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on the internationalisation process
of agro-food products**

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**Contributed Paper prepared for presentation at the 105th EAAE Seminar
'International Marketing and International Trade of Quality Food Products',
Bologna, Italy, March 8-10, 2007**

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The roles of geographical indications on the internationalisation process of agri - food products

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Summary

The purpose of this paper is to analyse the roles Geographical Indications (PDO and PGI) can play in the internationalisation process of some small-medium scale agri - food products from Tuscany (Italy).

The analysis of the selected case studies highlighted among the driving motivations of firms for the use of PDO/PGIs on international markets both defensive roles (in particular for the function of defending from abuses in using geographical name), and offending roles against competitors (as in the case of product differentiation or exclusive right of benefiting from the reputation of origin). Besides, there is also a strictly commercial role in terms of giving an answer to the explicit request of certifications from customers.

PDOs and PGIs can represent an internationalisation tool, although their effectiveness depends on several factors that rely on the characteristics of the product, of the production system (rate of fragmentation, organisation, role of collective organisations...) and of the firms in particular, as well as on the characteristics of the destination market.

KEYWORDS: Quality Food Products (QFPs), PDO and PGI, Small and Medium Enterprises (SMEs), Marketing strategies.

1. Introduction

The success of the market of Origin Products¹ is due to their suitability in responding to consumers' needs in terms of genuinity and authenticity in front of food massification, thus rediscovering old cultural traditions; this success pointed out the usefulness of agrifood product's territorial origin highlighted in the label to become a strategic tool for differentiation.

The EEC Reg. 2081/92 (recently substituted by EC Reg. 510/2006) arranged this strategic tool through the introduction of the Protected Denomination of Origin (PDO) and Protected Geographical Indication (PGI), two quality signs aiming at pointing out the link between the production process of an agri - food product and its territorial origin.

The use of suitable marketing strategies for PDOs and PGIs is an issue which has recently been faced by economic literature. Up to now, there is no much evidence on the effects the application and use of PDO and PGI may have on the internationalisation of agri -food firms. Due to the fact that firms producing PDOs and PGIs are mainly Small and Medium Enterprises (SMEs), often marketing strategies are difficult to implement, both in terms of costs and supply availability to orientate consumer's demand.

¹ We define as Origin Products all those products fitting the TRIPS definition for Geographical Indications, apart from the fact that they are labelled/designated by (and hence exchanged on markets with) a geographical indication or not. The use of a geographical indication to indicate an OP is in fact a step in the process of valorisation of the product and it is a result of the behaviour of the actors (local and non local). For further information on OPs and GIs in the world, both from economic and normative point of view, see the Siner - GI project results (www.origin-food.org).

The aim of this paper is that of verifying the roles PDOs and PGIs play in the internationalisation process of agri - food firms: when and why do firms use PDO-PGI for selling their products on the international market? Are they satisfied? Are PDO-PGI a valuable tool for helping firms in their internationalization process? At what conditions?

The paper starts from an analysis of the literary background regarding the role of origin products in international markets (par.2), focusing on the specific contribution of PDO/PGI products (par.3). After having identified the driving motivations leading firms to the use of PDOs and their subsequent satisfaction (par.4), and given a short description of the case studies examined (par.5), the paper puts in evidence the results of a specific survey carried out on the factors of success and limits of the use of PDOs and PGIs in internationalisation, both at an aggregate level (par.6), at product-type level (par.7) and at single firms level (par.8). The paper ends with some concluding remarks (par.9).

2. *Origin products in international markets*

The saturation of the national market and the growth of consumers' purchasing power in some emergent countries represent important triggers for the penetration of new markets for Quality Foods Products (QFPs). Among QFPs, Origin Products (OPs) are a segment of particular interest, due to their special qualities deriving from the strong link with the territory they originate from.

The globalisation of consumers' preferences and new technologies in production, communication and information give also to agri - food firms producing OPs new opportunities to internationalise themselves (Galizzi, 1990; Mellano, 2000).

Internationalisation of agri - food firms can be seen from two different (but strictly interrelated) points of view. The first one is internationalisation of all production processes, which can be pursued through the creation of new firms on foreign markets (namely 100 percent ownership of company overseas by start - up or acquisition, participation to capital of foreign companies through investments like Foreign Direct Investment, or less invasive forms of participating in global markets as partnerships or joint - ventures) or more simply through delocalisation of one or more phases of the production process (Galavotti, 2005). On the other side, there is internationalisation of commercial channels, which is nowadays more and more interrelated to the production process: this relation depends on targets and kind of investment (many investments are made in order to increase penetration of foreign markets, firstly penetrated through export activities).

However, agri - food firms need suitable tools in order to take the opportunity offered by internationalisation: these tools are capabilities to invest both in physical factors, as new production factories and, above all, in non-physical factors as know-how, organisational and managing capabilities which permit the innovation and valorisation of the product (Galizzi, 1995).

Internationalisation of commercial channels is the most relevant aspect of the internationalisation process for agri - food firms producing OPs: in most cases they implement traditional production processes using local raw materials and local know-how; hence the internationalisation of the production process is in most cases impossible unless abandoning the basis of specificity of the OPs, consequently firms have to orientate their internationalisation process on commercial channels and markets, rather than on the production process.

In addition, firms producing OPs are mainly Small and Medium Enterprises (SMEs) and this often does not allow the implementation of "traditional" marketing strategies both in terms of costs and of a sufficient supply of the product to orientate the consumer's demand. Difficulties met by SMEs producing OPs in penetrating new long - distance markets are often due to inadequate marketing and production strategies. According to Albisu (2002), many firms belonging to an OP supply chain tend to be more product oriented than market oriented and, even if pride of the product and loyalty to the traditional production

techniques may generate highly valuable product qualities, it is not a guarantee for a successful sales strategy. The success of promotion of OPs depends on careful implementation of effective marketing strategies, for consumers use a variety of signifiers to identify origin and authenticity, such as the place of purchase and/or consumption, physical attributes, and mechanisms that communicate heritage (Rangnekar, 2004).

In particular, selling Origin Products on international markets can rise problems in highlighting the link with the territory and in recognition of meaning of “traditional” and “typical” terms: consumers have different cultural backgrounds and ideas of which characteristics give “typicality” to agri – food products (use of local raw materials? Production process in a certain area? Historical production process? And how old a process has to be in order to define it “historical”?)

Other problems can be determined by cases of misleadings and frauds of OPs. Nomisma, together with INDICOD, has recently published a report (Nomisma, 2005) on the usurpation and misuses of the names of Italian OPs, taking in exam the imitations of pasta, wine, cheese and other Italian food products on the USA market, and trying to estimate the (large) economic damage resulting from non-Italian made products which imitate and/or catch Italy’s notoriety.

3. *Expected contribution of GIs on internationalisation of OPs*

Internationalisation of commercial channels and markets implies more complex transactions and consequently requires, coupled with strategies to increase consumers awareness on quality of food products, more information on traded products, in order to face informative problems and asymmetries as different typology of consumers, different food safety regulations and distribution practices. In this sense penetration of international markets requires the use of quality signs both as minimum standard in transactions and differentiation/valorisation tools (Marette, Crespi and Schiavina, 1999) in particular for those agri -food products which are characterised by a specific quality (Ménard, 1996; Barjolle et al, 1998).

In addition, the differentiation of consumption patterns and the growing demand of information lead agri-food firms to look for a competitiveness based on quality issues (in its wide meaning); this, coupled to the need of acquiring and managing control over a more globalised production process and supply-chain, is pushing for regulating supply-chains through severe and often private-own, public and international minimum quality standards (ISO 9001, EurepGAP, IFS, BRC, etc.).

The rise of quality standards risks to cut off Origin Products, producers and countries which are not sufficiently equipped (structures, know-how, support services, etc.).

It is argued that as large retailers take interest in local and regional food (acting on evidence of increasing consumer interest), they invoke certification schemes and standards that allow them to retain control. Consequently, globalisation tends to act as a promoter of Geographical Indication regulation and recognition schemes (Belletti and Marescotti, 2006).

