined identity of a product bearing a strong reputation with a very high price. The rather strict Product Specifications (limited maximum yield, small territorial area with a sub-zone) coupled to the different nature and location of registered farms, explain some sources of conflicts among producers and limit further expansion of PGI use by farmers. Quality of the two areas inside the delimited one appear to be different, and this menace product reputation (and price on the market) as both areas sell under the same name. Here both the provision of the possibility to use the sub-zone identifier and the maximum yield can be perceived as an attempt to reduce the "milking" of the product reputation by bigger (relatively speaking) player of the production system.

On the contrary, the looser Product Specifications of the Tuscan Pecorino-cheese PDO can be explained by the need to protect the name/brand "Tuscany" against usurpations; this has led to a set of specifications based on the identification of a few simple elements common to different cheesemaking traditions in the different areas of Tuscany. This choice, characterized by its own rationality, generated a double sub-system where big cheesemakers (similarly to what happens in some PDOs characterized by sectoral governance models, like Cantal – see Barjolle and Jeanneuax, 2013) are able to capture product reputation but menacing long-term average quality of the product (Belletti, 2000), while high-quality productions, mainly produced by small-medium cheesemakers, do not use the PDO as it is not able to effectively signal differentiated quality, or use it as a guarantee about the origin and authenticity of the raw material. Consequently, the potential of the PDO is under-utilized on niche channels and used mainly on the mass distribution ones. As a result, the average quality of the PDO production risks to lower (Akerlof, 1970) and other collective quality signs (collective trademarks, PDOs, or other) have been (or are on the way to be) created.

It is to note that the different level of use of PDO/PGI by firms do not depend in the two analyzed cases by entry-barriers linked to costs needed to implement the Product Specifications, as in both cases, according to preliminary results of the research, firms declared that these costs were not significant: inspection costs are quite low, as well as dedicated investments and firm's organization to comply with the norms. This happens because the Product Specifications were tailored on the existing techniques and production process, rather than aimed at increasing product quality.

In order to build effective PDO/PGIs, the ex-ante phase, where the contents of the Product Specifications are discussed and written, is therefore of paramount importance. The rules should be decided within participatory processes, as to allow all potentially interested stakeholders to express their opinions and concerns, and evaluate all the possible effects of the rules on firms' activity.

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