Some Factors of Success for "Origin Labelled Products" in Agri-Food Supply Chains in Europe: Market, Internal Resources and Institutions[1].

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Abstract

This paper provides an overview of a FAIR research project into the specific conditions and institutional requirements for the development of PDO and PGI products (Protected Designation of Origin and Protected Geographical Indication). Twenty-one supply chains in seven countries are analysed (France, Italy, Greece, Netherlands, UK, Spain and Switzerland). The primary factor in success is the capacity of a set of firms in a supply chain based in a particular area to effectively coordinate the management of the supply chain. This kind of collective management shows a possible link between an approach in terms of hybrid forms and an approach in terms of internal resources.

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Quelques facteurs de succès des "produits d'origine" dans les filières agro-alimentaires européennes : marchés, ressources internes et institutions

Résumé

Cet article est la synthèse finale d'un projet européen FAIR, concernant les conditions spécifiques économiques et institutionnelles du développement des filières des Produits sous Appellation d'Origine protégées et des Indications Géographiques Protégées. Vingt et une filières ont été étudiées dans sept pays (France, Italie, Grèce, Pays Bas, Royaume Uni, Espagne et Suisse). Le premier facteur de succès est la capacité d'un système d'acteurs basé dans une zone particulière à coordonner efficacement la gestion de la filière. L'article montre qu'un lien est possible entre une approche en termes d'économie néo-institutionnelle et en termes de resources internes.

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Introduction

This paper is intended as a contribution for reflection and discussion of the socio-economics of origin labelled products in agri-food supply chains. It concentrates on markets, internal resources, systems of firms, and institutions. We begin with the simple idea that a supply chain must fulfil a number of conditions if it is to be successful in a highly competitive global environment. Some of those conditions relate to the product and the market, others refer to the mobilisation of the system's resources[4]. By way of introduction it might be useful at this point to refer to some important remarks.

1. Why are some geographically labelled products protected by national and/or EU regulations? The North-South divide apart, international negotiations in recent years have polarised around two opposing positions. On the one hand the Anglo-Saxon outlook characterises any attempts to restrict trade through the use of designations of origin as protectionism and restraint of competition (cf. the United States' unrestricted use of the Chablis designation for wine). In contrast, other countries consider that such usage is tantamount to "passing off"; it constitutes unfair competition as an undue advantage is gained by usurping the good name of a product that has been built up by substantial, long-term, collective and individual investment. The European Community sided with this latter view in 1992 by introducing the policy set out in Council Regulation (EEC) 2081/92.

2. Origin Labelled Products must be different from standard products in the same market since the Regulation refers explicitly to their qualities or characteristics. The idea of *differentiation* as found Industrial Economics means something similar to the original sense of *specificity* : the product is said to be *differentiated* if it has *specific characteristics* (that are measurable in the sense of substantial or intrinsic) and *if consumers perceive it as such*. And here we have recourse to the idea of *relevant economic market* delimiting products that consumers view as substitutes for each other.

3. Moreover, in some countries quality policies have sought to justify the protection of names and/or collective brands by arguing that what differentiates the products are their *specific modes of production* (Allaire and Sylvander, 1996). This is true of, say, organic farming, which is currently defined by specifications laid down in a number of countries, and at European and soon world level

[4] An extensive version of this paper was published in the proceedings of the EAAE Seminar : Barjolle and Sylvander (2000) in Sylvander, Barjolle and Arfini (2000).

in the Codex Alimentarius standards. Consequently, the thinking behind the European regulation and behind other national policies on quality (such as the French policy) requires something more than what is known as "horizontal" differentiation. Yes, the product to be protected must be *different*, but that difference must be attributable above all to the mode of production.

4. In the case of "Origin Labelled Products" reference to the mode of production is further reinforced by the fact that quality is *"due to a particular geographical environment with its inherent natural and human factors"* (for PDOs) or that *"a specific quality, reputation or other characteristics [are] attributable to that geographical origin"* (for PGIs) (Regulation 2081/92). This text forms a basis for distinguishing between *"Origin"*, as defined above and *"Provenance"*, taken as the place of production of a good regardless of its specific mode of production. It can be seen in this respect that the distinction between *"goods of origin"*, meaning goods for which there is a "sum of shared knowledge" between producers and consumers (Ruffieux and Valceschini, 1996) is not restrictive enough, since in principle it does not entail any codification of production processes. However, it is true, as we shall see, that an essential condition for "Origin Labelled Products" to be successful is that consumers must have a positive perception of them and share cultural affinities with them. When these factors are officially acknowledged as part of a regulation designed to protect their geographical designation, such products are said to be of *"Protected Origin"*.