The EEC Reg. 2081/92 (recently substituted by EC Reg. 510/2006) created the Protected Designation of Origin (PDO) and the Protected Geographical Indication (PGI), two quality signs aiming at pointing out the link between the production process of an agri - food product and its territorial origin and guaranteeing protection against misleading uses of the geographical name.

The new EC Reg. 510/2006 offers PDOs and PGIs for signalling and differentiate QFPs linked to the territory, “In view of the wide variety of products marketed and the abundance of product information provided, the consumer should, in order to be able to make the best choices, be given clear and succinct information regarding the product origin ” (EC Reg. 510/2006, 4th “whereas”).

Both PDO and PGI share the same normative system and procedures for the application, and give the same guarantees to consumers, and the same rights to producers, but differences between these two signs depend on how closely the quality specificities of the products are linked to the geographical area of which they bear the name. The Protected Designation of Origin (PDO) is meant for those products which show an objective and very close link between their features and the area of which they bear the name (including human and natural factors, such as climate, soil quality and local know – how); the Protected Geographical Indication (PGI) also designates products linked to the area of which they bear the name but with a more flexible objective link.

PDOs and PGIs include both the so-called niche commodities, which are produced on a small scale in very limited areas where the interaction between the variety or species and the environment gives particular qualities to the product, up to large scale products. However, although the contribution of registered foods to Italian agri - food economy is far from marginal (it is estimated - wine excluded - about 7.2% of the agricultural added value) with a turnover of over 3,1 billion euro at production and 8,6 billion euro at consumption (INDICOD - Nomisma, 2005), firms producing PDOs and PGIs in Italy are mainly Small and Medium Enterprises (SMEs).

Most studies have been dedicated to analyse PDOs and PGIs effects on producers, on consumers' behaviour, on supply chain, while recently their impact on local development, rural development and environment has arisen among new research targets. However, the use of suitable marketing strategies for PDOs and PGIs is an issue which has recently been treated by economic literature and up to now there is no much evidence on the effects the application and use of PDO and PGI may have on the internationalisation of agri – food products.

Agri - food firms are registering a growing interest in PDOs and PGIs and have great expectations on the positive effects they can exert on international markets. Some studies (Belletti, 2001, Anania et al., 2004, Pacciani et al. 2003) underline the fact that PDO and PGI labels may act as a “key” to open modern market and/or long distance commercial channels (for example, export channels): in fact, amongst potential effects that PDO and PGI labels may have on markets there are “the market-cleaning effect”, thus the exclusion of non-authentic origin products, the creation process of reputation and visibility for labelled products, the access to modern and/or long commercial channels (especially those which show higher informative gaps). In particular, due to the complexity of OPs systems, the presence of a PDO or a PGI in the market can exert a “reassurance” effect on consumers and customers, out of territory the of production (Tregear et al., 2004): this effect derives both from an independent and qualified third party guarantee (Anania and Nisticò, 1999) and from the Code of practices, which establishes shared minimum standards (among producers), creates references and reduces information costs, minimizing moral hazard (Akerlof, 1970). In this way, these shared minimum standards allow more compatibility between supply chain actors and ease the access to new markets and new commercial channels (Belletti, 2001): in this sense PDOs and PGIs can become an important competitive lever for agri-food firms which want to penetrate new long-distance markets. In fact, the opening of international markets and trade leads to both a growing demand of information from consumers, and to the use of “halo country effects” (for reputed geographical names) by sellers (Porretta, 1992; Belletti and Marescotti, 2006).

Some difficulties for agri - food SMEs to enter new markets can be determined by transaction costs (Coase, 1937; Williamson, 1975), such as bureaucratic costs associated with managing and coordinating the supply chain, opportunity cost of time used to communicate with farmers and coordinate them, costs for testing potential suppliers/buyers (on the side of trade) (Hayes, 2000), and information and research costs on the side of consumers: in this sense the use of PDO or PGI helps to identify subjects and products attributes, reducing transaction costs both from trade side and the consumers one.

The presence of the Code of Practices, in addition, helps agri – food firms to codify management procedures and increases internal coordination between phases of the supply chain: this can ease implementation of internationalisation strategies either in terms of producers' improved confidence toward management functions (planning, organising, leading and controlling), or collective marketing initiatives on foreign markets due to the collective dimension of PDO and PGI, often amplified by the presence of collective organisations as Consortia (Canada and Vazquez, 2005).

However, the internationalisation phenomenon does not have to be considered only a penetration process of new or long – distance markets. For agri – food firms internationalisation also means integrating at global level both markets and economies, through different ways (Nomisma, 2005; Zucchella and Maccarini, 1999; CNEL 1992). For example, the consumption of OPs is strictly linked to tourism, in particular to the eno - gastronomic tourism which in Italy is obtaining an increasing success (wine/olive oil/cheese routes), and to the more general re - discovery of the values of rurality, within a typical urban, middle-class trend: this permits SMEs producing PDOs and PGIs to build up networks (like Wine and Flavour Routes) and create synergies with other sectors, like tourism and handicraft. In order to create networks PDOs and PGIs, SMEs have to rediscover the collective dimension of their system, joining to Consortia and Associations, which are, in most cases, a key figure for application and management of the PDO or PGI and for promoting activities.

4. Objectives, data and methodology

The purpose of this paper is to analyse the impact of Protected Designations of Origin (PDO) and Protected Geographical Indications (PGI) on the internationalisation process of some small-medium scale agri - food products from Tuscany (Italy) which have already borne the European geographical protection.

Our focus is on the different functions PDOs and PGIs are able to absolve, by exploring them on the specific context of international trade and analysing their impact from the production perspective.

Specifically, the main objectives are:

- to determine which are general motivations of agri - food firms for using PDOs and PGIs, with special reference to foreign markets;
- to assess the level of utilisation of the denominations by the firms and the incidence of exports of PDOs and PGIs on total firms' turnover;
- to characterise the marketing channels mostly used;
- to verify the level of satisfaction of the firms using the denominations also in relation to the motivations they had;
- to identify the role of collective organisations managing the denomination (Consortia in particular).

In order to reach these objectives, we carried out a case study analysis focused on the firms and the collective organisations involved in the internationalisation strategies. Due to the diversity of involved firms in terms of dimensions, interests in internationalisation, attended foreign markets and commercial channels, reached export data and role of collective organisation as Consortia, a diversity of results was expected in order to describe the impact of using PDOs or PGIs in the internationalisation process.

This paper bases its analysis on four case-studies (Olio Toscano PGI, Olio Chianti Classico PDO, Pecorino Toscano PDO and Prosciutto Toscano PDO) which have been selected from a wider survey carried out in Tuscany in the years 2005 - 2006 on some OPs of the region. Each case study analyses the production system of the agri - food product, starting from the characterisation of the product, going into the structure, functioning and evolution of the supply chain, with special regard to the description of its enterprises, their organisation, problems and main commercial channels. Considering the purpose of the paper a special

attention has been paid to the role of exports and in particular to the use of the geographical indications on international markets.

Selected products are representative of main Tuscan exports of agri - food products labelled as PDOs and PGIs. The choice has also been addressed to products that bear a well - known denomination (Toscana and Chianti) and have therefore a particular appeal to foreign markets.

As far as selection of firms is concerned, we chose all the firms which are charged of the decision of using the PDO-PGI sign (bottlers for extra-virgin olive-oils, cheesemakers for Pecorino Toscana PDO, and seasoners for Prosciutto Toscana PDO); all these firms produce and then export PDO and PGI products. In the case of production systems with a high number of export - oriented producers, we identified the firms to involve in the survey through a *critical case sampling* methodology, in order to reach a good coverage of the typology of firms involved in the supply chain. The chosen actors are those who represent a key-element for the understanding of the matters covered by the study or have a particular capacity of influencing the development of the internationalisation process. Therefore, our aim was not so much to build a statistically representative sample, as to maximise information on a specific subject.

