

Chapter 10

Old World Case Study: The Role of Protected Geographical Indications to Foster Rural Development Dynamics: The Case of Sorana Bean PGI

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Abstract The protection of Geographical Indications is an issue of growing importance all over the world, as it offers local producers a tool to differentiate their products on the market and escape price competition. In the European Union the legal protection of Geographical Indications dates back to 1992, and aims at both preventing misuses and abuses of brand names on the market fostering fair competition among producers and transparent and complete information to consumers, and supporting rural development dynamics, especially in marginal areas. In this chapter, after describing the many and multifaceted effects the protection of the Geographical Indications may exert on the economic, social, and environmental spheres, the case study of the Sorana Bean PGI in Tuscany (Italy) will be analyzed. The case is related to a very small production system, where a few small farms are using the protected Geographical Indication to market their product. The case shows that the protection granted by the European Union, besides supporting farmers' income, exerts important economic and social effects on the territory, thus supporting rural development in a marginal area.

10.1 Introduction

The legal protection granted to Geographical Indications (GIs) is an issue of growing interest and concern worldwide. From an economic and social standpoint, interest in this topic is rising due to an increasing international competition on the

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level of product quality differentiation, which helps products to stand out and avoid competing purely based on prices. As a consequence, many public and private stakeholders at both local and global levels have fostered this new turn to the element of quality. GIs protection appears to be one of the most interesting and *locally manageable* tools for attaining this aim. At the same time, GIs protection can help safeguard traditional knowledge and cultural heritage, and generate other territorial externalities, supporting rural development dynamics. This potential stems from the strong link these products have with their territories, and from the specificity of the local human and physical resources used in the production process, that give these products unique quality features. Furthermore, consumers are looking for a reconnection to the locality where food is being produced, sometimes for reasons of identity, in other cases for food safety and quality reasons. Given this conjuncture, GI protection is expected to exert positive rural development effects: economic effects (both inside and outside the supply-chain, at a local level), as well as social, cultural, and environmental ones.

The European Union has a longstanding tradition in supporting and regulating these products and the GIs they bear. In 2015 in the European Union, 1244 food products and 1579 wines are registered as Protected Denomination of Origin (PDO) or Protected Geographical Indication (PGI). Italy is the leader in the EU, with 278 food products and 523 wines. Empirical evidence on Italian protected GIs shows that over 80% of the turnover of PDO-PGI products in 2014 is generated by the big ten protected GIs, among which the famous Grana Padano PDO, Parmigiano-Reggiano PDO, Prosciutto di Parma PDO.

Thus, two main research questions emerge. The first question is related to the scope of the GI protection, which is presumed to be wider than any other kind of collective intellectual property right. In many places around the world, protected GIs are the pivot, or one of the main pillars, of territorial development strategies. However, academic (and non-academic) literature focuses mainly on marketing issues of GI products, and there is not sufficient awareness about the “side-effects” of the GIs protection (Belletti et al. 2015a, b). So the first question is the following: is the protection of GIs just a tool for fighting abuses and misuses of the GIs on the market, helping producers to skip unfair competition and consumers to access transparent and complete information? Can GI protection be also capable of activating more general economic and social development trajectories inside specific territories? What effects can be expected in that sense?

The second question is partly related to the first, and deals with the economic size of GI production systems. In many countries as in the EU, many GIs that have been protected show a huge diversity in terms of geographical scale of the production area and production volumes: some refer to a small village and its surroundings, while others refer to an entire region or even to a State. The production volume greatly varies across different cases. The question posed by many policy-makers is if only the *big* GIs deserve protection, considering a rough cost-benefit analysis that balances the efforts made by public bodies for the registration and enforcement, and the value of sales of the certified product.

We will try to answer these questions by drawing on the case of Tuscany, one of the most reputed Italian regions for agri-food quality; in particular, a small PGI related to a high-quality bean will be analysed. The structure of the chapter is the following. First of all, in the following section, we will introduce the concept of origin product and two ideal typical strategic orientations for its valorisation. In Sect. 10.3, we will discuss how Geographical Indications are protected in the European Union, with a special reference to food products (wines having a specific regulation in the EU). Section 10.4 will shortly describe the many effects that the GI protection can exert. Section 10.5 will be devoted to introducing the situation of protected GIs in Tuscany, while Sect. 10.6 will be entirely devoted to describing and analysing the case study. The final section will shortly resume and draw particular conclusions.

10.2 The Valorisation of Origin Products as a Tool for Rural Development

Origin products (called also typical products) are products whose specific quality comes from a strong link to their territory of origin (Delfosse 1996). A Geographical Indication often identifies them on the market. According to a number of scholars (Bérard and Marchenay 1995, 2004; Casabianca et al. 2005; Vandecandelaere et al. 2009) three relevant dimensions determine the special nature of an origin product (OP): the specificity of local resources used in the production process; the history of the product, included its production and consumption tradition; and the collective dimension, including the presence of a shared production and consumption knowledge at the local level. This strong link to the territory originates a rural development potential of OPs, which are expected to exert not only economic effects in the local supply chain but also other economic effects at local level, as well as social, cultural, and environmental ones.

The positive attitude of many consumers towards a reconnection to the locality (both for identity and for safety and environmental reasons) allows for a strengthening of their effects on local economy and communities (Weatherell et al. 2003), even though behavioural patterns are not univocally consistent with attitudes (Vermeir and Verbeke 2006). Thanks to their multifunctional character, OPs are often the object of valorisation strategies developed by actors belonging to the supply chain and to the territory they come from, with the frequent support of local public bodies, such as Municipalities, Provinces, Local development agencies, Chambers of Commerce. Valorisation strategies of OPs can be oriented by different logics, which depend on the category of actors involved in defining the strategy. Based on empirical evidence, two main approaches that actors may adopt with regard to the economic role of the OP can be identified: a supply chain strategy and a territorial strategy (Pacciani et al. 2001; Tregear et al. 2007). The supply chain strategy aims at building a network of actors in the production and processing of the OP, with a specific focus on the improvement of product quality (also by defining

common rules), the management of quantities to be produced, and the implementation of effective collective marketing strategies also thanks to labelling initiatives. The initiators of a supply chain strategy are normally the enterprises belonging to (one or more phases of) the supply chain, with the aim of increasing the degree of differentiation of the product in order to improve the product added value, opening new marketing channels or penetrating new markets. By this approach, the OP contributes to socio-economic well being through the strengthening of the local production network, and increases employment and revenues from the effective management of the supply chain and marketing of the product.

