A NETWORK ANALYSIS OF THE IMPACT OF A PUBLIC POLICY MEASURE: THE ADOPTION OF PROTECTED GEOGRAPHIC INDICATION LABELS BY THREE FOOD SECTORS IN THE SOUTH WEST OF FRANCE

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Introduction

The European Union currently provides protection in Europe to the names of food and drink products that have received a new form of intellectual property protection termed "Protected Geographic Indications" (or PGI). In the study, three different products from the south west of France were examined with a view to understanding how the network perspective can enhance our understanding the impact of such a change. Little empirical research in marketing or in public policy exists at present to aid such decision makers in understanding the real consequences of such interventions (Golan et al., 2000). Detailed case studies have been developed of the process of deciding on the requirements of the PGI label and the subsequent impact that its presence has had on the actors in the supply chain for each of the three food sectors studied.

It is proposed that the network approach to marketing is a valuable analytical tool within this context as it offers a detailed and realistic framework for understanding the differences in the effectiveness of this EU public policy measure across three different sectors.

The context of the study

Since June 1992, the European Union has sought to offer protection to manufacturers of superior food products that have gained a reputation beyond their region of origin against unfair competition from non-regional producers who benefit from their name. To protect such products, to avoid misleading consumers and to encourage diverse agricultural production, the EU offers producers three procedures to promote and protect their products that are either linked to a geographical area or possess a defined traditional character.

The label that is the subject of this research is called Protected Geographical Indication (PGI). It requires that a geographical link must occur in at least one of the stages of production, processing or preparation and, in addition, producers are required to adhere to certain standards.

The more restrictive European labelling scheme called Protected Designation of Origin (or PDO) requires that the foodstuffs in question 'must be produced, processes and prepared in a given geographical area using recognised know-how'. The third possibility is to register a foodstuff as a Traditional Speciality Guaranteed (or TSG) which does not refer to the origin but 'highlights traditional character, either in the composition or means of production'.[1]

Exhibit 1: The European Labels: PDO, PGI and TSG

The stated motivations for introducing these labelling schemes are 'to encourage diverse agricultural production, to product names from misuse and imitation and to help consumers by giving them information concerning the specific character of the products'. The PGI label thus supports the agribusiness industries of certain regions by limiting the production of region food

[1] For further details, see http://europa.eu.int/comm/agriculture/foodqual/quali1_en.htm.

specialities to defined geographic zones. The geographic zone thus becomes a form of collective brand.

The total number of food products benefiting from PGI status is approaching 300, of which 68 are French. The turnover of French products with PGI status is over €1 billion and some 25,000 producers are concerned. To benefit from the protection, a group of producers must first apply to their national authority that studies the application and passes it on to the Commission. Following a number of control procedures, the name is published in the Official Journal of the EU and, if there are no objections, the protected product name is registered. Representatives of French agriculture were active proponents of the measures adopted at European level and encouraged the adoption of French food and drink products in the list of items that were to have been discussed at the aborted ministerial conference in Cancun in September 2003 as part of the Doha round of WTO talks.

Overall in the south west region of France, 60 percent of agricultural production (including, of course, wine production) is covered by one of the three forms of protection offered by Europe, making it the European region with the most to gain from its development. In May 2004, Aquitaine had 8 PGI labels registered[2] with another 10 under consideration.

At present, however, the labels provided to producers who are granted PGI status remain virtually unrecognised by consumers and certain producers, processors and distributors are unsatisfied with the results of participation in the scheme. (Jullien and Smith 2004) Not only must the EU face fierce resistance to the adoption of these protective measures at WTO level, but within the sectors under study, their effectiveness in achieving their stated aims is not universally accepted.

The methodology

The research described is part of a multi-disciplinary study that is funded by the Conseil Régional d'Aquitaine in the south west of France and by the European Agricultural Guidance and Guarantee Fund (EAGGF).[3] The Aquitaine region of France is the third of the country's 22 regions in terms of the quantity of its agricultural output yet the first in terms of value added. To encourage the continued success of the quality-based tradition of food production in the region, policy makers were in search of an analytical framework that would facilitate comparison between different food sectors that had already adopted or that were seeking to adopt the European PGI label. As some of these initiatives had proven more successful than others, it was initially decided by the research team to study three different sectors across which it was expected different levels of performance would emerge.