We adopted mainly open qualitative interviews, a choice motivated by the fact that our goal was not so much to gather quantitative information as to understand the motivations and satisfaction level of producers using PDOs or PGIs in their internationalisation processes, as much as characterising the problems and opportunities of the different marketing channels and the role of collective organisations. As far as more quantitative aspects are concerned, we also collected data either from each selected firm, or Consortia's representatives in order to gain an overview on the main trends of PDO and PGI products in terms of production volumes, PDO/PGI total firms' turnover and foreign sales.

The tool we used for interviewing producers was a semi-structured questionnaire in way to get information related to each of the main research objectives. The questions we proposed were partly open ones, especially in the case of more qualitative aspects of the survey, while remaining questions were multiple choice. We interviewed a total number of 16 firms belonging to 4 selected production systems: Olio Toscana PGI, Olio Chianti Classico PDO, Pecorino Toscana PDO and Prosciutto Toscana PDO.

In addition, the representatives of all Consortia were interviewed in depth, due to the fact that the action of such institutions has a strong impact on associated firms, especially for small and very small enterprises which generally cannot bear the burden of international marketing on their own resources, experiences, capabilities and management skills.

5. The case study analysis: description of the production systems

The aim of this paragraph is to give a short description of the main features of the selected production systems, in terms of typology of firms involved in the process, marketing channels used by firms, role of collective organisations, and level of internationalisation. Particular attention is given to the certified (PDO-PGI) product, which is often a minor part of the total amount of the production of the firms involved in the production process, depending on the structure and strategies of the firms, on marketing channels used, on the "strength" of the PDO-PGI itself in collecting consumers and customers attention.

A special focus is also given to the level of internationalisation of firms, that is still limited in average and very diversified between different products and even within the same production system.

5.1 The Tuscan extra – virgin Olive Oil PGI

The “Toscana” (Tuscan) extra-virgin olive oil is a product which enjoys great, longstanding “renown” in Italy and also internationally. The PGI was obtained in 1998, in particular in order to face problems of misleading of the renown name “Tuscan” for olive oil.

The production system is very articulated, managed by a variety of professional and non-professional actors (olive growers, olive mills, olive pickers, merchants, both small and industrialised mixing and bottling firms) and characterised by a very strong fragmentation (in 2002/03, 2.500 tons was certified, produced by 9.900 olive growers, 244 olive-oil mills and 258 bottlers).

The production is directed toward heterogeneous marketing channels, from very short (direct sale by the olive growers) to long channels (large bottling firms selling to supermarket chains). More than 60% of the total PGI production is sold through large retailers, followed by intermediates and wholesalers, while only just 4% of the production is distributed through direct channels (direct sale to final consumers). Internationally, the main channels used in order to export olio Toscano PGI are buyers of foreign Large Retailer and middle-men, as foreign importers and/or national exporters (most firms exports through this channel) even if direct sales to foreign consumers are growing in importance.

Tuscan extra-virgin olive oil PGI is the most export oriented product among Italian recognised PDOs and PGIs. In 2003, its sales relied on foreign markets for more than 66% of all production volume (Nomisma, 2005), gaining during the last five years an increasing importance in terms of quantity and value coming from international trades. Main foreign markets for Tuscan olive oil are non - European countries, in particular the most important market is represented by United States which accounts for more than 60% of the total exported volume of protected product, (which amounts 13.413 q in 2006, for a value of more than 16,500,000 euros, thus the 65% of total production value).

Within the supply-chain, owing also to the fragmentation of the production system, the role of the Consortium (Consorzio di tutela dell’Olio di Oliva toscano) is particularly relevant for the services offered to the members, which represent all the Olio Toscano PGI producers.

5.2. The Chianti Classico extra - virgin olive oil PDO

The Chianti Classico extra virgin Olive Oil is a new denomination, that obtained the PDO in the year 2000, but enjoying the high reputation of a geographical name well known for the production of wine.

The first phase of the production structure (olive growing) is very fragmented among many farms, most of them run by the owner’s family. Some farms are medium – sized, but olive oil production is not the principal activity (which is generally wine production, but also saffron and lavender production in some cases), hence the degree of specialisation is very low.

The PDO Chianti Classico Olive Oil supply chain counts 258 olive growers (119 of them are also olive millers and bottlers), 30 olive mills and 100 bottlers, often organised in form of cooperative. In 2006, the Consortium of Chianti Classico olive oil associated all previously described categories of producers.

Producers do not certify all the olive oil production as PDO, partly on the basis of the channels on which the product is sold and therefore to the signalling necessities. In average, the percentage of certified production is about 20% of the local production of olive oil.

Main commercial channels on foreign markets are the direct sale through agritourist farms owned by olive oil producers and through import wholesalers. As for the markets of destination, 65% of the total exported Chianti Classico olive oil PDO goes to the EU foreign markets (Germany, France, England, Austria and Belgium), while 35% of the exported product is destined to the U.S.A., Canada, Switzerland, Vietnam and Norway.

The Chianti Classico PDO internationalisation strategies had already been adopted by producers before they gained the recognition of PDO protection: in fact most farms were already present on foreign markets with their olive oil, principally thanks to wine Chianti Classico sales, which have consolidated commercial channels and a very high renown for a quite long time.

5.3. The Pecorino Toscano PDO

The Pecorino Toscano is a typical sheep cheese produced in a wide geographical area which includes the whole Tuscany, part of Umbria and Lazio. It has a defined and structured production process which gives a significant mass of product marketed on structured commercial channels.

Before obtaining the PDO, the Pecorino Toscano was protected (since 1954) with a national protection system of local production called Denomination of Origin (D.O.). Therefore, this sheep cheese has been considered as a product needing a protection against misuses and frauds for a long time. For the existence of different typologies of pecorino (sheep) cheese traditionally produced in Tuscany and hence sold as “Tuscan pecorino cheese”, a mark which could include and protect all these heterogeneous products was needed. Therefore, after the D.O. protection, producers applied for the European recognition of protection of the geographical indication, obtaining the PDO in 1996.

The Pecorino Toscano PDO is produced by non - specialized dairy factories, which also produce other kinds of cheese. However, the particularity of the Pecorino is the raw material (milk) coming only from sheep breeding in the PDO area. In Pecorino Toscano PDO cheese production system, some of the actors of the supply chain are associated to a Consortium, whose activities concern technical assistance to the members, recording and management of the data related to the milk and dairy production and of the marketing phase of the Pecorino Toscano PDO, including promotional activities.

The commercial channels for the Pecorino Toscano PDO cheese on foreign markets are various, mainly indirect selling through wholesalers and direct selling to tourists, even if a high percentage of the product is sold to buyers of Large Retailers.

The Pecorino Toscano PDO cheese sold on foreign markets is about 17% of the total PDO production in quantity and it is destined for the 81% to EU countries (England, France, Germany, Sweden, Austria, Spain, Greece, Denmark, Belgium and Finland) and the rest is sold to U.S.A., Canada, Australia, Japan, China, Switzerland and Luxembourg.

5.4. The Prosciutto Toscano PDO

The “Prosciutto Toscano PDO” is a raw ham made only by pigs belonging to specific races, reared in a determined area (Tuscany and other Italian regions included in the area of rearing recognised for PDOs Prosciutto di Parma and S. Daniele), and with dry salting process which can only be carried out in Tuscany.

The product has a link with tradition and geographic area of Tuscany basically due to the seasoning, which involves specific know-how in order to manage the process. The relative low presence of pig breeding in the area of Tuscany and the relative higher costs of raw materials answering standards established in the Code of Rules constitute a limit to producers to increase volumes of PDO production.

The production system of PDO Prosciutto Toscano includes 25 producers who are variously involved in the production process: butchering, sectioning and seasoning. They join PDO production to other kind of products (salami, sausages, fresh meat, etc.), often similar to the marked one (for example ham obtained by non Italian pigs). All producers but one using the PDO have joined the Consortium since it was born in 1990 in order to protect the origin product from unfair national and foreign competitors, which have started to directly threat the Tuscan ham selling inexpensive similar products made of “unknown”

pork. After the request for the recognition of Italian denomination of origin, the Consortium applied for EU PDO, gaining it in 1996.