The territorial strategy conceptualizes the OP as an asset for rural development paths. Here, actors perceive such products as offering a series of related resources including environmental (e.g. distinctive landscapes, local animal breeds and plant varieties), cultural (e.g. techniques, know-how, local folklore and heritage), and economic (e.g. skilled employment). In this strategy, OPs are seen as having the potential to contribute to a wide range of initiatives that encourage diverse activities and novel interactions between multiple types of actors (e.g. tourist trails, markets, festivals, educational initiatives, community events). What is important in this strategy is not only the physical output of the supply chain (the volume of OP produced and sold), but also the territorial identity of the product that can be integrated in other value creation processes as an immaterial asset. A range of local actors much broader than the supply chain can use OPs: citizens' associations and local development agencies are normally part of this type of strategy. These actors may develop strategies of 'basket' goods and services, trying to integrate different activities and resources in the territory by developing synergies both in the production and consumption phases; these strategies can also result in a wide distribution of economic rent (Pecqueur 2001; Hirczak et al. 2008). In some specific cases, the valorisation of OPs can be directly aimed at enhancing non-economic positive contributions to rural development, especially for the conservation of culture and the environment, for example when the identity of the OP is rooted in a local specific breed or a vegetal variety.

The valorisation of an OP asks for many tools, but the pillars of such a strategy are the following (Vandecandelaere et al. 2009): an agreement between local producers on the key-features of the product and of its production process, a control system able to guarantee both producers and consumers the real quality and identity of the product, and a collective organization that encompasses producers and other stakeholders in the product and support communication with consumers. The legal protection of geographical indications (GIs) is one of the most used tools for OPs valorisation, and has the potential to strengthen the above-mentioned effects (Treagar 2003; Rangnekar 2004; Giovannucci et al. 2009; Bowen 2010). GI protection allows fighting against imitations and misuse of the name used to market a product, and makes it possible to strengthen the territorial anchorage of the more relevant phases of the value chain. Therefore, GI protection can generate a better remuneration of efforts made by local producers and preserve local specific resources, according to the "GI quality virtuous circle" model (Belletti and Marescotti 2011; Vandecandelaere et al. 2009).

10.3 The Protection of Geographical Indications in the European Union

The protection of GIs is a tool of growing importance all over the world (Arfini et al. 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 point of view, interest in GIs protection is directly related to the need to escape the increasing competition on global markets, GIs being perceived as a useful tool to signal specific quality characteristics and avoid competing purely based on prices. The protection of GIs is advocated to offer opportunities to support local agri-food systems and sustainable development (Belletti and Marescotti 2011). Companies using protected GI are expected to observe a reduction of unfair competition due to abuses or misuses of a GI, and have the opportunity to differentiate their product 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 (Vandecandelaere et al. 2009; Belletti et al. 2015a, b).

Starting with the '80s, the EU agricultural policy seeks to shift the leading paradigm from a quantitative to a qualitative perspective. For this reason, according to several reforms that involved the whole Common Agricultural Policy (CAP), in 1992 the UE introduced some instruments to protect and promote GI food products (regulation n.2081/92, now substituted by the UE regulation n.1151/2012): Protected Designation of Origin (PDO) and Protected Geographical Indication (PGI). These tools were the first attempt to introduce a common way to govern the use of geographical names linked to food products, following the Italian and French pioneering experiences. Both PDO and PGI focus on the relationship that links a product with a specific geographical area. Specifically, the strong connection between producers and their territory contributed to the progressive evolution of the product, developing its unique characteristics and determining its quality. PDO and PGI products have developed a reputation associated with a specific production place, which has become a brand, recognized and valued by consumers.

PDO is used for agricultural products and foodstuffs, which are produced, processed and prepared in a specified area using recognized know-how. Instead, PGI covers agricultural products and foodstuffs closely linked to the geographical area and one, at least, of the stages of production, processing or preparation has to take place in that area. Both PDO and PGI are characterized by a set of rules, which define the production area where the process must take place, the characteristics of the product, and its production process. These rules are codified in a document, called Product Specification (PS). The main difference between PDO and PGI consists in the different intensity of the link between the quality of the product and

the geographical area where it is produced. The whole production process has to take place in the area allowed by the PS for PDO products, while in the case of PGI, the geographical link must occur in at least one of the stages.

Finally, the ownership of these two signs is collective and all producers that belong to the geographical area in question and respect PS rules have the right to use it as a GI. An independent third party firm has the task of evaluating the correct respect of the PS by producers. PDO and PGI can be included in the agri-food standard plethora, which has quickly increased from the end of the '90s and has become a leader in coordinating relationships among stakeholders. PDO and PGI have some specific characteristics as compared to other standards, in particular, they possess a hybrid nature. Certainly, they are created by private initiative, following a procedure defined by public rules and approved by public authorities. Another relevant characteristic is their Business-to-Consumer (B2C) nature, which offers several marketing opportunities, specifically taking advantage of two reputational levels: first, the PDO/PGI reputation and second, the product one. The PS represents the core of designations and, due to its structure, a fully-fledged standard. For that reason firms that use PDO or PGI, 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 involved in the different stages of the supply chain to public authorities; therefore, it reflects different points of views and heterogeneous interests (Dentoni et al. 2012). Usually, the debate among producers 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).

10.4 The Effects of the Protection of Geographical Indications

The effects originating from the registration of a GI as a PDO/PGI may cover different aspects and dimensions. As pointed out by Belletti and Marescotti (2011), the multiplicity and complexity of the effects originated by GI protection are linked to the complexity of OP production systems. In fact, they 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 originate from. GI use and GI effects are therefore very complex, and they are subject to much *exogenous interference*. The analysis of the chains of causality helps to understand the effects of GI protection. Furthermore, GI effects depend strongly on the characteristics of the general framework, legal and institutional, for the recognition, protection and management of all GIs in a given territory. Although EU countries have a single general legal framework, there are many differences between different EU countries in regards to legal and

administrative frameworks, the presence and the effectiveness of accompanying polices and the effectiveness of the protection on the market (London Economics 2008).