One sector studied was that of chicken and the PGI in question is "volaille fermière des Landes". These are free-range chickens that are bred in the Landes area of pine forests south of Bordeaux. The second sector studied was the production of the PGI known as "foie gras du sud ouest", a luxury food product made from the liver of ducks in the south west of France that have been force fed with grain. The third sector is that of the PGI "Jambon de Bayonne", a

[2] The eight PGI's are Tomme de Pyrénées (a cheese), pruneaux d'Agen (prunes), Volaille des Landes, du Béarn, and de Gascogne (chickens), canards à foie gras du Sud-Ouest (duck foie gras), Bœuf de Chalosse and de Bazas (beef), agneau de Pauillac (lamb), fraises du Périgord (strawberries).

[3] In association with the regional Chamber of Agriculture, the project includes researchers from the Ecole Nationale des Ingénieurs des Travaux Agricoles de Bordeaux and Bordeaux Business School under the direction of Bernard Jullien, Université Montesquieu Bordeaux IV and Andy Smith, Institut d'Etudes Politiques de Bordeaux.

ham that is dried and salted in a large geographic area around the town of Bayonne in the south west of France.

The objective of the research design was to develop a series of three in-depth case studies (Easton 1998). These case studies provided the basis for the development of a detailed comparative framework that would highlight similarities and differences that may be useful in understanding the relative success of the adoption of the PGI label in each of the sectors under study. By extrapolating from the specific to the general, the objective of the case study research is to generate understanding about the potential effectiveness of such public policy measures. The initial case-building phase of the research involved work by three separate teams of researchers each of whom conducted a series of interviews.

The first group of interviews were conducted by students in an agricultural college who interviewed an average of twenty producers in each of the food sectors under study. Their objective was to describe the evolution of the activity of these actors prior to, during, and since the application for the PGI label by the professional association that represents their industry. Producers of different sizes were sought and specific questions were asked in relation to quantity and quality of output, production methods and the rate of return of the different activities.

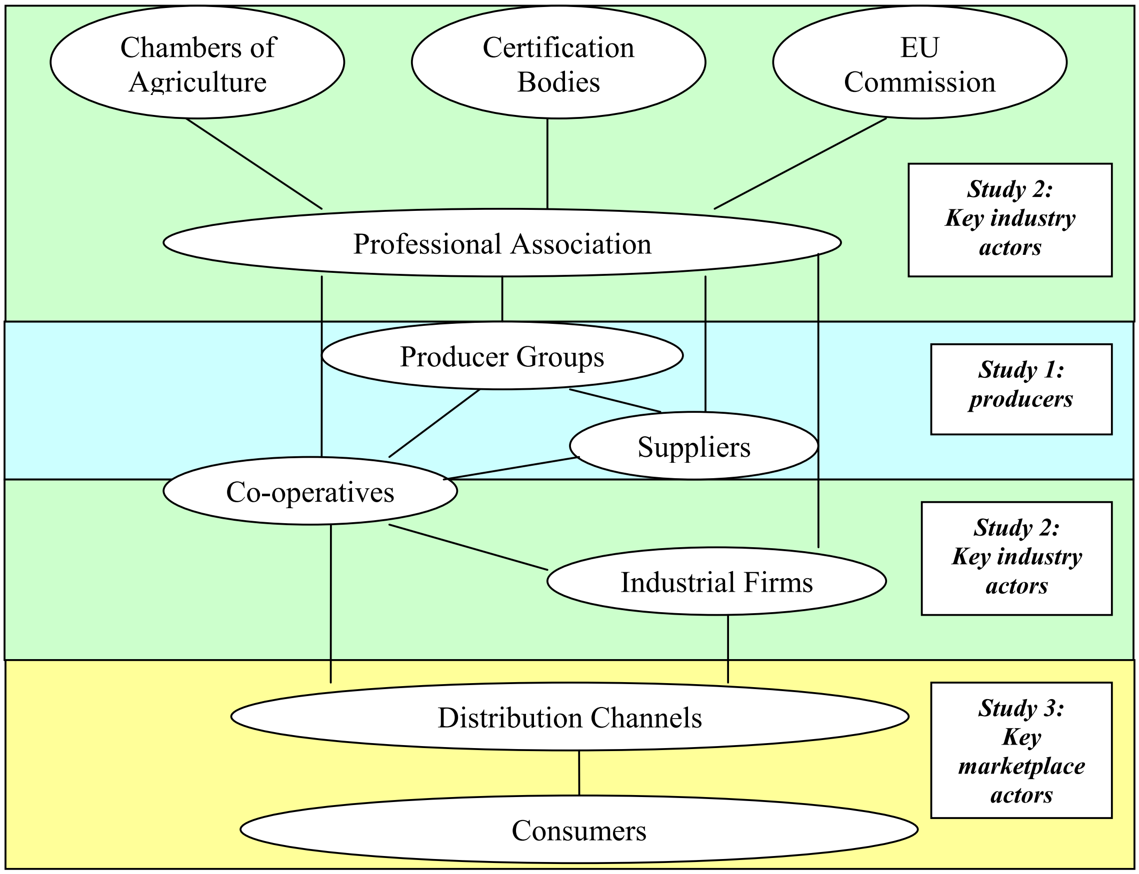
The second series of interviews were conducted with the main industrial firms in each of the food sectors who are responsible for transforming the basic agricultural produce into value-added food products. These firms along with representatives of the main professional institutions in each of the three food sectors were interviewed by the economist and political scientist who were directing the study and the objective was to describe the position and the perception of the different actors in relation to the process of applying for the PGI and its impact on the performance of each firm and of the sector as a whole.

