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COLLECTIVE RULES AND THE USE OF PROTECTED GEOGRAPHICAL INDICATIONS BY FIRMS*

JEL classification: L1, Q13, Q18

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Abstract. *Geographical Indications (GIs) are tools adopted by firms 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 on firms' profitability. The extent by which firms use the protected GI for marketing their products depends on many factors, among which the expected benefits and costs, the marketing strategy pursued by firms, and the characteristics of the Product specification (PS). Notwithstanding the great emphasis often put on the positive effects of the GI protection, the use firms make of the protected GI is in many cases far away from its potentiality. So far, academic literature has not handled this topic in a systematic perspective.*

The aim the paper is to analyze, by means of two case-studies related to protected GIs in Tuscany (Italy), the "Fagiolo di Sorana IGP" (Sorana Bean PGI) and the "Pecorino Toscano DOP" (Tuscan Sheep-milk cheese PDO), the strategic decisions that lead firms to decide whether and to what extent to use the protected GI for marketing of their products.

Results show that firms use the protected GI to attain a wide spectrum of results that are often far away from the expected ones. Besides, the way PS has been drawn greatly affects the effects generated by the GI protection. Much of the real use of protected GIs by firms relies on the coherence between firms' characteristics and strategies, and PS, while the different use of the protected GI by firms seems not to depend by entry-barriers linked to costs needed to comply with the PS.

Keywords: *firms' strategy, PDO and PGI*

1. Introduction

The protection of Geographical Indications (GIs) is a tool of growing importance all over the world (Arfini, Albisu, and Giacomini, 2011). Following the TRIPS agreement (1994), that defines GIs as "indications which identify a good as originating in the territory of a Member, or a region or locality in that territory, where a given quality, reputation or other characteristic of the good is essentially attributable to its geographical origin" (art. 22), all WTO member States are obliged to provide the legal means for interested parties to obtain the protection of GIs.

From an economic and social point of view, interest in GIs protection is directly related to the need to escape from increasing competition on global markets, GIs being perceived as a

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useful tool to signal specific quality characteristics and avoid competing purely on price.

The protection of GIs is advocated to offer opportunities to support local agrifood systems and sustainable development (Belletti and Marescotti, 2011b). 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 protection, to date there is still a lack of systematic research on the effects of GI protection on firms' profitability. 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, 2011a), 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) – where GIs are protected by means of a "sui generis" system based on two kinds of signs, the Protected Designation of Origin (PDO) and the Protected Geographical Indication (PGI)[1] – showed how firms reported 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 commissioned by the EU (Areté, 2013), rather showing uneven and contradictory patterns. Moreover, the use firms make of the protected GI is in many cases far away from its potentiality, and this clearly affects the effects GI protection can exert.

The aim of this work is to analyze the strategic decisions that lead firms to collectively set-up the rules of the protected GI and then decide whether and to what extent to use the protected GI for producing and marketing their products.

The paper proceeds as follows. First, we provide a short analysis of the importance of PS in firms' decisions whether to use or not to use the protected GI. Second, we detail the objectives of the study and the methodological framework. Third, we put in evidence and discuss the most significant results of the two case-studies analyzed. The paper ends with some concluding remarks.

2. Product Specification and use of protected GIs by firms

The level of use of protected GI by firms depends on different factors, including the expected benefits and costs, the general strategy pursued by firms, and the characteristics of the Product Specification (PS), with particular reference to constraints established in the PS, and degree of internal quality standardization achieved (Barjolle and Sylvander, 2002).

Provided that GI protection schemes are but one of the many tools in the typical products

[1] PDO and PGI are both in a general sense "protected geographical indications". According to the European Union legislation – Reg. (EU) 1151/2012 – PDO and PGI differ for the intensity of the link between the product and the area of origin.

valorization, firms which are able to comply with the PS choose whether to use 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 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 contains a set of rules, which define 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, under the control of a third party certification body (at least according EU and many other countries rules). 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, Menozzi, and Capelli, 2012). Usually, the debate is based on the definition of three main elements: product characteristics, 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, Belletti, and Marescotti, 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.

For example, Barjolle and Philippe (2012) showed that firms may utilize collective rules, such as those written in the PS, to set entry barriers to competitors (raising rival's costs theory, according to Salop and Scheffman, 1983, and Scheffman and Higgins, 2003). Indeed, in the case of Cantal cheese PDO, "The implementation of the code of practices (…) impacts the production costs and excludes from the production system the milk producers adopting intensive agricultural practices" (Barjolle and Philippe, 2012, p.15), while in the case of Gruyère cheese looser rules make it possible for any new entrant to "develop a strategy based on cost leadership through rationalization of the production process, production volume expansion, shortening of the ripening duration, production facilities' expansion, or relocation of the activities" (Barjolle and Philippe, 2012, p.17). On the same aspect Bouamra-Mechemache and Chaaban (2010) also evidenced that in the case of Brie cheese PDO big firms are not interested in using the PDO as they cannot exploit scale economies, as the PS imposes restrictive rules (non-pasteurized milk, high labour-intensity in the production process, etc.).