When a GI obtains legal recognition and protection, a sub-system of firms using the protected GI according to the rules defined in PS can be identified inside the OP production system. Not all the enterprises belonging to the OP system are able to make use of the protected GI (Barjolle and Jeanneaux 2012). Therefore, the effects of GI protection should be evaluated not only with regards to the enterprises using them, but also to those excluded from the use of a geographical name. Positive effects for the first category can correspond to negative ones in the latter category.

Enterprises able to comply with the PS choose whether or not to use the protected GI on their products when they find it profitable according to their global strategy, depending on the marketing channels and customers preferences and knowledge. The boundaries between the use and non-use of the protected GI are fleeting (the same firm can make use of the registered GI only for a part of its OP production) and vary in time. GI protection can affect many aspects of both the OP system and the single enterprises belonging to it, not only in a marketing perspective (quantities sold, prices, marketing channels, etc.) but also in regards to coordination and governance mechanisms inside the local production system and the supply chain. The protection of GIs can modify the competitive equilibrium inside the supply chain, both at a horizontal (competition between firms at the same production stage) and at a vertical level (competition between different stages of the supply chain, typically farmers and processors). Besides, the protection can exert indirect effects on local economy (for example increasing tourist inflows), on local society (increasing social cohesion and identity), and the environment. The contents of the PS (especially the delimitation of the production area, the characteristics of the production process, and the quality of the product) are key-factors in determining the effects of the protection, both inside and outside the production system. Stricter requirements in the PS guarantee high level of product reputation and recognisability among consumers, but small or poorly equipped producers may be excluded, because of their inability to bear the implementation costs and comply with the rules (Galtier et al. 2013). Moreover, even big enterprises oriented towards mass markets may find it too costly to insert a so-specialized and different production line in their activity. Consequently, the total amount of production under PDO or PGI may not reach significant levels, relegating the PDO/PGI product to niche markets and/or impeding appropriate collective action (Barjolle and Sylvander 2002). On the contrary, weaker rules in the PS simplify the implementation process and increase companies' possibility to use PDO and PGI. This situation strengthens both the number of enterprises using PDO/PGI and total amount of certified product quantity, increasing the opportunity of reaching supermarket and international channels. At the same time, weaker PS' reduce product standardization and preserve variations of the product (i.e. under the same protected GI many different kinds of product may co-exist), but menacing product identity and reputation, as well as confidence among buyers and final consumers. Therefore, big enterprises are normally much more interested in having looser rules for their

production, as to capture the benefits from scale economies. Dentoni et al. (2012) recently explored the impact of individual group members' heterogeneous characteristics, resources and strategies on their level of cooperation on defining the future regulation of GIs. Higher heterogeneity negatively affects members' agreements on the future level of restrictiveness of "Prosciutto di Parma" PDO as a GI and therefore the effectiveness of the collective action.

The analysis of potential impacts derived from GI protection should proceed from a classification and typology of possible effects (see in particular: Belletti and Marescotti 2011). Five main categories of effects can be identified to assess the performance of the GI protection:

(a) **Effects on the structure of the GI system**

GI registration can affect the structure of a GI system. The rules set in the PS normally lead to some kind of exclusion of some businesses (firms located outside the boundaries of the identified production area, firms that do not have the capacity to comply with the specifications, etc.). GI registration may also affect the organization of the production system, the degree of horizontal and vertical coordination between firms along the supply chain (Réviron and Chappuis 2011), and the level of investment and innovation dynamics. In addition, it can exert effects on the relocation of economic activities and the maintenance of more added values to local producers, thus ensuring a positive effect on employment and income in the local economy of the region.

(b) **Effects on the economic performance of the GI system**

Normally, the most important expected effect is an increase of income, that results from the difference between the turnover (price x quantity) of products sold under protected GI and the costs to produce and certify it. On the other hand, the negative effects on enterprises not able to use the protected GI should be taken into account in the analysis. One should not focus only on the price level as an indicator of the *success* of the GI protection, because higher prices do not necessarily lead to an increase in income for single firms and for the whole production system (aggregate). Enterprises often gain premium prices, but they should be compared to prices of similar products, that is to say the price of other similar GI products and/or the price of the product not using the protected GI. Production costs may increase due to the use of the protected GI, not only because of the higher costs of inspection and certification, but also because of the need to comply with the contents of the PS: adaptation of the production process to the new requirements, implementation of the certification system (acquisition of new skills, change in administrative routines), administrative expenses (time to fill out forms), plus mandatory participation in collective organizations managing the protected GI.

Therefore, the final effect on both enterprises' and system profitability is uncertain, and requires a careful evaluation of many aspects. For example, the protection of the GI can also open new markets and/or new marketing channels (such as mass distribution, export), allowing firms to attain a greater diversification and risk reduction. Moreover, the stability of sales could be improved through the

use of the protected GI, or again an increase in firm's reputation benefitting the whole assortment. Generally speaking, the horizontal and vertical distribution of these benefits and additional costs should be carefully analysed, also given the fact that the registered GI can be used more easily by large companies than small producers, or enterprises operating in the downstream sectors of the supply-chain than farmers.

(c) Effects on consumers and markets

The performance of the GI protection on the market (final and intermediate) is strictly related to the capacity to controlling abuses and imitations of the GI, especially when the product displays a strong reputation and is widely imitated. The number of imitations and abuses of the GI in both the home country and abroad, and the number of imitations and abuses sanctioned are key indicators that could be used. The GI registration can increase consumers' willingness to pay by increasing the perception of the product's quality. This assessment should be made not only on the final market (consumer level), but also on intermediate markets, such as retailers, restaurants, mass-distribution firms. The PS can change the quality and the identity of the protected GI product, establishing a higher level of quality of the raw material and/or the final product, requiring traceability systems (which are usually appreciated by customers on modern marketing channels). At the same time, the rules of the PS may lead to a standardization of the product, with a consequential loss of specific qualities of the product.