5. France and Italy have gone a step further by referring to *typicity* (Scheffer, 2002). Different institutions and countries attribute greater or lesser importance to this concept. We propose two approaches to typicity : *"typicity 1"* is horizontal meaning that the good is *both specific (different) and unique* and therefore relates to a given region (*typical of …*); *"typicity 2"* is vertical and supplements *typicity 1* by emphasising its determinants, i.e. the combination of natural and human production factors that go into making it (Salette, 1997). The fact that the latter factors are related to *human know-how*, and are not readily separable from natural factors (Bertrand, 1975) might suggest that they cannot be readily reproduced: while knowledge may be handed down (in time) under certain circumstances, it is not easily transferable (in space) (Casabianca and De Sainte Marie, 1997). In this sense, the concept has a certain cultural content. *Terroir* can then be defined as a homogeneous and bounded zone where conditions for *"typicity 2"* are fulfilled.

6. Such a definition of "Origin Labelled Products" presupposes an *agreement linking the involved actors* for the good to be fully characterized. Of course, widespread recognition can be achieved by

a fixed, long-term brand policy pursued by a large company alone. However, "Origin Labelled Products" are often produced in less-favoured regions by networks of small firms with little in the way of resources to secure such recognition without backing from public policy. This type of production provides a compromise between big industry and small independent producers (Sylvander and Marty, 2000) while ensuring international protection.

In this article, after considering a number of theoretical points of view about the subject (Part 1), we look at a method for assessing the factors of success of 21 supply chains involved in PDO or PGI (Part 2). We then comment on the results (Part3) [5].

Table 1 : The 21 PDO-PGI supply chains studied

Country	Product
France	Cantal, Agneau du Quercy, Comté, Pommes de terre de Merville, Huile d'olive de Nyons
Greece	Feta, Zagora Mèla, Peza Olive Oil
Italy	Prosciutto di Parma, Parmigiano Reggiano, Fontina
Netherlands	Noord-Hollandse Edammer, Boeren-Leidse met Sleutels (cheese), Opperdoezer Ronde (potatoes)
UK	West Country Farmhouse Cheddar Cheese, Scotch Lamb, Jersey Royal Potatoes
Spain	Jamón de Terruel, Ternasco de Aragon
Switzerland	Gruyère, Abricot Luizet du Valais

1.Theory

Organisational economists of the 1950s, seeking to define the circumstances under which economic optimum and social welfare could be achieved, developed the Structure-Conduct-Performance paradigm. The aim was to identify and stamp out anti-competition practices such as the imposition of entry barriers or monopolies. For a long time the firm had remained out of the research field, although the basic postulate advanced by Coase (1937) had altered the way we view the firm, which was defined as an organism whose internal structure and relationship with the outside world change over time. During the sixties and seventies, this new conception of the firm has developed rapidly. In

[5] This article is based on a FAIR research project on "PDO-PGI products: market, supply chains and institutions" The aim of the project was to analyse the economic and institutional conditions for developing PDO-PGI products in the European Union (Regulation 2081/92) and to make recommendations to the EU and the institutions concerned about how to make the quality policy a success, which would mean to achieve an appropriate degree of harmonisation of the decision-making process among local, regional, national and community levels. Field surveys were conducted of the following 21 supply chains where products are registered at European level as PDOs or PGIs.The partners in the programme are: Fearne A. & Wilson, N., Wye College (GB), De Roest K et al., CRPA (IT), Galanopoulos K. et al., University of Thessaloniki, Fotopoulos C., Vakrou A. et al., NAGREF (GR), Sylvander B. & Lassaut B., INRA-UREQUA, Leusie M., Crisalide (F), Van Ittersum K. et al., Wageningen (NL), Barjolle D, Chappuis JM, Dufour M, IER-EPFZ (CH).

emphasising the importance of the firm's decision-making capacities Simon is emphasising the importance of its internal resources. Similarly, Barney and Hesterly (1996 :133) claim that the SCP paradigm gives too much weight to the firm's environment: *"However, the attractiveness of an industry cannot be evaluated independently of the unique skills and abilities that a firm brings to that industry"*. The research in management experienced the same evolution. Penrose (1963) stressed that the internal skills was a determinant factor to explain firm strategies, followed by Wernerfelt (1984) who launched the stream of a "Ressource Based View " of the firm. This movement stands clearly in opposition with the porterian view, which focuses on market and competition for accounting of the firm's strategy. In a very pragmatic point of view, we chose here to follow both approaches in the same time. PDO/PGI supply chains, have usually quite a weak market power and have then to comply with external market forces. In the same time, they have specific internal skills in order to enhance their products (know how, culture, cohesion on a common project, etc.).