PDO Prosciutto Toscano is one of the growing leaders of the Italian ham market, after the most popular PDOs Prosciutto di Parma and S. Daniele. However, on the national market the PDO Prosciutto Toscano seems not to suffer the direct competition of other Italian raw hams because, given its particular features, it has its own positioning on the market. Nevertheless, many synonyms or imitations of the PDO product on the market strongly mislead the consumer, both on local and foreign markets.

Almost all PDO ham production is sold on national and local markets, either because these markets better know Tuscan ham characteristics and attributes, or because firms do not reach sufficient volume of certified product in order to sell it overseas: this implies low importance of exports in terms on impact on the turnover of the Prosciutto Toscano PDO system.

The firms which go overseas are very few in number, generally the biggest ones, thus those with a range of production from 50,000 to 150,000 PDO hams per year. The PDO Tuscan ham registers an average rate of export incidence on total PDO production of 4% of value and 6% of quantity. Moreover, exports of PDO on total firms' turnover have a lower impact than other firms' products sold overseas. Prosciutto Toscano PDO firms mainly export their product through importers-exporters, while the direct channel is less important for these firms because they belong to more industrialised sector which is generally out of tourist routes.

6. The use of PDO/PGI on international markets: motivations and satisfaction

The analysis of the roles PDO/PGIs play in international markets has moved from the determination of the motivations producers have in the use of PDOs and PGIs both on the national and the international market.

The literature analysis (see par. 2 and 3) together with previous research carried out by the authors allowed us to identify some key functions attributable to PDO and PGIs on the market. The functions have been identified as follows:

- The defence of the geographical name of protected products against misuses and abuses (phenomenon largely present for most OPs from Tuscany);
- Answering to specific customers' requests (middle-men, importers-exporters, buyers for foreign large based retailers, etc);
- Gaining higher premium price than non PDOs or PGIs similar products;
- Increasing firms' turnover on the same international commercial channels;
- Facilitating the opening of new commercial channels and or regional markets (especially in the case of foreign large based retailer);
- Steadying commercial relations and reducing uncertainty on the trade and final markets regard to volumes and/or prices of exchanged PDO and PGI products;
- Benefiting from collective product promotion thanks to the presence of a collective organisation in charge of organising, defending and promoting represented PDO or PGI production system;
- Offering more guarantees to final consumers (traceability of the product and its production process);
- The differentiation of protected products on foreign attended markets;
- Benefiting from renown and reputation of geographical name of origin of protected PDO and PGI product.

Main PDOs and PGIs functions supposed as driving forces are quite diversified. Due to firms characteristics, features of denominations and target markets conditions, selected functions cover either defensive roles (defending the protected product from abuses in

using geographical name), or offending roles against competitors of protected product (product differentiation, exclusive right of benefiting of reputation of origin), as well as they can affect commercial aspects of trading PDOs and PGIs (impact on protected product turnover and price, opening new markets and new commercial channels for PDO/PGI products).

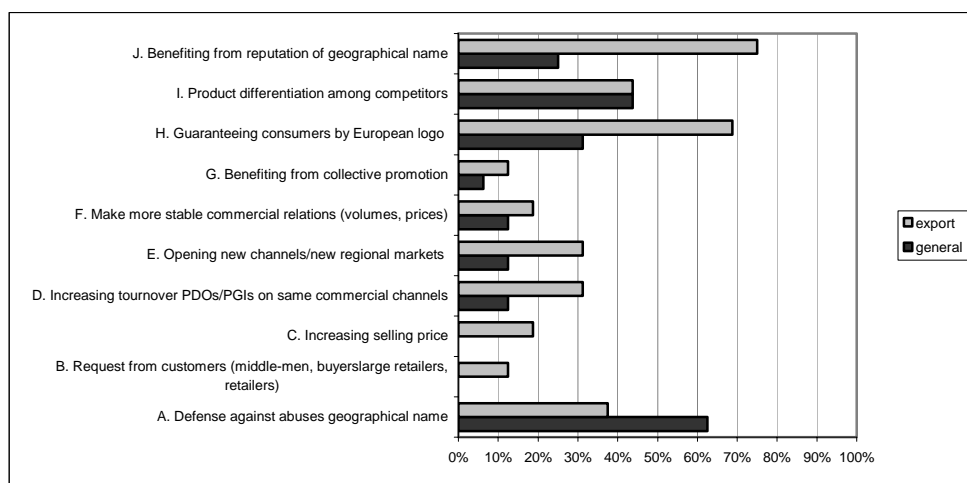
The above functions have been evaluated and then graded by the interviewees in the first step as motivations for the use of PDO/PGI on the markets and then in terms of personal satisfaction on their effective impact on the internationalisation of the firm. Importance range for rating functions in terms of motivation started from a minimum (not important) to a maximum (very important) level of assessment, while for the effective satisfaction gained regard to each function the level started from unsatisfied to very satisfied. Collected motivation and satisfaction assessments have been later scored, attributing them a different number value, variable according to importance and satisfaction levels. For each function, we calculated its respective average index of motivation and satisfaction².

In this way, the motivation index measures the average level of importance producers assigned to each function in terms of driving force to use geographical indications on international markets, while satisfaction index aims at averagely estimating how much firms are satisfied for each performance of PDO/PGI function. These indexes can vary from 1 (minimum value) to 100 (maximum value).

To better understand the role of PDOs and PGIs on international markets, the analysis has moved from a comparison between the driving forces which led producers to generally use the geographical indication and those on international markets (graph 1). At aggregate level some interesting considerations emerge. The first general result is that all the motivations reported by firms for using the PDO-PGI reached a higher score for international markets than the average, but for the Defense against abuses of geographical name. The most important differences can be found in the Use of the geographical name in order to benefit of its reputation that together with the Guarantee to consumers represented by the European Logo seem to be much less important on general use of denominations than on the international markets. On the contrary the defence against abuses of the geographical name seems is reputed highly less important on the international market. This different attitude may be explained by the fact that on foreign markets the use of the reputation of the territory of origin (that in the specific case is Tuscany and Chianti) has a stronger effect on the foreign consumer than, for example, on the Italian one, who already knows the product and the territory. On the contrary it is perceived as more important at national level to use the PDO to defend the product from abuses that are more liable to appear because of the widespread notoriety of the product itself.

² The average motivation index is calculated as follows: Average Motivation Index $(\sum_{i=1; i=4} Mi \cdot fi)/n$, where i are the supposed levels of motivation (total number of 4), Mi stays for the Importance score, fi is its respective frequency and n the number of firms which answered to the question. The 4 levels of importance established in order to assess the motivation for each function were scored as follows: “not important”= score 1, “less important”= score 33, to “important”= score 66, while for the maximum of motivation (very important) we assigned the score 100. The same applies for the satisfaction index calculated as follows: Average Satisfaction Index $(\sum_{i=1; i=4} Si \cdot fi)/n$, where Si stays for the Satisfaction score for each supposed level of satisfaction (“unsatisfied”= score 1, “less satisfied”= score 33, “satisfied”= score 66 and “very satisfied”= score 100), while the rest of components of the formula coincide with those we explained for the Average Motivation Index.