The third part of the study related to the marketplace position of the products that emerged from the PGI application process. It was conducted by the author and its objective was to provide a counter-balance to the perception of producers and transformers of their own products as this is sometimes perceived to be too favourable in relation to the 'quality' of their products and their suitability for the marketplace (Aurier et al. 2004). This final study involved a quantitative survey of consumers that was used to compare the notoriety of the different PGI labels and a series of interviews with retail representatives to analyse how these products are perceived by these key actors who control their access to the mass marketplace.

The case-building phase of the research has been completed and an initial report on each sector will be discussed with the representatives of the professional bodies in September 2004.

Having verified the validity of the detailed case studies, the second phase of the research will be to conduct a network analysis to illustrate how such a perspective enriches our understanding of the differences between different sectors. From a theoretical perspective, this phase of the research aims to explore the validity of certain theoretical constructs of the network approach when applied to a context in which a significant number of network actors are forced to present their positions and preferences explicitly. The process of applying for the PGI label via the professional body over a number of years required each interested party to declare its position in relation to a number of key collective decisions that were to be formalised in relation to their behaviour in the future. This thus provides three interesting cases in which the actors and their resources and activities can be more clearly delineated than would generally be the case in sectors that are not yet highly industrialised. It is also an interesting case in which to examine the important role of retailers as powerful mediators between consumers and the supply network for certain consumer goods. It is proposed that the network approach offers a richer analytical framework for the role of distributors in the agri-food business than the traditional marketing mix approach.

Figure 1: Proposed framework of significant actors in relation to the PGI protection process



In addition to the interviews conducted as part of each of the three empirical case studies, significant secondary research was conducted to describe the evolution of each of the industries over the past decade and to trace the role played by the PGI label. In this paper, a short summary of each of the three case studies is presented to illustrate the main actors and their resources and activities. Each case study is built on a combination of the work of all the groups, rather than on any particular perspective (producer, professional association, distributor or consumer). Subsequently, an initial marketplace analysis is presented based on a marketing management approach and its limitations are highlighted in relation to the objective of the study which is to generate understanding of the dynamics of the sectors under study and the role of the PGI label. In the final section, the core elements of a network analysis are introduced and the interesting practical and theoretical questions that this analysis poses are discussed.

Summary of case studies[4]

Each of the case studies will be summarised briefly to explain to the reader the context in which the comparative and explanatory framework is to be developed.

Foie gras du sud ouest

France is the both the primary producer and the primary consumer of foie gras and production is estimated to have reached 17,700 tonnes of the global production of 20,000 tonnes. In 2003, products with the PGI label 'foie gras du sud ouest' accounted for 50 percent of foie gras produced in France. A significant motivation to the adoption of the PGI label was the growing interest in the foie gras market from other regions of France, who were themselves looking for alternative value-added uses for their agricultural resources in light of the reduction in milk subsidies from the EU. The technological development of artificial insemination of ducks also facilitated the more to a more industrialised production of foie gras, thus increasing industry capacity. The process for obtaining the PGI was begun in 1991 and the label was adopted in August 1997.

A part of the foie gras industry is made up of individual breeders of ducks and geese who sell their output directly to customers from their premises or in local markets. It is estimated that these producers account for 12 percent of the market for duck foie gras and 20 percent of the market for goose foie gras. The remainder of the production emerges from the longer supply channel that is made up of more industrial actors. The supply chain in its disaggregated form consists of breeders, feeders who stuff the ducks or geese with the grain that causes their livers to enlarge, slaughterers and transformers who prepare the final product that appears in retail outlets. The industry is highly concentrated downstream, however, with approximately 70 percent of the final transformation being carried out by the top five firms. The trend in the industry is for these firms to control all stages of the production process.