Therefore, big firms are normally much more interested in having looser rules for their production, as to capture the benefits from scale economies. Dentoni, Menozzi and Capelli (2012) recently explored the impact of individual group members' heterogeneous characteristics, resources and strategies on their level of cooperation on defining how to modify the PS. Higher heterogeneity negatively affects members' agreement on the future level of restrictiveness of "Prosciutto di Parma" PDO and therefore the effectiveness of the collective action.

On the other hand, reputed producers will normally try to get stricter regulations, or internal differentiation in the PS as in the case of Parmigiano di Montagna PDO cheese quoted in Sidali and Scaramuzzi (2014), otherwise they will exit from using the protected GI (Segre, 2003).

Generally speaking, firms' heterogeneity increases the possibility to have conflicts and different levels of use of the protected GI, as normally happens in collective goods management (Kanbur, 1992).

3. Objectives and methodology

The main purpose of the study is to understand on what basis firms decide whether and to what extent to use the protected GI, and to analyze costs and benefits firms may obtain.

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), selected because of their nearly opposite characteristics. Indeed, Sorana Bean PGI is produced in very small quantities by a few farms localized in a small area of Tuscany and sold mainly on traditional marketing channels or direct sale, while Tuscan Pecorino-cheese PDO is one of the bigger GI product of Tuscany, spread all over the regional boundaries, 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 by local stakeholders during the process that led to the application for the PGI/PDO recognition, by examining PS contents (also in relation to similar products) and other official and informal 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 17 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 questionnaire was divided into six main sections:

1. Firm's characteristics. History and evolution of the firm, type of products (assortment), turnover, marketing channels importance and evolution, quality certification schemes, investments, etc.;
2. Implementation of PDO/PGI standard. Quantity produced, PDO/PGI marketing channels as compared to other firm's products, geographical markets, etc.;
3. Comparison to conventional product. Identification of the main relevant differences between PDO/PGI product and a close substitute product as regards production techniques, production costs, marketing channels, etc.;
4. Costs of compliance to PS. Implementation costs (administration), raw material costs, production costs, control and certification costs, participation fee to consortium, etc.);
5. Direct benefits from PDO/PGI. Prices and incomes, turnover by marketing channel and geographical market;

6. Other benefits related to PDO/PGI use (protection from imitations and abuses, firm's reputation, assortment, access to specific marketing channels, etc.);

These information were collected in order to capture the relative convenience to use the PDO/PGI scheme as compared to the decision to use other quality seals and certification schemes.

4. Results

4.1. Sorana Bean PGI

The product and its production system

Sorana Bean PGI is a niche product cultivated in a small valley in Tuscany, characterized by low level of urbanization, industrialization and infrastructures. The pedo-climatic features of this small valley affect the Sorana bean quality, giving its distinctiveness: small, pearly white with pink veins and a very thin skin. Traditionally, farmers manage directly all the phases of the production process up to the drying and packaging; very often they also sell the product directly on the final market or to groceries.

Local farmers obtained the PGI protection in 2002. The most important points stated by the PS are: a strict definition of the geographical boundaries where the production must take place, the banning of the use of chemical herbicides and a relatively low maximum yield per hectare (20 quintals). Moreover, the PS describes the exact characteristics of the product and harvesting methods.

The production area allowed by the PS is very small, and with paedological characteristics that impede the adoption of modern farming techniques. It covers around 660 hectares in Sorana valley, from the banks of the Pescia di Pontito creek, called "Ghiareto", to the upper lands, called "Poggio". Indeed, the PS allows 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 higher prices 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 PS.

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.

Production is characterized by very low quantities and high sale prices (22,00 euro/kg on average, compared to 3-4 euro/kg for 'conventional' beans) and sold mainly through direct marketing. Tuscany is the prevalent consumption market, although a small share of product is sold to restaurants and agri-food shops in the North of Italy.

The production has grown, from 57 q. of certified beans in 2004 (first year of PGI implementation) up to 76 q. in 2012, following the growth of surfaces (4,78 ha in 2004, to 5,22 ha in 2012).

Most of production is carried out by small farms often managed by non-professional farmers (retired, hobby, or part-time). The number of producers has slightly grown over the years, but it still remains very small: from 15 producers of 2004, the PGI is used by 22 farmers 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. 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 ones, who keep on producing the bean for income integration or just for the pleasure to have this special production.

Strategic use of the PGI

PS has been drawn following the traditional production techniques (banning the use of chemical herbicides, low maximum yield), common to non-professional farmers with less productive land in the area of Ghiareto, that historically gave the reputation of the product.

Interviewed farmers reported a high interest to produce Sorana Bean PGI, essentially due to the fact that market price is quite high as compared to conventional beans, while additional production costs (included inspection and certification costs) are rather low. The morphological characteristics of the production area (in particular the cultivation carried out on the torrent banks in the Ghiareto area) and the limited extension of available fields, coupled to the fact that most farmers are pensioners, hobby or part-time farmers, do not allow the use of less expensive production methods. Therefore, producing a different bean variety (with higher yields) with ordinary cultivation practices costs as much as producing Sorana Bean PGI, but the sale price is undoubtedly lower.