(d) Economic effects outside the protected GI production system

The registration of a GI and its effective use by enterprises may engage third order effects from outside the GI production system. The value and reputation associated with the GI may act as a lever by other subjects to enable or reinforce other economic activities. Local actors can use the GI product, its reputation and the specific resources that are linked to it (local gastronomy, traditions, landscape, etc.) as tools to enhance the competitiveness of the entire local economic and social system taking advantage of its ability to attract customers and tourists in the production area. As a result, other economic activities can be developed by both GI producers and by other local businesses (hotels, restaurants, museums, company visits, etc.).

(e) Effects on other elements of the territorial capital

GI systems are often strictly related to many local resources as components of biodiversity and other local environment assets (soil, landscapes, etc.), as well as cultural and social capitals. The preliminary step to be made in the analysis of the effects exerted on the territorial capital is the analysis of the relevance between the protected GI and the various components of territorial capital. This analysis should start from the identification of the specific local resources used in the production process (such as local breeds or local vegetal varieties). The amount and ratio of the

agricultural area interested by the GI production is also relevant (a very low ratio means that the potential impact of the protected GI on certain resources—such as water—is probably limited). There can be a distinctive relationship between a GI product and other local material or immaterial resources (e.g. local traditions, fairs, specific habitats).

10.5 PDO and PGI Food Products in Tuscany

In 2015 there were 1244 PDO/PGI registered products in the European Union, most of which related to “fruit, vegetables and cereals”, “cheeses” and “meat products” categories (Chart 10.1). Moreover, a relevant difference between Northern and Southern European countries exists. In fact, more than 70% of PDO/PGI products are produced in Mediterranean countries, in particular Italy (22%), France (18%) and Spain (14%).

Different motivations can explain this wide difference. Climate conditions and the relevance of agriculture for the economy of Mediterranean area, as well as cultural habits and social perception of food can be considered among the most important factors. Still in 2015, the amount of Italian PDO/PGI products was 280 (164 PDO, 116 PGI), elevated from 81 in 1997. Italy is the leader for PDO/PGI number of products, even though the Italian growth rate is lower than the EU rate. “Fruit, Vegetables and cereals” category represents more than 38% of the whole number of Italian PDO/PGI products, followed by “Cheeses” (18%), “Oils and Fats” (15%) and “Meat Products” (14%) categories. More than 45% of PDO/PGI products are concentrated in Northern regions, while in Central and Southern regions these products represent 26 and 29%, respectively. According to the Italian National Institute of Statistics (ISTAT), in 2013 (latest available data) PDO/PGI

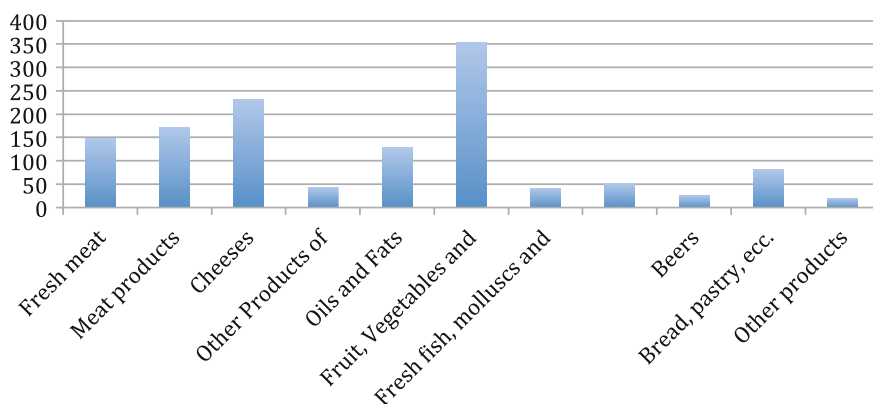


Chart 10.1 Number of registered PDO and PGI products (excluded wines) in the European Union, 2015

productions involved more than 75,000 producers and 7000 processors. Producers worked especially in “Cheeses” category (37%), “Oils and Fats” (25%) and “Fruit, Vegetables and cereals” (22%), and most of them were located in Northern part of Italy (45%). Agricultural land involved in PDO/PGI productions was more than 162,000 ha, 67% of which for “Oils and Fats” category and 32% for “Fruit, Vegetables and Cereals”. Breeding farms involved in the production of PDO/PGI products were around 42.000, most of them concentrated in the North, in particular in Lombardy, Veneto and Emilia Romagna (Chart 10.2).

Tuscany is one of the most noteworthy Italian regions, according to the amount and the relevance of PDO/PGI products. Tuscany is a quite small region in the northwest coast of Italy. Due to the morphological and pedoclimatic characteristics, Tuscany has developed a long and important tradition in agri-food productions. Despite a high level of production costs due to the high fragmentation of farming activity that reduces the opportunity to reach scale economies and to introduce innovations, the relevant reputation achieved all over the world has contributed to the development of international trade. Wine, extra-virgin olive-oil and cheese have gained substantial market shares, thanks to the “bucolic” perception of Tuscany, always related to good quality and safe lifestyle. The importance of the brand “Tuscany” gives a plus to food products, but misuse of the name risks spoiling its collective image. The PDO/PGI represents a way to both exploit this brand name capital and to protect it.

In 2015, the amount of Tuscan PDO/PGI products was up to 30 (15 PDO, 15 PGI). Most of these products can be considered *entirely Tuscan*, because the whole production process has to take place in that area. According to the Italian National Institute of Statistics (ISTAT), in 2013 PDO/PGI productions involved around 12,800 producers in Tuscany (around 17% of Italian producers) and 1.000 processors (around 14% of Italian processors). Tuscany is the region characterized by the wider PDO/PGI agricultural area, around 67.000 ha, thanks to the relevant production of extra-virgin olive oils.