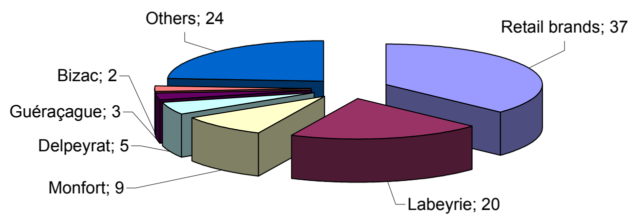
In 1998, the French foie gras industry was faced with a drop in price of between 6 and 11 percent. Although consumption had risen by 6 percent, both national production and imports had also shot up, by 20 percent and 26 percent respectively, creating a surplus of foie gras on the marketplace. The reaction of the larger market players was to begin consolidation moves to structure a more stable supply chain and avoid future market surpluses. The introduction of the PGI label appeared to have somewhat stabilised the falling price and the industry also benefited from a growth in interest in the product to celebrate the new millennium. Measures to limit output that were recommended by the foie gras trade association, CIFOG, led to a drop in French production of foie gras of 4 percent in 2003. Prices dropped slightly nonetheless by almost 3 percent.

In March 2002, ownership of the market leader, Labeyrie passed from SI Finance, a subsidiary of groupe Suez to a subsidiary of Industri Kapita, a Swedish investment group. The sales of foie gras accounted for 21.3 percent of the firm's total turnover of approximately €202 million in 2001. Over 50 percent of its turnover is made up of sales of smoked salmon and the remainder is divided among other fish and duck specialities. The firm signed an agreement in 2001 with a co-operative from the Basque country, Lur Berri, under which it took over the commercialisation of the Guéraçague brand of foie gras, thus acquiring a further 3 percent market share. In return it transferred its upstream operations to Lur Berri, including those of Palmitou, an acquisition made in 1999. Labeyrie thus controls 23 percent of the foie gras market in France. The CEO of Labeyrie is quoted as saying that it is the existence of the PGI

[4] Detailed versions of these case studies are to be confirmed with industry actors from September 2004.

label that has permitted his brand of foie gras to resist the price pressure of the market and he goes on to insist on its importance because of its role in stopping non-regional producers from passing off their low-quality product as high-quality foie gras from the south-west of France.

Figure 2: Market share data (% in value) 2003



Source: Ofival 2001

The second position in the foie gras market is held by the co-operative Pau Euralis that has successfully integrated downstream from its original activity which was was the distribution of corn from the south west of France. Products that are commercialised as relating to specific value of 'terroir' or regional specificities now make up over 35 percent of the group's turnover of some €700 million. Its two brands of foie gras, Montfort and Bizac represent 9 and 2 percent of the market respectively. Montfort was acquired in 1996 and, in 2001, Euralis took a majority ownership in the leading French exporter of foie gras, Rougié Bizac International. In addition to Montfort and Bizac sold through mass retailing channels, the firm commercialises three other brands: Rougié and Grimaud to the CHR sector and Pierre Champion via direct sales to end consumers.

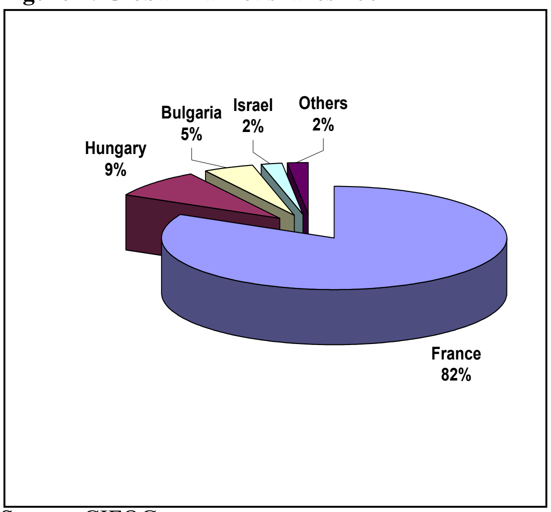
Maïsadour is the co-operative behind the brand of foie gras, Delpeyrat, that accounts for 5 percent of the French market. Originally a grain supplier, the firm had a turnover of over €500 million in 2002 in seven different activities and has 2,500 employees. As with Euralis, a major activity of the co-operative is the development and distribution of products linked to the 'terroir' and these now constitute 20 percent of the firm's business. In addition to Delpeyrat, Maïsadour commercialises the brand Sarrade to the CHR sector and it also has a wholesale brand, Leymarie. Its annual production of 10,000 tonnes classifies it as the second largest producer of foie gras in France after Laybeyrie. The foie gras subsidiary of Maïsadour made a loss of €12 million in 2002 and the firm claimed that this loss resulted from a combination of falling demand leading to price pressure and the heavy investment needed to adhere to the requirement of the PGI labelling scheme.