Producers underlined that Sorana Bean PGI plays an important role in the economy of the area, allowing the survival of agriculture, which otherwise would have been abandoned due to difficult growing conditions. The protection as PGI, also thanks to peer control between local producers operating in such a small area which supports the formal control system by third party certification body and national public institutions, succeeded in reducing imitations on the market and supported their promotion and marketing activities, allowing to capture new customers, especially on intermediate markets and distant consumers. Furthermore, the PGI helps selling other farmers' products.

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 lower prices.

The extension of the production area to the less traditional area (Poggio), while it 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 increasing the maximum yield. On the other hand Ghiareto farmers, underlining the higher quality of their products, complain about both the lower prices and the sales to supermarkets by Poggio farmers, that are likely to confuse consumers and to reduce the reputation of the Sorana Bean IGP on the market. Despite this, farmers from both areas make use of the PGI, with a small price premium for Ghiareto beans paid by more expert consumers.

4.2. Tuscan Pecorino-cheese PDO

The product and its production system

Tuscan Pecorino-cheese is a processed product, which obtained the PDO protection in 1996. Due to the ancient origins which link this product to all Tuscany region, 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).

Due to the high value of the brand “Tuscany” on the market, the option that was preferred in the application for the GI registration was that of a single regional denomination, coupled to a PS that included different types of Pecorino coming from the sub-regional production areas and local traditions. This asked for a PS 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 (only milk coming from sheep breeding in the allowed production geographical area) and the use of only native lactic ferments approved by the Consorzio, the inter-professional body charged of managing the PDO (internal control, marketing, information).

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. In 2012, the 17 registered dairies 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 firm.

Strategic use of the PDO

The high product variability 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 firms 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 PDO 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 cheesemakers produce 90% of the total amount of Tuscan Pecorino-cheese PDO). Tuscan Pecorino-cheese PDO is the most important product for their business, the opportunity of reaching supermarket channels being the most important benefit from the use of the PDO scheme. 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 (USA, UE, United Arabian Emirates and Australia).

A second group, ‘the low users’, declares that PDO production is not so important for their business. This group is composed by small-medium cheese factories that cannot reach equal scale economies as the big firms. Therefore, they only 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. The low users therefore focus their business strategy on high-quality market segments of non-PDO certified cheeses, using small amounts of PDO products both to qualify the assortment and as a ticket-to-trade to access some distribution channels. In the low user group a few firms positioned on low-quality market segment operate, too, producing low quantities of PDO Pecorino-cheese to qualify their assortments.

Consequently, a few big cheese factories supply the bulk of Tuscan Pecorino-cheese PDO, and their cheese production is concentrated on PDO production (roughly 60-70% of their business), while the others use the PDO only to a very limited extent, preferring in some cases to focus on high-quality non-PDO productions and in other to lower costs, 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 '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).

5. Concluding remarks

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 GI associated to the product and therefore to market and consumers' recognition, much of the real use of PDO/PGI by firms relies on the coherence between firms' characteristics and strategies, and the contents of PS (Carbone, 2003; Arfini et al., 2010).

In the case of the Sorana Bean PGI the aim of the 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. Owing to the high price the PGI product gets on the market in front of relatively low cost of compliance to the PS, all farmers find it convenient to use the PGI. Some of the norms contained in the PS (maximum yield, small territorial area with sub-zones) can be perceived as an attempt to reduce the "milking" of GI reputation by bigger (relatively speaking) farmers, allowing all interested farmers to use the PGI, although limiting further expansion of quantity produced as PGI, that is already limited by the low availability of land in the area that acts as an entry-barrier to the system.

As regards the Tuscan Pecorino-cheese PDO, the looser PS can be explained by the need to protect the name "Tuscany" against usurpations and regulate its use; this led to a set of specifications based on the identification of a few simple elements common to cheesemaking traditions in the different areas of Tuscany. This choice generated a double sub-system where big cheese factories - similarly to what happens in some PDOs characterized by sectoral governance models, as reported by Barjolle and Philippe (2012) - are able to capture product reputation but menacing long-term average quality of the product (Belletti, 2000), while some high-quality productions, mainly produced by small-medium dairies, do not use the PDO as it is not able to effectively signal their higher quality, or use it as a guarantee seal 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, new more specific PDOs, or other) have been (or are on the way to be) created.

It is to note that differences in the level of use of PDO/PGI by firms does not depend in the two analyzed cases by entry-barriers linked to costs needed to implementing the PS, as in both cases firms declared that these costs were not significant: inspection costs are quite low, as well as dedicated investments and firm's organization adaptations to comply with the norms. This happens because the PS have been 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 PS are discussed and written, is therefore of paramount importance. The rules should be designed in order to allow all potentially interested stakeholders to express their opinions and concerns and to tailor the PS to the strategic needs of firms, without loosening the link with the territory and its traditions. Participatory processes and an ex-ante evaluation of all the possible effects of the rules on firms' activity can help achieving this outcome.

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