Furthemore, we have to cope with the question of *collective action*. In effect, we explore in this study several *sets of actors* characterised by many firms jointly managing the same product in the way one large firm might do. The PDO/PGI group of firms often includes numerous small businesses or industrial agricultural cooperatives, and even industrial operators whose objective is not profit maximisation. There may be several objectives including survival, developing existing special quality products or creating and distributing new ones, saving rural activities, maintaining the land, ensuring regional development, or optimising production rights.

Therefore, it is important to point out that PDO and PGI must stem from a *collective process*. The foregoing theoretical developments (Ressources Based View and market/competition view) can be applied to a set of actors, which we shall term the "actors' system", supposing that they manage to define common objectives (which they sometimes do in practice !). If they share a common objective, their activity and performances can be accounted for through consideration of the way each firm's management reacts to market information. Coordination between operators in such systems is intended to piece together a specific form of supply.

Following Williamson (1985), we consider that a set of actors is an "hybrid form", which manages the collective strategy in order to face the problems tied to uncertainty, as risks are especially high

when the transactions is linked to specific assets. When uncertainty is high and market environment is moving, specific institutions can be in charge of the co-ordination of the actor's behaviour. The diversity of these forms of organization has been highlighted (Ménard, 2001).

In the context of PDO/PGI supply chains, those arrangements have been studied (Barjolle, Chappuis, Sylvander, 1998 ; Reviron 2001 ; Barjolle and Chappuis, 2000). Reviron for instance shows that "market system" is often driven jointly by many bilateral primary negotiation tables and one multilateral negotiation table, which gives the general coordination framework. It is on this basis that we investigated the factors determining whether or not PDO and PGI supply chains are successful at micro- (the firm, the product and the market) and meso-level (the institutional arrangement).

2. Methodology

In this section, we will present some assumptions about the main success factors identied in the course of the research. In an attempt to assess the factors behind successful PDO/PGI products, we adopt two different standpoints. First we compare the scores calculated for each factor and for each product/actors' system (*calculated success*). Secondly we ascertain success from four main determinants of market performance : supply chain's turnover, supply chain's growth, product's reputation, price premiums (*observed success*). We assume that if calculated success and observed success are correlated, then the criteria for success have been correctly identified. Previous theoretical considerations and case study findings lead us to give precedence to two sets of factors: (1) factors relating to *overall product/market features (supply and demand)*, and (2) factors relating to *organization*. Those factors are supposed explain the performances of the PDO-PGI supply chains.

For the firm, *product specificity* (differentiation) and *market relevance* are the main strategic choices underpinning its performance. Market boundaries may be indentified in relation to an industrial sector and with strategic groups (Porter, 1980). At meso-economic level, the product is constructed collectively by a large number of firms. *Specificity* is therefore achieved through a social construction process. The choice of a future market is at least as important as the common rule laid down for collective control of the product (promotion, research & development, quality standards,

etc.). Collective performance is dependent on both these factors. Research also indicates that operator motivation and the legitimacy of the union are important factors in supply chain performance (meso-economic level). Naturally there is interaction between each firm's strategy and the supply chain as a whole.

2.1. Factors relating to supply and demand of the product

2.1.1. Product specificity

We begin with the assumption that success is dependent on the product being highly specific.[6] *Specificity* involves the product meeting a number of conditions (Sylvander & Lassaut, 1994):

a. It must have *measurable characteristics* which are genuinely different from those of substitute products. These fall into two categories : (i) *Discernible and measurable characteristics* which the consumer can identify when buying or consuming the finished product ; (ii) *indiscernible characteristics*: a distinction may be drawn here between intrinsic characteristics (that it is often mandatory to state on the packaging, e.g. nutritional composition) and production characteristics (that are cited by the seller but that it is not mandatory to state on the product). Those characteristics are strongly determined by *technology*, which makes the product different from the substitute products. In the case of PDO/PGI products, the technologies have to reflect the connection between the final characteristics and the *terroir*, underlining what we have termed product *typicity*. In competitive markets, the degree of specificity conferred by PDO/PGI listing may not be enough to differentiate between products: the *intrinsic (or substantial) quality* of the products, the uniformity and consistency of their distinctive characteristics must be taken into consideration too. We make provision for this by specifying whether any quality assessment or test is made prior to sale (based on a standard or a special grading system).