An example of a smaller sized firm in the market is La Quercynoise, whose marketing director believes it holds the 5th or 6th position in the market place with an upmarket positioning and an emphasis on 'terroir' and innovation. The firm's turnover in 2002 was €28 million and 30 percent of this comes from mass retailing channels for which a specific brand, Maîtres Occitans, was developed in 2002. Although 90 percent of its production is classified under the PGI 'foie gras du Sud-Ouest', La Quercynoise is participating in the development of a more demanding certification procedure that will involve, among other requirement, three more days breeding per duck and a minimum of 70 percent grain feed. The new label is to be termed 'Saveur Terroir Sud-Ouest'.

In addition to these larger players, there are another 40 to 50 firms involved in the production and commercialisation of foie gras that have a turnover of over €1 million and €15 million. Half of these have a turnover of €5 million or below.

With an output of 1,700 tonnes annually, Hungary is the world's second biggest producer of foie gras and it is the largest producer of goose foie gras. Eight five percent of the Hungarian output is exported to France and the Hungarian association of producers of goose foie gras has imposed export quotas to avoid a drop in prices.

Figure 4: Global market shares 2002



Source: CIFOG

Hungarian companies that produce foie gras have been able to develop a product of a standard quality that can be supplied at a lower cost than that of French producers. These companies are relatively large, diversified and may be publicly quoted.

In September 2003, the PGI of "foie gras du Sud-Ouest" became the first French PGI labels to benefit from an EU programme to promote the label. The total budget involved is €3 million to be spent over a three year period on an information-based campaign to promote the PGI label along with the products themselves. The European Union contributes 70 percent of the budget and an additional €150,000 is provided by the French government and the regional councils of Aquitaine and Midi Pyrénées. OFIVAL, the trade body provides a further €50,000 and a contribution of €1,05 per duck is taken from the sales of each producer.

Poulet fermier des Landes

The south west region of France was a pioneer in the development of quality chickens when it became the first to implement a French quality label, the 'Label Rouge' on a wide scale in 1967. The subsequent development of this label throughout France is evidence of the need to distinguish between the industrial approach to breeding chickens that was becoming technically widespread around that time and the alternatives. These involve different breeds of chicken that gain weight more slowly, are fed differently and that are twice as old when they are killed. The higher costs of this second approach mean that the market for chickens in France is split between the lower cost option and what became known as the market for 'Label Rouge' chickens. The split in value terms is roughly two thirds for the 'standard' chickens who gained ground by expanding the market in the 1970s and 1980s and one third for the 'labelled' chickens who benefited from a new dynamism in the 1990s as a series of health scares led consumers to be increasingly wary of low cost meat products. An intermediary form of chicken available on the French retail market is 'certified', meaning that the supplier has had recourse to one of a number of certifying bodies. This is a common form of non-standard label on retail-brand chickens and it represented some 12% of value sales in 2003.