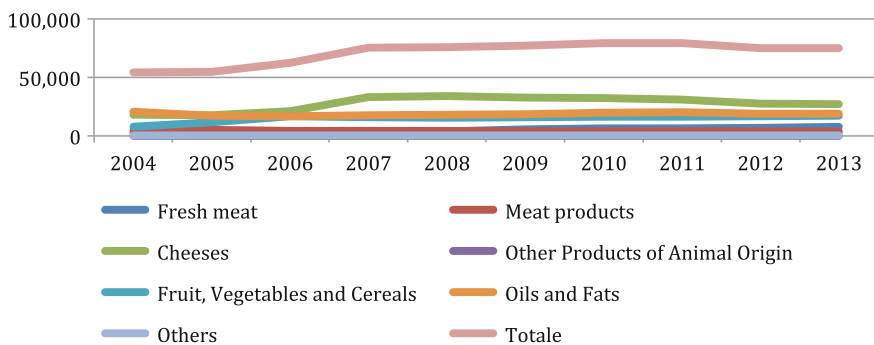


Chart 10.2 Italy: number of producers involved in PDO-PGI productions, 2004–2013. *Source* ISTAT

PDO/PGI production systems in Tuscany can be divided in two main groups (Table 10.1): major PDO/PGI systems and minor ones. The first group is composed by few products (Tuscan Pecorino-cheese PDO, Tuscan Extra virgin Olive oil PGI and Tuscan Ham PDO), characterized by large aggregate volumes (relatively speaking), the presence of some large companies, and regular access to supermarket channels and to foreign markets. The application for the PDO/PGI protection was mainly meant to exploit the brand name reputation associated to “Tuscany” and to clear the market from imitation products or misuses of the name. As a consequence, the contents of the PSs were drawn in a way as to include nearly all the typologies of the product previously produced, without setting too high quality standards. This decision, coupled with the wide dimension of the territory where the production can take place, allows many producers to be able to use the PDO/PGI, but at the same time has some drawbacks. First, these products can be produced in the whole territory of Tuscany, where a high variability in the products typology and quality can be observed, thus causing a reduction in the effectiveness of the message to customers and final consumers. Second, if on one hand the opportunity to access to supermarket channels thanks to the high “appeal” of the brand Tuscany can guarantee quite stable sales to producers, on the other hand it exposes them to the risk of losing control over the brand, due to the unbalanced bargaining power on the two sides of the relationship. Third, the impact these products exert on local development is more “diluted” on the territory.

The second group is composed by most of the PDO/PGI products. These products are characterized by small quantities, traditional/artisan production process, and the preference for direct sales and short supply-chains. Usually, their production area is very small and the number of producers and processors is limited. For instance, in 2013 San Gimignano Saffron PDO and Caprese Michelangelo Chestnut PDO counted only on 3 and 1 producers. The protection granted by the EU represents a tool to protect their products against misuses and frauds, but it is mainly meant to increase (and not only to defend) product reputation and communicate product peculiarities to consumers. Moreover, being locally focused, the effects of the protection are more concentrated on small territories, thus being able to better activate and reinforce rural development dynamics.

10.6 The Fagiolo Di Sorana IGP (Sorana Bean, PGI)

10.6.1 Aims and Methodology of the Study

The Sorana Bean PGI (*Fagiolo di Sorana IGP*) is one of the smallest production systems, which gained PGI protection in Tuscany. Nonetheless, the Sorana Bean PGI can be considered an interesting example of success. Truly, it played an important role for this geographical area, not only from an economic point of view, but also from a wider rural development perspective. Below, the effects related to the GI protection on farmers’ activity will be analysed, especially focusing on how

Table 10.1 PDO/PGI products in Tuscany, 2012

		Producers	Processors/bottlers	Quantity (kg)	Turnover at consumer level
Smaller PDO/PGI production	Chianti Classico Extra Virgin Olive Oil PDO	238	79	119,000	1,680,800
	Lucca Extra Virgin Olive Oil PDO	12	7	7200	n.a.
	Seggiano Extra Virgin Olive Oil PDO	29	14	4352	n.a.
	Caprese Michelangelo chestnut PDO	9	1	1700 (2011)	9200 (2011)
	Cinta Senese PDO	85	27	494,228	n.a.
	Colonnata lard PGI	–	17	165,220 (2011)	377,300
	Garfagnana neccio flour PDO	12	5	1700	14,200
	Garfagnana spelt PGI	32	3	118,400	592,000
	Lunigiana chestnut flour PDO	23	2	1100	17,300 (2011)
	Lunigiana Honey PDO	41	12	44,428	1,074,300
	Monte Amiata chestnut PGI	164	4	400	n.a.
	Mugello chestnut PGI	93	5	35,600	224,900
	San Gimignano saffron PDO	4	4	n.a.	n.a.
	Sorana Bean PGI	22	22	7500	155,000
Bigger PDO/PGI production	Terre di Siena Extra Virgin Olive Oil PDO	114	59	36,000	679,700
	Tuscan Extra Virgin Olive Oil PGI	10,825	706	3,583,871	43,006,452
	Tuscan Pecorino-cheese PDO	832	22	3,067,190	46,315,100
	Tuscan Ham PDO	2306	122	2,927,900	65,456,600

Source: Authors elaboration on data by Qualivita, Ismea, Istat, Consorzi di tutela

farmers decide whether and to what extent to make use of the protected GI, and the benefits they obtain. Moreover, the effects induced by the PGI product on the whole rural economy and community will be analysed.

The research methodology consisted in an analysis of the *logic* followed by local stakeholders during the process that led to the application for the PGI recognition, by examining PS contents (also in relation to similar products) and other official and informal documents. Secondly, some semi-structured interviews were conducted with a representative group of Sorana Bean PGI producers (8 out of the 23 registered farmers), in addition to the director of the Consortium. The first aim of these interviews was to understand the motivations underpinning the choice of firms of using the PGI in marketing their products, underlining strengths and weaknesses. The second goal was to verify the existence and the strength of the different effects on the territory. In particular, we analysed the effects from an economic, social and environmental point of view. The questionnaire was divided into six main sections:

- Firm's characteristics. History and evolution of the firm, type of products (assortment), turn-over, marketing channels importance and evolution, quality certification schemes, investments, etc.;
- Implementation of the PGI standard. Quantity produced, PGI marketing channels as compared to other firm's products, geographical markets, etc.;
- Costs of compliance to PS. Implementation costs (administration), raw material costs, production costs, control and certification costs, participation fee to consortium, etc.);
- Direct benefits from PGI. Prices and incomes, turnover by marketing channel and geographical market;
- Other benefits related to PGI use (protection from imitations and abuses, firm's reputation, assortment, access to specific marketing channels, etc.);
- Effects related to PGI use for the rural community (reduction in depopulation rate, increase in tourism, biodiversity protection, etc.).