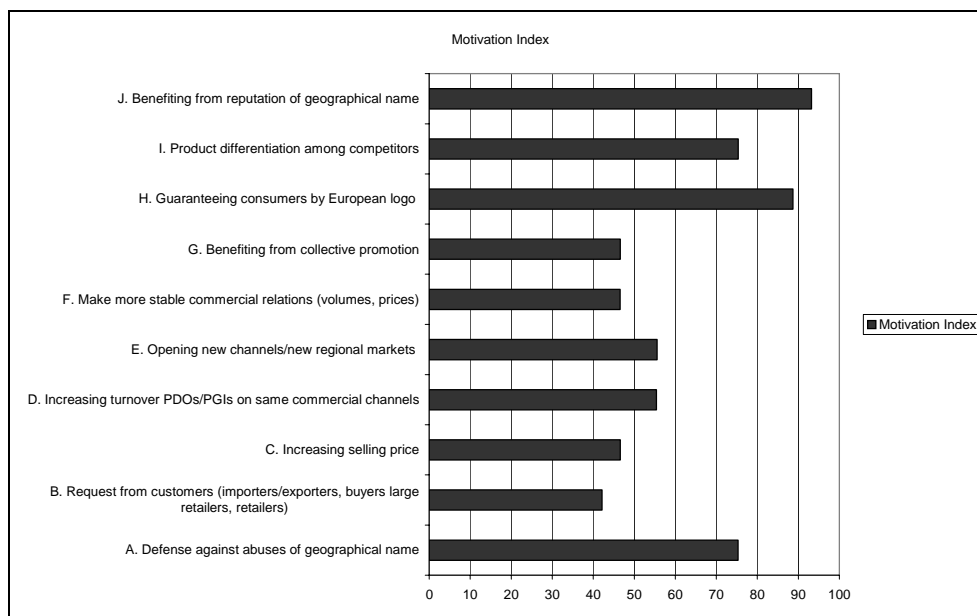
Graph 1 - Motivation for the use of PDO/PGI: comparison between general usage of PDO/PGI and specific usage on international markets



Note: The values are in percentage and calculated on the number of firms answering “very important” on the motivation; multiple answers were allowed)

Source: Direct survey

Graph 2 - Motivation index for the use of PDO/PGIs on the international market

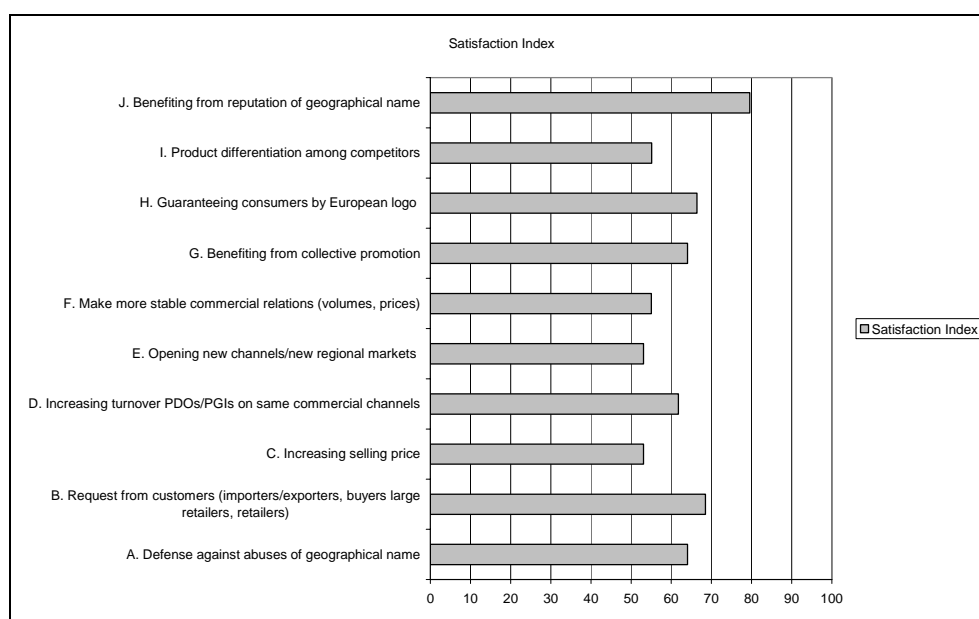


Source: Direct survey

The motivation index on foreign markets shows how a key importance in the internalisation through PDOs and PGIs is given to both offensive and defensive motivations (graph 2). In fact, on the one hand producers state that they use the geographical indication in order to benefit of the reputation of the “Tuscan” geographical name and in order to differentiate their product from that of their competitors, but on the other hand they also use it to defend their product from abuses of the geographical name and to guarantee consumers through a European logo. The situation described, as we will analyse more in depth in the following paragraphs, is in reality the result of different strategies of the single firms according to the product they produce and/or according to the different organisation at individual and system level, and marketing structure.

The aggregate analysis of producers’ satisfaction deriving from PDOs and PGIs performances on international markets (referring to same specific functions used for exploring driving forces) shows an overall good satisfaction for the use of the Reputation of the geographical name as well as for the European logo (graph 3). Nevertheless, some unexpected functions³ of the PDO/PGI on international markets emerge mainly on the marketing field, among which we underline the Request made by the customers for the logo in order to guarantee the origin and the characteristics of the product.

Graph 3 - Satisfaction index for the use of PDO/PGIs on the international market



Source: Direct survey

7. Motivation and satisfaction: the different production systems overall view

Among the driving motivations of firms for the use of PDO/PGIs on international markets (graph 4), the analysis of the selected case studies has highlighted defensive roles (in

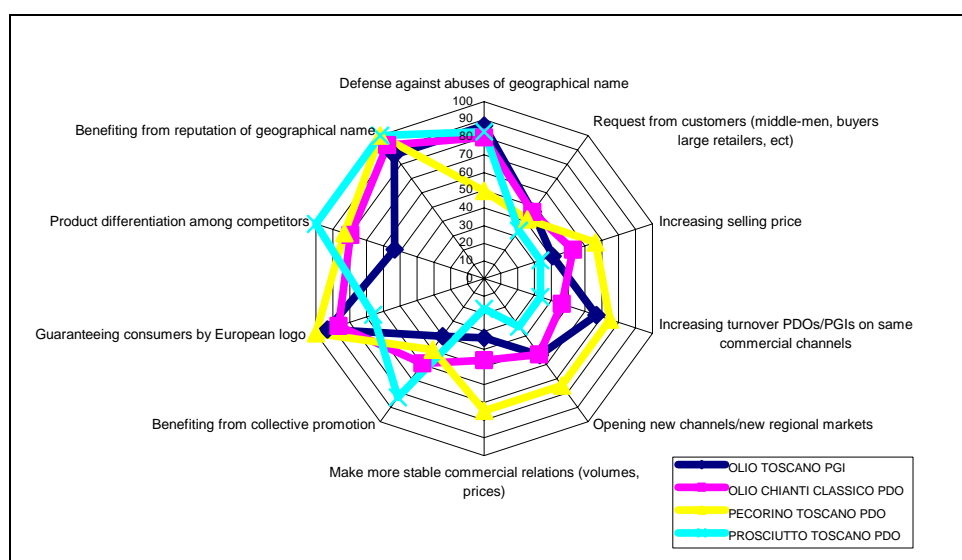
³ Specifically, unexpected functions are those for which the importance level attributed by interviewees as driving forces for using PDO or PGI on international markets is lower than the satisfaction grade associated at the same functions considering them as effective results.

particular for the function of defending the protected product from abuses in using the geographical name), offending roles against competitors (as in the case of product differentiation or exclusive right of benefiting from reputation of origin), but also a strictly “demand driven” role in terms of giving an answer to the explicit Request of a production standard from customers (middle-man, importers-exporters, buyers for foreign large retailers).

Nevertheless, the exam of satisfaction grades (graph 5) has evidenced on the one side a coherence between expectations and satisfaction, as in the case of the use of the PDO/PGI for the benefit from the reputation of the territory, or else in the case of the Guarantee of consumers through the European Logo. Certainly unexpected effects have arisen, in fact there are some functions that had not been identified by producers as important driving forces for the use of the PDO/PGI on international markets, while *ex post* they have proved to be highly satisfactory. Among these functions a primary role is played by “answering to an explicit request by costumers”, which is evident in all case- studies.

In order to have synthetic measure of PDO/PGI impact on internationalisation for the different case studies we have also adopted a weighted satisfaction index⁴, in which the degree of satisfaction related to each function of PDO and PGI has been associated to the degree of importance given to them by firms in terms of motivations. A representation of the results is shown in the graph below (graph 6).