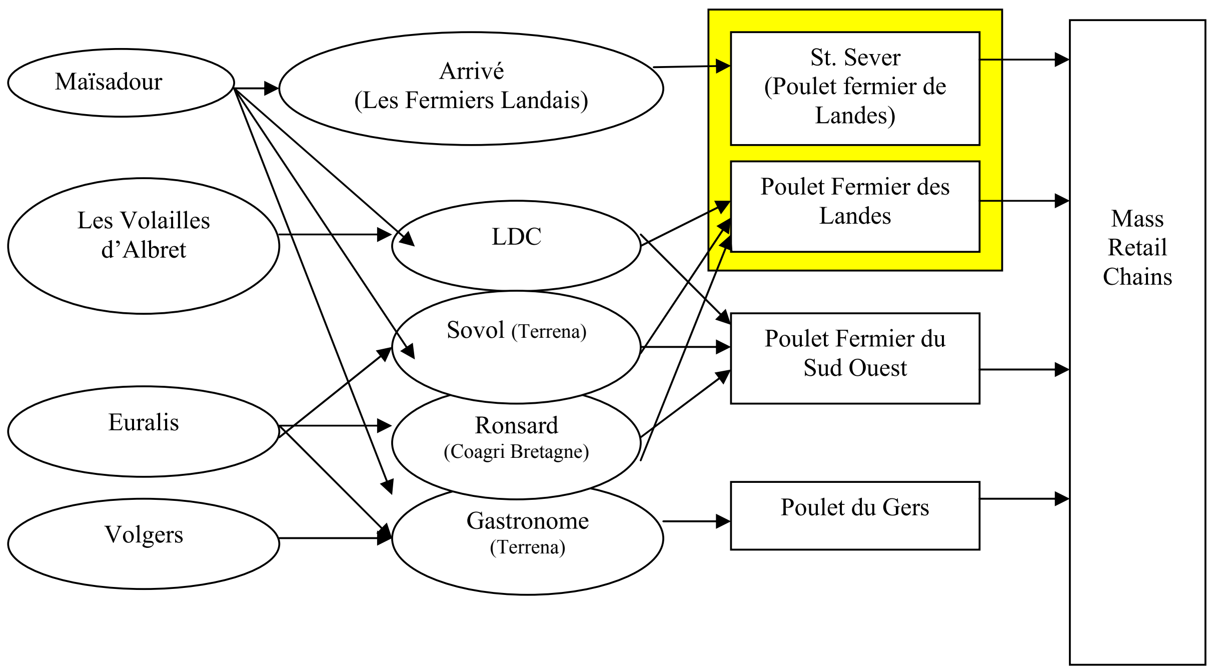
The Aquitaine region of France supplies one quarter of the country's labelled chickens and the PGI label 'poulet fermier des Landes' was obtained as early as 1996, as it represented one of the first applications in 1992. As the majority of producers in the region were already operating the Label Rouge system, the professional association (Association des Volailles Fermières des Landes) was able to take advantage of a fast-track application process at European level as much of the requirements were the same as those already in place. The speciality of the chickens from this region of France is the yellow colour of their meat due to the 80 percent of their feed that must be made up of corn, another speciality of the region. The other innovation in the raising of these chickens is the use of small portable cabins in which they are 'housed' in large enclosures in the pine forests of the 'Landes' region south of Bordeaux.

Despite the higher costs involved in breeding these higher-quality chickens, the price differential between standard and labelled chickens has been reduced by 20 percent between 2000 and 2003 as the crisis facing the beef industry has receded. The discount retail sector accounted for 15 percent of sales of chickens in France in 2003 and mass retailers are pushing suppliers for lower prices to supply the basic whole chicken and innovations in terms of higher growth segments such as chicken wings and other products that fit in with the time-stretched lifestyles of their consumers. The PGI-labelled products have little to gain from the development of more processed foods as it is not possible to include the PGI status of the product without reapplying for a label and proving the regional link of the processing involved.

The most significant chicken brand in France is Loué which is in fact another PGI of a little known area in the Sarthe region in the west of France. The PGI is formally controlled by the professional association of the region but 85 percent of the production of chickens with this label is supplied by one firm, LDC. It was created through the merger of three small local producers, Lambert, Dodart and Chancelreul. The firm has a market share of 25 percent of all labelled chickens sold through mass distribution channels and its turnover is over €200 million.

With an estimated market share of less than 9% in 2003, the label 'poulet fermier des Landes' is a challenger in the French marketplace for labelled chickens. The market for 'poulet jaune des Landes' is supplied by five major firms, one of whom is LDC the supplier of Loué. Two of the others, Sovol and Gastronome, are subsidiaries of the co-operative group 'Terrena' originally based in the west of France. Gastronome is the third player in the French chicken market with the majority of business based in standard products and a growing business in the processed chicken segment. As it owns the two factories in the region, Gastronome has an exclusive right to supply chickens with the Label Rouge 'poulet du Gers'. The Ronsard company is part of the co-operative group from Brittany, Coagri Bretagne. The most important supplier of the PGI labelled product is the Arrivé group who supply a branded version of the PGI label under the name 'St. Sever'. It acquired this brand, and its activities in the south west of France, following its part-acquisition of a troubled firm 'Les Fermiers Landais' in 1993 but the majority of its business is related to its mass distribution brand 'Maître Coq' and its specialist brand 'Marie Hot' for butchers and other specialist outlets. 40% of 'Les Fermiers Landais' is in the hands of Maïsadour, the Landes-based co-operative described above as a loss-making supplier of foie gras. Maïsadour and the other co-operative mentioned earlier are two of four main suppliers to the five firms. All of these firms are also suppliers of products that are in direct competition with the PGI labelled chickens. The most closely positioned competitor is the Label Rouge 'Poulet Fermier du Sud Ouest' which has very similar requirements to the PGI label other than the space allocated to the chickens. The relative complexity of the supply chain is illustrated graphically in figure 3.