10.6.2 Basic Characteristics of the Sorana Bean PGI Production System

Sorana is a small village situated at the bottom of the Appennino Mountains, half way between the cities of Florence and Pisa. The Sorana Bean is a niche product, which can boast ancient origins, chronicled by old documents. The production area includes no more than 660 ha in this marginal valley, crossed by a little torrent, and characterized by low level of urbanization, industrialization and infrastructures, and for the presence of very small farms where farmers are often non-professional (retired, hobby or part-time farmers). The biggest part of the valley is in fact covered with woods, while open fields are cultivated with olive-trees and some horticultural products, and in particular beans, using traditional methods. These

cultivated fields play an important role for both landscape and habitat functions. High humidity levels and low temperatures ranges characterize the area. Mountains, protect it from cold wind in winter and from sun exposure in the summer. These particular pedo-climatic features contribute to the distinctiveness of these beans: small dimension, pearly white colour with pink veins, and a very thin skin. Traditionally, producers cultivate this bean on the sand lands of the torrent banks (area named *Ghiareto*, traditional production area where yields are lower and product quality higher due to special pedo-climatic characteristics that seem to give the bean a particular texture and flavour), even though the production area has been more recently extended to the surrounding hills (area named *Poggio*). With time, production methods have not been subject to relevant modification: seeds are selected from the last crop, harvest time is from half August to half September and this phase is manual, beans are exposed to sun for 3–4 days and packed in small plastic bags. The Sorana Bean is a climbing pulse bean, which belongs to the *Phaseolus vulgaris* L. species and can reach more than five metres. The seeds used today are obtained from the plants that have been on site for many generations, thus creating an ecotype entirely adapted to the local environment. Firms produce two different varieties of Sorana bean: white Sorana bean and red Sorana bean. While the white bean is the most famous and it benefits of a high recognisability and reputation, the red one is quite unknown for consumers and less appreciated by local population, and, in the last decades it risked extinction. Farmers in Sorana valley are very few, and most of them are non-specialised, being retired or undertaking other work. Traditionally, farmers directly manage 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. Consumers pay a price six to seven times higher (20–2 euros/kg) than for a *standard* bean.

10.6.3 The Application of the PGI and the Drawing of the Product Specification

For a long time, the reputation of Sorana Bean did not exceed the surrounding areas and trading was a marginal activity. In time, the high reputation of Sorana bean, coupled with unclear rules on the use of its name, brought problems of misuse and abuse of the name on the market. Following the approval of the EU regulation 2081/92, Sorana bean producers started considering the PGI-application. The small number and physical proximity of producers favoured a direct, informal interaction, in particular in the Ghiareto area. The Associazione dei piccoli produttori del Fagiolo di Sorana Il Ghiareto (Association of small farmers of the Sorana Bean), founded in 1994, managed the PGI-application process, in order to reach an agreement between farmers about the rules of the PS. Some conflicts emerged between farmers located in Ghiareto and Poggio. The latter benefited from higher yields per hectare and thus lower production costs. However, by extending the

historical production area to Poggio one has also increased the quantity produced, the visibility in the market and the possibility to carry out collective promotional activities. In the end, the PS has been drawn taking into consideration more traditional production techniques, common to non-professional farmers with less productive land in the area of Ghiareto, which historically gave the reputation of the product. Producers agreed on the PS rules, deciding to extend the PGI production area to the entire Sorana valley, so to include the Poggio area. The municipality of Pescia and regional public authorities supported this solution, given the narrowness of the area and the limited amount of production. At the same time, Ghiareto producers were allowed to add a special mention on the label to highlight the most reputed sub-area of production.

The extension of the production area to other historically less traditional areas, like Poggio, has increased the quantity produced by the whole system, the visibility of Sorana bean on the market, and the possibility to carry out collective promotional activities. Other important points agreed in the PS were the ban of chemical herbicides to grow the beans, and a relatively low maximum yield per hectare (20 quintals), lower than the average yield in Poggio area, but higher than the Ghiareto one. Despite the conflicts between upper and lower areas, the application process allowed the cooperation between farmers to achieve a common aim. Moreover, the process fostered the motivation to produce high quality beans and increased the local pride of producers. The very PGI application process, thanks to local and national media news about the PGI was reported frequently by media - boosted the reputation of Sorana bean favouring its marketing. Traceability and quality control enhanced product quality on the final market and the access to new markets and marketing channels (Quiñones-Ruiz et al. 2016).

In conclusion, the rules included in the PS were the result of a complex process of negotiation, which involved heterogeneous stakeholders, from farmers to local public authorities. It is worth underlining the presence of local public authorities in the process (Municipality, Tuscan Regional Administration, Chamber of Commerce), that highlights how the protection of the geographical name and the support to local farmers is not only a matter of the specific supply-chains and its enterprises, but involves the whole territory, as it both shapes its identity and cultural values and traditions, and may contribute to the whole economy of the area by inducing positive effects on touristic activity and preventing local people to emigrate to other areas.

10.6.4 The Use of the PGI

From a total number of 40 bean producers in Sorana valley, approximately 20–22 actually use the GI certification. The other mainly non-professional producers do not need the GI certification, as many of them sell small quantities of beans to friends and relatives. Today's production is characterised by very low quantities and high sale prices (22, 00 euro/kg on average, compared to 3–4 euros/kg for