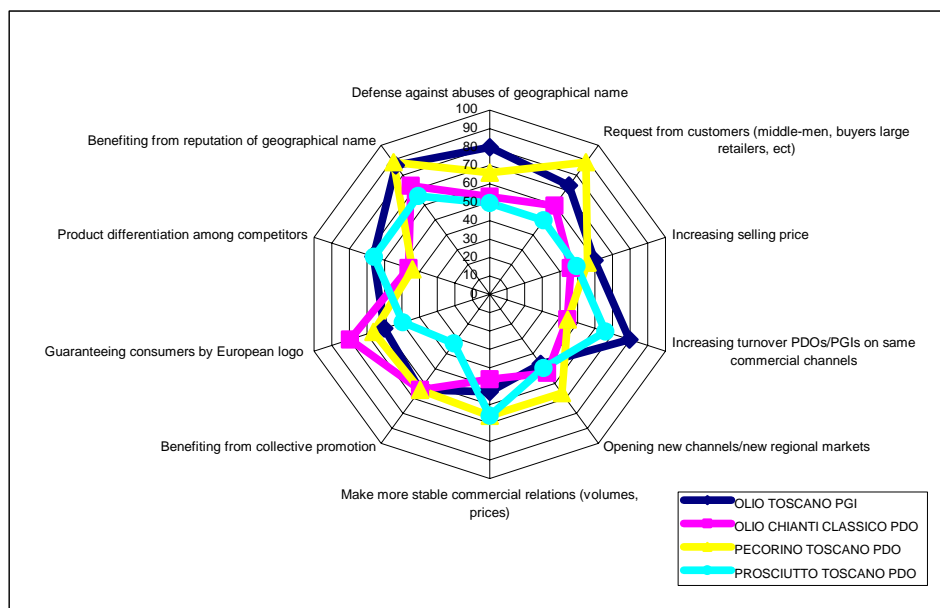
Graph 4 - Motivation index for PDO/PGI functions for some PDO/PGI products



Source: Direct survey

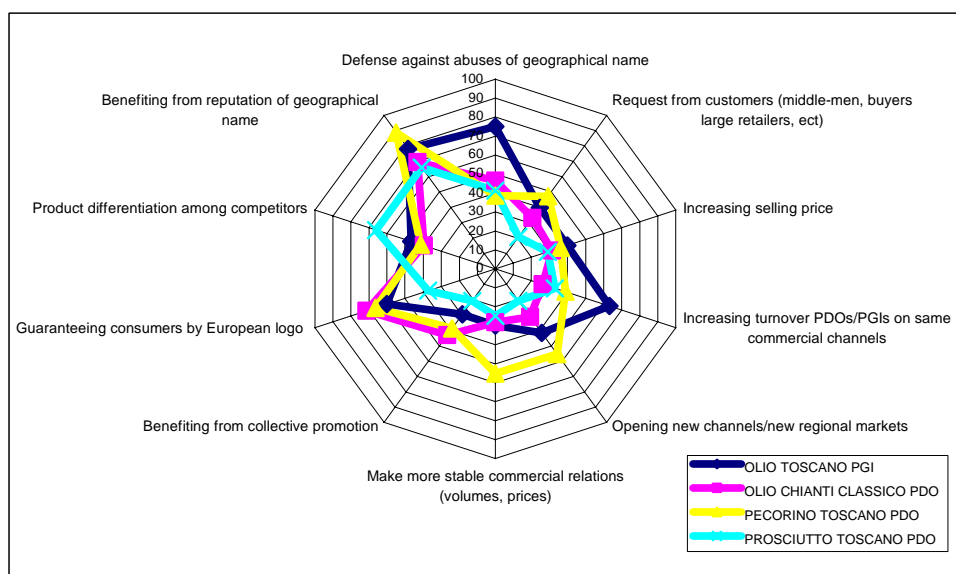
Graph 5 - Satisfaction index for PDO/PGI functions for some PDO/PGI products

⁴ The weighted satisfaction index is calculated as follows: $(\sum_{i=1}^4 \sum_{j=1}^4 S_i * f_{ij} * P_j) / n$, where i are the levels of satisfaction, S_i stays for Satisfaction, f_{ij} is its respective frequency, P_j is the value we assigned to importance assessments of each function in order to weight relative satisfaction grades, and n the number of firms which answered to the question. The scoring of factor P bases on following criteria: to “Not important” we assigned weighting factor value of 0.25, to “less important” the value 0.5, to “important” the value 0.75, while at the maximum level of importance we assigned 1. This index can vary from 1 (minimum value) to 100 (maximum value). When the index varies from 66 to 100, higher levels of satisfaction pondered with motivation occur, while the lowest levels measure from 33 to 1.



Source: Direct survey

Graph 6 Satisfaction index weighted according to importance factor for PDO/PGI functions for some PDO/PGI products



Source: Direct survey

Within the graph, owing to the weighting with the motivation, the unexpected functions are not visible as the high satisfaction is lowered by the soft motivation. The different shape of area of each polygon in the graph also underlines a diversity of PDO/PGI impact among different products. It has to be noticed that the effects of the use of PDOs and PGIs on

international markets, as they have been perceived by firms, also depend on different strategies run by producers.

The effective impact in terms of producers' satisfaction regard to PDO and PGI role on international markets does not often match the goals firms expect to achieve by using denominations. Prosciutto Toscano PDO and Pecorino Toscano PDO show a prevalence of "offensive" objectives in their internationalisation strategy while the ones of Toscano PGI oil and Chianti Classico PDO olive oil highlight "defensive" objectives.

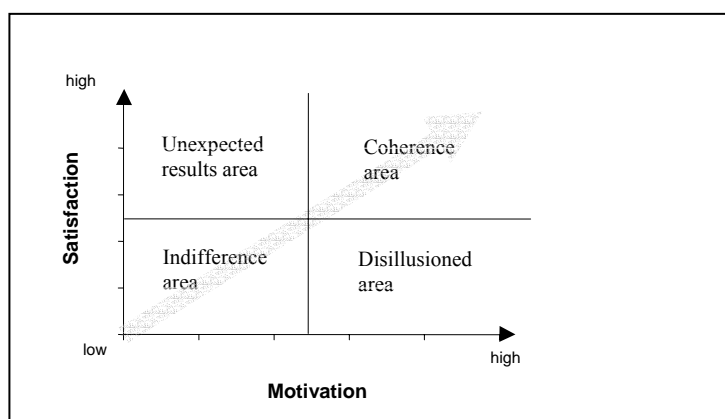
8. The performance at single firm level

As we have explained in the previous paragraph, the discussed indexes of motivation and satisfaction are built as a mean of different positions at firm level and might lead to some misleading conclusions. Therefore, the aim of this paragraph is that of going to analyse more in depth, at single firm level, the existing relation between motivations and satisfaction for the most important functions identified by the interviewees as motivations: the benefit from the reputation of the geographical name, the defence of the reputation of the product from abuses of the geographical name and misleadings, the guarantee of consumers through the EU logo, the differentiation of the product, the explicit request of the PDO/PGI coming from customers (middle-man, importers-exporters, buyers for foreign large retailers).

For these reasons, we have built scatter graphs for each of the main detected functions referring to the two variables: range of importance assigned to PDO/PGI functions as driving forces on international markets and range of satisfaction for their effective performance.

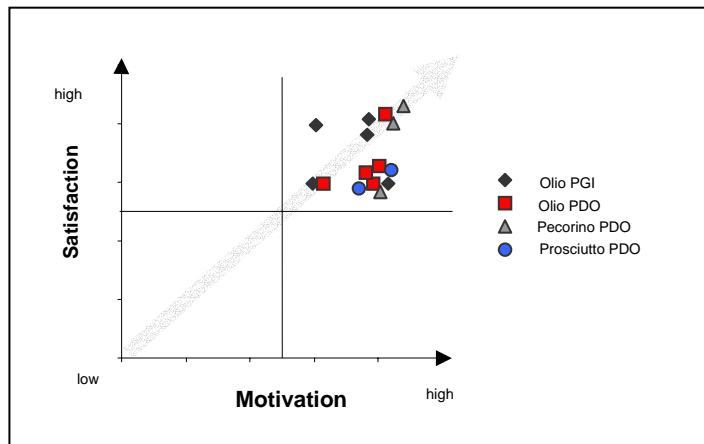
The first quadrant of the graph represents a *coherence area*, where the motivation of the firm for the specific function has been fulfilled through a satisfactory performance; the second quadrant is the *disillusioned area*, where firms who had high motivation for that function, have been disillusioned by unsatisfactory results, the third quadrant is the *indifference area*, where firms had a low motivation for the function and no or little satisfaction has resulted, the fourth quadrant is the *unexpected results area*, where are firms who had low motivation for that function and registered satisfactory or very satisfactory results (see graph 7).