Figure 3: The supply chain of 'poulet fermier des Landes' and main competitors



Jambon de Bayonne

Of the €5 billion spent annually by the French on 'charcuterie' products, some €500 million represented 'salted and dried ham and related products' in 2003. In the supermarket shelves, the primary supplier of charcuterie products tends to be retail brands with up to 60 percent market share but there is growing pressure from discount retailers, who represent 16,5 percent of the market in 2002. In reaction to this development, retailers have allocated more space to low-cost products, such as ham that has been simply salted and not dried. The PGI label, Jambon de Bayonne was obtained in 1998 and its annual sales of €100 million represent 20% market share.

The French market leader in the segments of both cooked and dried ham is Aoste, a subsidiary of Sara Lee. The firm made an investment of €5.5 million in a production site in the Bayonne region following the awarding of the PGI label and it currently suppliers 9% of overall production. In total, there are some 2,000 pig breeders based in the greater south west region of France and who guarantee a cereal-based diet to their pigs. The branding of the carcasses on their legs ensures that the source of all 'Jambon de Bayonne' products can be traced back to the original breeder. 25 slaughtering plants are certified to supply 10 salting and drying sites that are located in a more limited region of the Adour river basin. Not all the pigs will be selected to make 'Jambon de Bayonne' as it requires a certain size and a ratio of fat to meat. Nonetheless, the producers are guaranteed a 'Bayonne bonus' payment for 50% of their output.

This is deemed necessary as the requirements of the PGI label incite producers to breed pigs whose meat has more fat content than is normally required and the remainder of the pig carcass is thus devalued.

The most significant 'jambon de Bayonne' brand is Grand Adour that was developed by Chevallier, a subsidiary of a large French food group, Bongrain. It represented one third of retail sales of jambon de Bayonne in 2003. The second largest producer, with 22% share, is a Spanish firm, Campo Frio, a subsidiary of the American group, Smithfield Foods. Both of these, and the majority of smaller producers who mainly supply retail-brand 'jambon de Bayonne' are facing significant price pressure in light of the recent growth of low cost alternatives.

Analysis

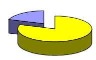
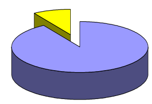
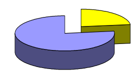
An initial comparative analysis of the three food sectors was conducted using a basic managerial marketing approach. While the summary table 1, and the background information used to compile it, provide a basis for comparison of some key differences in terms of market share and associated marketing activities, a traditional marketing analysis of the activities in these three sectors remains unconvincing in terms of its power to explain why the PGI labels have differed so much in terms of their ability to protect their holders from the competitive forces of the marketplace. With 77% market share, for example, foie gras du sud ouest has resisted the entry of other French regions and Eastern European producers. The PGI 'poulet fermier des Landes', on the other hand, has less than 9% market share.

The future work to be conducted on these case studies is based on the belief that "understanding of the processes is more critical than being informed of the current state and features of the structure" (Snehota 2003: 14). A network approach is seen as likely to offer a promising means of understanding the true dynamics of the three different sectors leading up to, during and since the acquirement of the PGI label. In turn, the three sectors offer an interesting environment in which to study 'parallel net adaptations' (Harrison and Easton, 1997) to the change that was represented by the introduction of the EU legislation. As French professional bodies were highly represented in negotiations leading up to the drafting of the legislation, the change cannot be termed entirely exogenous to the networks involved.

A further interesting point in this series of case studies is the nature of the negotiations that were carried out in each professional association in order to define the terms of the PGI application. During this process, many previously undefined positions were made explicit in order to favour a particular direction that would be advantageous to the actors involved. A detailed retracing of these negotiations will add to our understanding of how these networks truly functioned prior to the change and how each actor sensed the need to position themselves, their resources and their activities in relation to a network change that occurs in a clearly identifiable time period and involving actors who are, for the most part, self-declared participants in a form of 'collective enactment' (Snehota 2003: 16).

Finally, the added interest of these case studies is that there is a key network actor who is common to all three – the retailer. An analysis of the different approaches taken by different firms and professional bodies as they seek to position their PGI in the mass retailing market will enhance our understanding of the dynamics of this complex relationship that is vital to all consumer firms access to the final marketplace and thus to its success.