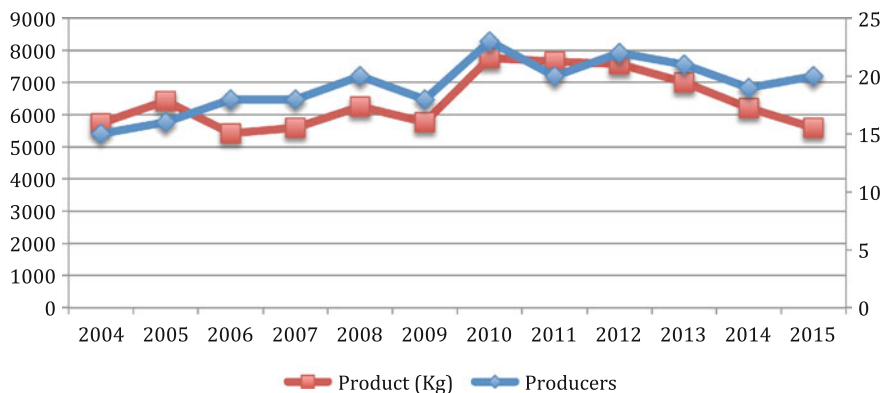


Chart 10.3 Sorana Bean PGI: number of producers (*right axis*) and production quantity (*left axis*, kg). *Source* ICEA (inspection body of Sorana Bean PGI)

conventional beans). Mostly, Sorana beans are sold through direct marketing. Tuscany is the prevalent consumption market, although a small share of beans is sold to restaurants and agri-food shops in Northern Italy. The PGI certified production has grown from 57 quintals of certified beans in 2004 (first year of PGI implementation) up to more than 80 q. in 2010, before a fall in the following years due to adverse weather conditions (Chart 10.3). Most production is carried out by small farms often managed by non-professional producers (retired, hobby, or part-time). The number of producers which use the PGI has slightly grown over the years, but still remains very small (15 in 2004, 20 in 2015). In fact despite the high price level, it is difficult to extend the area under cultivation, as available land is scarce and highly fragmented. On the other hand the slope of fields and their small size do not allow to mechanize the production, which remains thus highly labour-intensive.

Moreover, farmers produce on average 280 kg of dry bean, which means approximately an average turnover of 6000 euro (value at final consumption). Farmers' production ranges from a maximum of 1905 kg to a minimum of 45 kg (2015), highlighting a high heterogeneity of producers. Indeed, the production system is composed by a few large (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.

10.6.5 Effects from the Use of the PGI

The results of the research show an interest in using the PGI by market-oriented producers, essentially due to the fact that market price is by far higher as compared

to conventional beans, while additional production costs (included inspection and certification costs) are minor. The choice to use the PGI is almost uniform among producers; farms opt for using the PGI certification for the whole production. Specifically, the level of use of PGI is the highest according to both the number of users, compared to potential ones, and the certified quantity, compared to the whole production. Indeed, only a marginal amount of Sorana beans are not certified as PGI, since they are used for personal consumption, to obtain seeds for the following year, or simply they do not comply with the PS. 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 with the fact that most farmers are pensioners or part-time farmers, do not allow 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. The banning of the use of chemical herbicides, the product selection and the packing phase are the main aspects that create higher costs to farmers, due to additional work.

In addition to open interviews, a specific enquiry was made in 2014 to a sample of local actors about their perception about ex-post effects of the PGI. A total of 8 people – 3 public actors and 5 producers – were asked to express their level of agreement on a list of 19 potential effects on a scale from 1 (strongly disagree) to 5 (strongly agree). Table 10.2 reports the results of this enquiry.

Improved product identity and perceived quality in the final market, and related satisfactory price premium, are the most perceived benefits from stakeholders, with an average score of 4.5 and 4.4 over 5.0 respectively. The high market price is the main element that encourages producers to use the PGI. The morphological characteristics of this valley restrict the opportunity to introduce innovations or new techniques, affecting producers' activities and reducing their options. Therefore, Sorana Bean PGI is the best and unique product they can cultivate for economic results. Farmers perceive the importance of this product and they pay specific attention to keep the high quality level. As previously mentioned, the strict rules defined in the PS have contributed to increase the product reputation and to give a strong characterization, which has made Sorana Bean PGI easily recognisable among consumers. PS has 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. Whereas most farmers are pensioners or part-time farmers, Sorana Bean PGI represents an important opportunity to increase their traditional incomes, and therefore they prefer to consolidate the exclusive product image, through a limited supply. This choice strengthens the product position on the market, but it represents a huge limit to innovations. On the other hand, professional farms have an opposite point of view. They perceive the maximum yield rule as an important restriction, which limits the experimentation of technical innovations, the recovery of new lands, the access to new market channels, in particular supermarket ones. The access to supermarket channels is the most criticized element, and represents a daily topic of debate. Professional farmers would increase the production

Table 10.2 Benefits perceived by stakeholders from registration of Sorana bean PGI

Benefits after registration	Average	Coefficient of variation (%)	Public	Private	Difference in %
Improved product identity and perceived quality in the final market (both customers and consumers)	4.5	11.1	4.3	4.6	6.2
Satisfactory price premia of the Sorana bean on the final market	4.4	11.1	4.0	4.6	15.0
Positive effects on the environment and landscape.	4.4	11.1	4.0	4.6	15.0
Retaining of revenues and employment in the GI geographical area.	4.3	10.2	4.3	4.2	-3.1
Improved regional knowledge, self-confidence and identity of producers	4.3	10.2	4.0	4.4	10.0
Introduction of a traceability and quality control logic in firms	4.3	15.6	3.7	4.6	25.5
Improved access to new marketing channels (e.g. supermarket chains. HO.RE. CA.)	4.1	8.0	4.0	4.2	5.0
Positive effects on rural development (e.g. agro-tourism)	4.1	8.0	4.0	4.2	5.0
Development of collective marketing activities	4.1	8.0	4.0	4.2	5.0
Price premia sufficiently transferred to farmers.	4.0	12.5	4.0	4.0	0.0
Improved access to local/regional market	4.0	12.5	4.0	4.0	0.0
Increase of firm reputation and support in selling other firm's products	3.9	23.9	3.0	4.4	46.7
Increase of the market power of farmers	3.8	22.1	3.7	3.8	3.6
Improved access to new markets in EU countries	3.5	24.7	3.3	3.6	8.0
Improved access to new markets outside the EU	3.0	23.6	3.3	2.8	-16.0
Reduction/discouraging of free-riding (decrease of abuse and imitations)	3.0	44.1	4.0	2.4	-40.0
Increase of horizontal coordination between farmers	2.9	32.2	3.7	2.4	-34.5
Strengthening of Interprofessional organization	2.6	18.4	2.7	2.6	-2.5
Improved long-term relations/communication and vertical coordination between farmers, packers and retailers	2.4	20.4	2.7	2.2	-17.5

Source Authors

to become a stable supplier and to gain quite constant incomes. Even though this strategy may add new opportunities for the whole production system, the exclusive image of Sorana Bean PGI would be compromised due to the access to mass distribution. Therefore, some conflicts emerge between the two different production areas, “Poggio” and “Ghiareto”, 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 higher quality of their product as compared to those from Poggio, complain about the excessively low prices set by professional farmers, who are likely to confuse the average consumer and to reduce the reputation of the Sorana Bean IGP on the market. Producers underline that PGI certification plays an important role in reducing imitations and misuses.