Graph 7- Comparing levels of motivation and satisfaction, a general interpretation of the different combinations



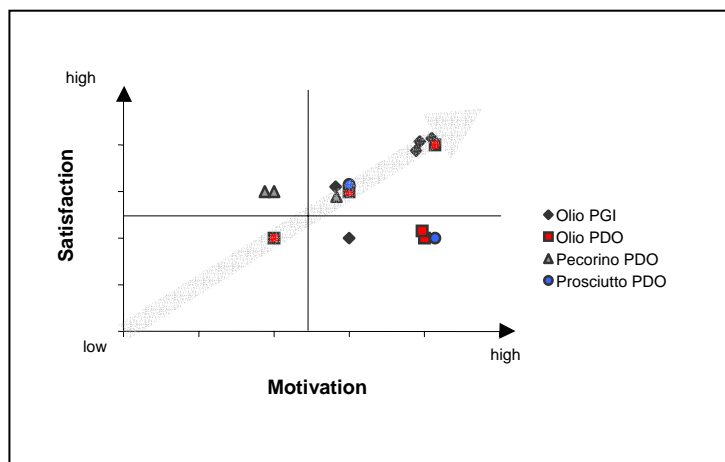
Source: Our elaboration

Graph. 8 - “Benefiting from the reputation of geographical name”, comparing importance levels of motivation and satisfaction



Source: Our elaboration

Graph 9 - “Defence of the product from abuses of geographical name and misleading”, comparing levels of motivation and satisfaction



Source: Direct survey

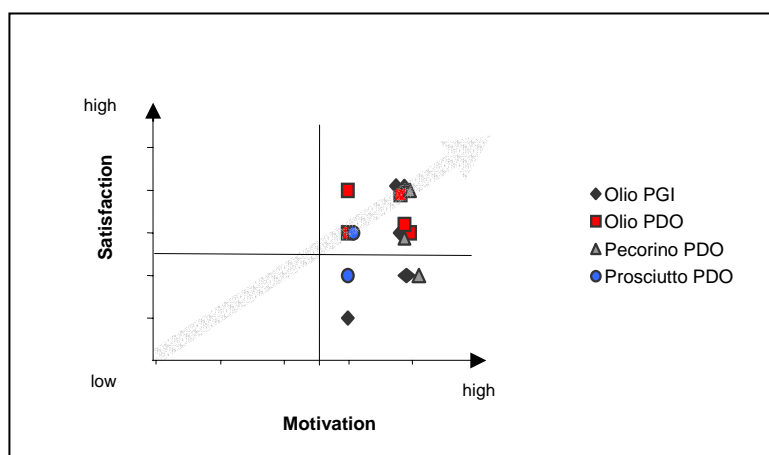
The representation of the different attitudes of the firms (motivation and satisfaction) on some key functions of the denominations towards internationalisation shows a very convergent position for all products on the importance and satisfaction about the benefit from the reputation of the geographical name (graph 8), therefore about associated rent actors can appropriate due to established reputation. Furthermore, considering the reputation of the denominations used (Toscana and Chianti), this impact becomes even stronger and explains why all firms are in the coherence area.

A relevant function is also played by the PDO/PGI in Defending the product from unfair competition about the use of protected geographical name of origin (graph 9). Most interviewed firms are also in the coherence area, as they expressed a level of satisfaction in line with the importance assigned to the function with regard to motivation. However, some of the firms expected a highly stronger effect than the effective satisfaction they achieved (disillusioned area). The highest satisfaction in relation to the level of motivation can be found in the Olio Toscano PGI firms as in the case of two specialised firms (two

cooperatives which together represent the 35% of olive growers of the production system) and the very small producers who, as we will discuss more in depth later, are able to face foreign markets thanks to empowerment activities carried out by the Consortium. However, less satisfaction is expressed by those firms who are already well positioned with their own brand on national and international markets.

In the case of PDO Olio Chianti Classico, most producers presented a level of satisfaction in line with expectations, nevertheless the satisfaction is in average low to medium, which is in part due to the relatively recent recognition of the denomination (2000) and to the efficacy of the control and sanction system.

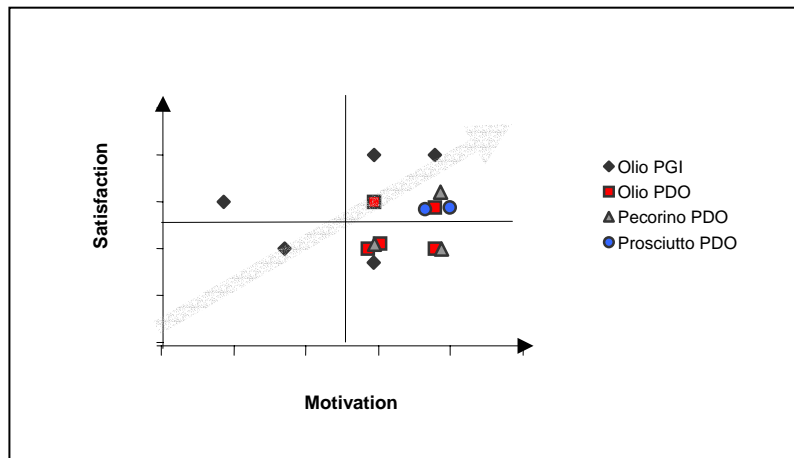
Graph. 10 “Guaranteeing final consumer by EU logo”, comparing importance levels of motivation and satisfaction



Source: Direct survey

As far as the impact of PDO/PGI in terms of guarantee of final consumers due to the presence of EU logo, the scatter below (graph 10) shows that little more than half of the firms are located in the area of high motivation and low satisfaction. This is due to the low information about the meaning of the logo (product traceability, coded production process), besides the consideration that the international legal value of European PGI and PDO is still recognised only in Europe. In the case of Olio Toscano PGI, we must underline that producers expected great performance from PGI use in terms of guaranteeing the final foreign consumer, more than what they expected on domestic market. Most satisfied firms of Olio Toscano PGI are the two main producers/exporters (the cooperatives), while in the case of Olio Chianti Classico there is a larger satisfaction among firms.

Graph. 11 - “Product differentiation”, comparing importance level of motivation and satisfaction grade of interviewed firms



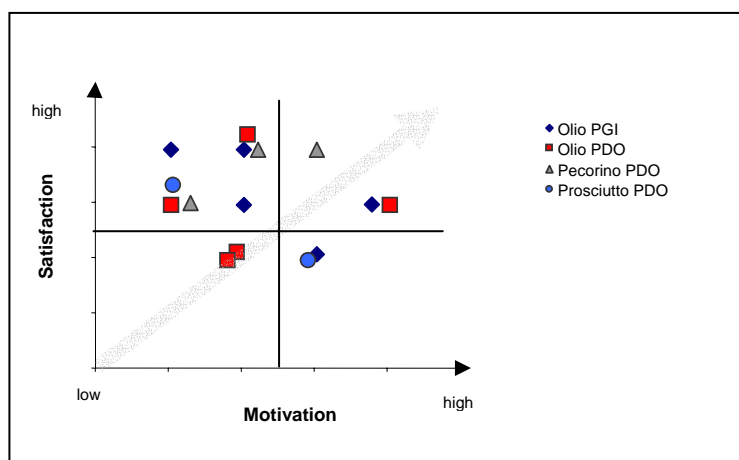
Source: Direct survey

As far as PDO and PGI impact on product differentiation on foreign markets is concerned, most firms are not very satisfied of this function considering also that it was graded as medium to maximum important factor (graph 11).