Table 1: Comparative analysis of three PGIs

PGI	*Foie gras du sud ouest*	*Poulet fermier des Landes*	*Jambon de Bayonne*
Market value (estimated 2003)	€215,5m	€822,5m	€504,2m
	€166m	€72m	€100m
	77%	8,7%	20%
PGI market share			

Summary of marketing mixes

Product			
Brands	• Delpeyrat • Montfort • Labeyrie • Retail	• St. Sever • Poulet fermier des Landes • Poulet jaune du sud ouest • Poulet du Gers	• Grand Adour • Retail

Price			
Up market	**Small producers**	**St Sever Landes**	
Mass market	**Delpeyrat Montfort/Labeyrie**	**Sud Ouest/Gers**	**Grand Adour**
Low cost	**Retail brands**		**Retail brands**
Discount			

Distribution			
	Centralised referencing Seasonal sales	Centralised and regional referencing Relationships with the supermarket buyer at store level	Centralised referencing Retail brand suppliers Strong price pressure

Promotion			
(collective)	€1 million/year	None	€1 million/year

The analytical framework of business relationships (Håkansson and Snehota, 1995) will be used to describe the impact that the adoption of the PGI has had in each of the three sectors. The following will be examined in detail for the purposes of understanding how the process was different in each of the sectors:

1. Resource ties and activity links (technological and economic factors)
   In the case of the production of "foie gras du sud ouest", for example, the decision was taken that the ducks could be fed with a paste of grain and water rather than the traditional method using only grain. This decision was favourable to the more industrial methods that were being introduced to the sector by the larger firms who were specialised in the 'force feeding' stage of the process and who sought to develop a lower-priced foie gras for mass distribution. It was resisted by the smaller duck breeders who are vertically integrated and who often sell directly to their consumers.

2. Actor bonds and activity links (concentration and standardisation)
   One of the key objectives of the introduction of the EU legislation was 'to encourage diverse agricultural production', which implies that there is a desire on the part of public policy makers to avoid a level of standardisation that could be judged harmful in terms of some measure of the public good. What can be seen from a more detailed look at each of the case studies is that the existence of the PGI label is not a guarantee against industry consolidation. This is most clearly the case for 'poulet jaune des Landes' where all four main firms in the transformation industry are significant national players who were attracted to the region during a period of growth in this segment of the market. As this growth has levelled off, these firms are considering a move to a 'less demanding' PGI in terms of the space that needs to be allocated during the breeding phase.

3. Actor bonds and resource ties (conflicting interests in relation to ownership of resources and control over activities)
   In two of the markets studied, there are some actors who choose to promote their own brand in addition to, or instead of, the PGI-protected label. This is the case for 'St. Sever' and 'Loué' in the chicken market and 'Delpeyrat' and 'Labeyrie' in the market for foie gras. By building a strong brand, these firms are differentiating themselves from the basic PGI-protected offering and may build more powerful relationships with the distribution. Other firms may seek such relationships with distributors through agreements to supply own-brand products with the PGI label.

The next stage of the research involves verifying the detailed case studies that have been built of each of the food sectors and possibly adding two more PGI labels from the south west of France to have clear examples of a successful and a failed PGI label. Three perspectives will be applied to the case studies and their ability to illustrate the true impact of the EU legislation will again be reviewed with industry actors. One of these perspectives is the network perspective and its view of relationships, actors and networks will be compared to those of the institutional school of economics and of political sociology.

A key focal relationship in the success of the products bearing the PGI label is that of the manufacturers with the mass distribution chains. It is hoped that more systematic access will be gained to examine the interaction at the level of central buying organisatons.

Conclusion

The conclusions of the analysis of the three case studies centre on how the adoption of the PGI label in three different sectors of activity had a significantly different impact on each, despite the fact that all three sectors studied produced food products for consumption via mass distribution channels and all were produced and processed in the same geographic region.

The network approach to understanding market dynamics is particularly rich in this context as it offers a far more sophisticated and realistic view of the impact of introducing such a change that is typically used by public policy makers in deciding on measures to be taken or by industry participants in deciding on their position in relation to proposed or actual changes. It is proposed that more systematic use be made of this approach when policy makers and industry participants are considering the real potential impact of such measures.

The application of the network approach to a consumer environment through this study of PGIs also offers promise for development of this school of thought to other consumer markets where policy makers are intervening to attempt to achieve social goals. This may include other food-related fields such as consumer-oriented labelling or emerging industries such as low-cost air travel in Europe. Policy-makers at European, national and regional level are eager to achieve certain goals through such interventions but the impact in reality may often differ from what was intended for some firms and organisations that are part of the networks involved in the industry. Analyses of actors, activities and resources in these contexts should be of value in understanding why and how it is that different levels of change occur in different networks.

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