The high price differential between Sorana Bean PGI and other traditional beans has encouraged frauds, decreased due to the growing controls and packaging rules, in particular the ban of unpacked trade. Moreover, the PGI has helped producers to strengthen marketing relationships, in particular with unconventional clients. PGI logo represents insurance for consumers that are more confident in purchasing this product, despite its high price. The PGI increased the fame of this particular bean and, consequently, favoured 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 than 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 and, consequently, the chance of also selling other products raises. Farmers underlined that Sorana Bean PGI plays an important role in the economy of the area. The low level of urbanization, industrialization and infrastructures of this valley influenced its economic development and the social fabric dynamics, characterized by a progressive reduction and ageing of the population. The opportunities related to PGI have partially mitigated this phenomenon, thanks to the positive effects registered on the economic sphere. The profitability of the PGI bean allowed for the survival

of agriculture in this valley - which otherwise would have been abandoned due to difficult growing conditions - thus preventing for abandonment of land and contributing to the preservation of landscape and habitat equilibrium in this delicate area. Stakeholders in fact cite positive effects on the environment and landscape as the third benefit with an average score of 4.4 (Table 10.2).

Immaterial effects of GI protection are also quoted by producers and public actors as highly relevant. Certainly, the GI registration improved self-confidence and identity of producers and other local people, thus contributing to the strengthening of local social capital. For this reason GI protection acted as an incentive to restore some agricultural productions (especially reclaiming part of the torrent banks), and offered new chances to youth. Besides, the whole territory benefited from the Sorana bean's notoriety gained through the PGI, which supported the valorisation of other products such as local extra-virgin olive oil or by promoting rural tourism (some restaurants offer special bean menus) (Belletti et al. 2014). In fact, the reputation and success of the PGI increased the exposure of the valley in the media, also due to the intense promotional activity carried out by the producers' association, raising opportunities for local tourist industry. Agri-tourisms and restaurants have gained the most from the PGI success. This marginal valley, cut off from the main touristic itineraries and attractions of Tuscany, has succeeded in developing its own touristic inflows, in particular thanks to the relevant communicative effort of Sorana bean PGI producers. Additionally, the producers' association promotes annual festivals, to celebrate the seeding and harvesting time. These festivals are important opportunities for producers to increase Sorana Bean PGI sales, as well as for other stakeholders, such as restaurants, agritourisms, etc., to take advantage of tourism flows.

10.7 Conclusion

The peculiarities of Origin Products – the strong link between quality and territory, the use of traditional production process, their collective and cultural dimension—offer new opportunities to producers to escape price competition in a globalizing world, and are coherent with increased attention towards multi-functionality and diversification of agricultural and rural activities. The vitality and in some cases the survival of rural regions are occasionally endangered, particularly where local human and natural resources cannot easily be managed so as to find new bases of competitiveness. This is particularly true in marginalized rural areas where, due to a complex set of reasons - infrastructural, structural, geographical, cultural—it is not always easy to achieve price competitiveness, and other forms of leverage are not available. The crisis that many rural areas are facing may endanger their local economies, exert negative effects on the quality of the environment, threaten social relationships and livelihoods, and cause a loss of culture and traditions. The

valorisation of Origin Products can prove to be an important device to activate and consolidate the dynamics of sustainable rural development. In particular, the legal protection granted to Geographical Indications can reveal to be an effective tool to foster rural development, provided that it is inserted in a wider and coherent network of actors and actions. By means of the case study of the Sorana Bean PGI, we showed how a marginalized territory could benefit from the legal protection of a Geographical Indications. Indeed, the protection of Sorana Bean as PGI exerted positive effects both for producers and for local development. Despite some relevant limits for the production system and its development (non-professional farmers, small production level, preference for direct sales, etc.), the PGI has played a crucial role in protecting the name of Sorana beans against misuses and frauds, safeguarding its strong image, which is the basis of its success among consumers. The decision to include some strict rules in the PS has contributed to forming a strong identity of the product and has encouraged the adoption of a PGI scheme by farmers. In particular, imposing a relatively low maximum yield per hectare has moderate the competition among *big and small* producers. Moreover, these rules have reduced the possibility to obtain different quality levels of the Sorana Bean PGI. Therefore, the image and reputation of the product have been well defined and made it easily recognizable by consumers. Moreover, the very process of application for the PGI has delivered numerous benefits (Casabianca 2003), reinforcing cohesion among farmers by bringing producers together when no association was previously active in the area. Through the producers' association, the interests of producers are now represented in negotiations with agencies and institutions. Finally, by encouraging the defence and promotion of the bean, the association has acted as a catalyst for the involvement of other local and non-local actors. The high reputation and the exposure achieved by Sorana Bean PGI have generated positive effects not only for producers, but also for local stakeholders. For example, local public institutions have funded educational initiatives with local schools related to the bean and the valley history, and the producers' association has developed scientific research projects with the University of Pisa and the University of Florence. Moreover, tourism and local industries have exploited this opportunity, trying to find new businesses and fostering the social environment. Therefore, the initiatives taken by the producers' association, prompted and supported by an *external* network of local public and private organisations show how the PGI helped to activate new connections by capturing the new social demand for *multi-functionality* (product quality, environment, traditions and culture, ethics, social relationships). It is also for that reason that the engagement of public bodies in GI registration processes and GI protection can be justified, also for the *small* products whose turnovers are not significant but which are able to generate other positive effects at local level, in both economic and non-economic spheres. In conclusion, the legal protection of Geographical Indications should not only be considered as a *legal* tool to defend a particular intellectual property right and modify the markets, but also as leverage to foster rural development paths even when the economic dimension of the production system of the protected product is apparently *small*.

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