Therefore, PDOs and PGIs do not appear as a strong differentiation lever on foreign markets, except for Olio Toscano PGI producers who are mainly located in the high satisfaction area of the graph. As it has arisen from previous considerations, in the case of Olio Toscano most satisfied producers regard to the PGI performance are the two main firms selling overseas, while firms located in low motivation/satisfaction area are those which mainly operate on markets by stressing their own brand.

In the case of PDO Tuscan ham, producers find difficulties in differentiating the product from competitors in particular due to the presence of another Italian ham marked with the PDO designation: the Parma ham. This product has been on international markets for a longer time than Tuscan ham, gaining a stronger reputation and wider renown and it seems to reduce the signal value of origin, making it more difficult for Tuscan producers to inform markets about their ham characteristics.

Graph. 12 - “Explicit request from customers”, comparing importance levels of motivation and satisfaction



Source: Direct survey

A relevant result from the survey comes from the role of the PDO as a standard requested from customers (middle-men, importers/exporters, buyers of foreign large retailers) for commercialisation (graph 12). This can be considered as the most unexpected function arisen, being assessed as the most successful one, considering the importance assigned by interviewees in terms of motivation. Pecorino Toscano PDO's producers are all located in the area of "unexpected", as well as the main exporter of Prosciutto Toscano PDO's production system. In the case of Olio Toscano PGI comparing to importance levels in terms of motivation, even for this function the most satisfied firms are the two cooperatives. In the case of Olio Chianti Classico PDO's producers who gained extraordinary effect on trade market by specifically answering to customers' requests thanks to the PDO presence are the firms specialised on the olive oil sector, while the rest (those firms who do not expect/gain great effect in terms of requested standard from distribution sector) are mainly wine producers who have already implemented strong strategies of international marketing specifically for wine.

On the basis of these results and of those of the analysis carried out at product system level, we can express some synthetic considerations concerning each case study.

In the case of Tuscan olive oil, a product with a high impact of export on total sells, the presence of the PGI strongly satisfies producers in order to benefit from reputation of Tuscany, as well as for the increase in turnover and for having a standard to reply to the requests of the market. Nevertheless, the role of PGI as a defensive tool against unfair competition has not yet satisfied the producers, comparing the importance producers associate to this function, though the satisfaction index reaches a good grade. This probably depends on the efficacy of control systems and mechanisms of managing and treating abuses and misleading products. Olio Toscano PGI's interviewed producers also present the highest number of "unexpected" functions associated with the use of the geographical indication on foreign markets. Moreover, producers highly specialised for PGI products, who are also the most internationalised firms of the production system, reached the highest satisfaction grade for most of PGI functions.

In the Chianti Classico Olive Oil case study, the use of the Designation of Origin on foreign markets is basically prompted by the opportunity of benefiting of product geographical reputation, contributing to gain an average level of satisfaction for producers who sell the certified product abroad. However, the PDO does not significantly contribute to differentiate and signal the product (it cannot be considered a differentiation lever for all producers), while allows to participate to a collective system and represents an important quality standard for buyers, middle-men and importers, due to the link to the territory of production and the third – party certified production process. Promotional activities could increase the informative power of PDO on final markets, in particular through creating synergies between Chianti Classico olive oil and wine, supporting the "halo effect" coming from the last one and influencing the reputation of the olive oil.

The Pecorino Toscano cheese case study highlighted how the Protected Denomination of Origin can be an important tool for penetrating foreign markets thanks to the role of standard generally accepted by retailers of foreign markets and the protection against abuses of the geographical name of the product. The use of PDO as a differentiation tool or as a guarantee for consumers can be however unprofitable, if the awareness of consumers about the PDO sign is low.

As far as Prosciutto Toscano PDO is concerned, we observed a dissatisfaction both in functions linked to defensive roles (right of exclusivity to use geographical name of origin) and function linked to offensive categories (product differentiation). Nevertheless, the reasonable justification for rewarding increases in prices and in turnover of PDO exports on the same commercial channels, for facilitations in opening new commercial channels and regional markets, and finally for the steadying effect on commercial relations can be found

in the acceptance of PDO as request standard from middle-men like importers/exporters, buyers of foreign large based retailer who seem to prefer the PDO product because it answers to a precise production process, presenting stable characteristics and product attributes. Finally, a widespread low satisfaction has been registered for the benefit from collective promotion. This PDO function is strictly related to the role played by Consortia in supporting activities for associated firms.

Without a strong participation of Consortia in promoting activities, the only PDO/PGI sign results insufficient for collective promotion, which has to be planned before the use of PDO or PGI sign and can empower previous promotion activities.

However, Consortia in Italy are important pillars in PDO or PGI certification, for the general limited dimension of firms producing typical products: Consortia contribute to collect a critical mass of PDO or PGI product, but could contribute in a more incisive way to help firms to organise themselves to follow common strategies, and increase contractual power of their members both on the market and with the control body in tariffs negotiation.

9. Final remarks

PDOs and PGIs can be adopted as an internationalisation tool, but their effectiveness depends on several factors: the reputation of the product, the reputation of the territory of origin (halo country effect), the importance given by customers to the guarantee offered by PDO-PGI certification (linked to the structure of marketing channels and especially modern channels), the capabilities of firms in implementing PDO-PGIs marketing strategies, the effectiveness of collective organisations (such as Consortia).

As a matter of fact, the analysis of the satisfaction of producers in relation to the motivations expressed has put in evidence a very variegated and complex situation that cannot be explained only through a “product key”. In fact, the study has evidenced a differentiation of impacts of denominations, both among different production systems (inter-diversity), and among firms producing the same agri - food protected product (intra-diversity).

The inter-diversity depends not only on the organisation of the supply chain, but mainly on the reputation of the product and of the territory of origin (halo country of origin), while the intra-diversity is related to heterogeneity of firms of the same production system in terms of dimension, organisation, goals, production volumes, availability of capabilities to operate with foreign markets such as professionals, management skills, knowledge of normative for exporting, etc. Firms with strong a reputation present on foreign markets with their own brands are not interested in PDO or PGI, creating a conflict between (collective) PDO/PGI and firms’ brand name, while the most specialised producers for PDOs and PGIs, often also more export-oriented regard to protected product, present high levels of motivation/satisfaction.

Moreover, due to the basic dimensions of firms producing PDOs and PGIs (in most cases small to medium enterprises), the level of professional skills and knowledge existing in the involved firms are often not adequate to the standards required by internationalisation processes.

A fundamental role in this respect can be played by collective organisations (such as Consortia), as it happens in the case of *Olio Toscano* PGI. In fact collective organisations (producers’ cooperatives and Consortia) could play a key role in organising the production systems, managing European certifications and supporting international activities of associated firms. Specifically, we refer to those activities able to influence the internationalisation process of PDOs and PGIs either on a direct (collective promotion internationally) or an indirect way (helping producers regard to production processes or general management processes, participating in building local networks linked with other sectors like tourism and handcraft, etc). In particular as far as internationalisation strategies

are concerned, Consortia could support the empowerment of firms, integrating their lack of structural capabilities to operate on foreign markets.

On the whole, the research pointed out the high impact of PDOs and PGIs in the benefit from the reputation of the geographical name and in the consequent appropriation of the rent on the part of producers. A certainly unexpected result in terms of satisfaction (considering the attributed level of motivation) is represented by the use of PDO or PGI on foreign markets on the request of customers (middle-men, importers/exporters and buyers for large retailers): this highlights the importance of PDO and PGI sign as a quality standard generally recognised and certified by a third-party control body. This function also explains the positive global satisfaction for stabilization of relationships between different actors of the supply chain. Therefore, the PDO or PGI signs significantly carry out the function on standard for professional operators, besides certificating the effective origin of product and its production process.

In other words PDO/PGIs cannot *per se* allow to reach the internationalisation goals of the firms, as the access to international markets implies the existence of a number of structural organisational and other pre-requisites, that are often lacking in Origin Products systems.

Certainly, we should take into serious account for future research also the fundamental role of support that the policy maker could play in order to raise the impact of PDOs and PGIs in internationalisation strategies, by smoothing the process through a series of actions that could start from supplying firms with the necessary capabilities to face the international market, as much as investing in raising the consumer information capital in destination markets.

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