b. The product must be *perceived as different* by the consumer. This perception concerns the products attributes (taste, nutritional values, etc..), but also the *designation* used for the productn which has to be significantly different from the name of the standard product. In the cases studied here, some names like *Comté* or *Cantal* are household names and refer exclusively to the

product. Others like *Scotch Lamb* or *Agneau du Quercy* are merely the combination of a geographic and a generic element. In the case of PDO products, the region's name generally has positive connotations for consumers.

The degree of specificity as evaluated for each of the products under study is shown in annex, table 2, column 1.

2.1.2. Relevance: the specific product must find demand in a relevant market

The success of a specific product is often dependent on management correctly defining the market for it. This definition takes us beyond the "naturalist" concept of the product market (as defined by the nature of the actual product and its most common use). The relevant market for *Parmigiano Reggiano*, for example, is not so much the *cheese market* as that of *meal ingredients*. In the same way, the relevant market for *Huile d'olive de Nyons* is less the *olive oil market* in general than the *market for farm products bought by holidaymakers*.

Market relevance can be evaluated from three sub-factors (see in annex, table 2, column 2) : (i) *Customer appeal* created by the product's specific characteristics. This is dependent on the level of consumer expectations and on how well the product meets those expectations. Long-standing ties between the product and the region instil habits and traditions reinforcing this appeal ; (ii) significant *willingness to pay*. This was evaluated through consumer surveys (Van Ittersum, Candel and Torelli, 2000) ; (iii) a *distribution system* geared to the targeted consumers. Choosing the right distribution channel is one of the main factors in market relevance.

2.2. Factors relating to the organization of the firms

We assume, thirdly, that the success of PDO-supply chains and products is also closely related to the ability of the set of firms to manage the PDO-product collectively. In order to confirm this assumption we consider : (i) the set of operators and their *motivations* ; (ii) the coordination among firms with regard to *product management* ; (iii) the coordination among firms with regard to *market management* ; (iv) the effectiveness of local, regional and national *institutional support*.

6 This is consistent with the "Differentiation Principle", the main principle in marketing and management theory (e.g.Porter, 1980).

2.2.1. Operator motivation: the necessity for differentiation and protection in a precise area

The balance among the different interest groups within the supply chain is an important factor in facilitating the decision-making process. In our case studies, we identify three kinds of firm : (i) *the initiator*, who was the first to spot the opening, to obtain legal protection, and/or to see the need for better differentiation of the product on a collective basis ; (ii) the *interprofessional body*, that is the applicant group (in the sense of Regulation 2081/92) seeking legal protection for the product under the PDO / PGI schemes ; the *channel captain*, the economic leader in the supply chain.

The role of an *initiator*[7] is generally to implement collective management of the product. In the early stages, the initiator's role is to secure the commitment of the individual operators throughout the production chain and to induce them to adopt a common code of practice and external controls. Subsequently, the initiator has to drive the decision process in a collective manner, so that every firm is informed of changes allowing it to comply with the conditions laid down in the code of practice. The application process itself may engender difficulties[8]. A careful balance must be struck among the three "decisions makers" in the supply chain: the initiator, the interprofessional body (if any), and the channel captain. The existence of the initiator is the criterion we employ to evaluate "calculated success" (see in annex, table 2, column 3).

To perform well, the set of firms and each operator have to be very committed. We rank *motivation* as an important criterion for achieving success (see annex, table 2, column 3).

We assume also that the pressure from *competitors* is an important factor in forging cohesion and therefore success. We consider competitive pressure at three levels: the *risk of or trend towards standardisation*, the *pressure from substitute goods*, and *unauthorised use of the name*[9] (see annex, table 2, column 3).

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[7] The initiator may be a producer group, a manufacturer or a distributor. In some cases it is an interprofessional body, generally working with a producer's union and a processor's group.

[8] A degree of cohesion is needed to reach a consensus on product and market strategy. Many difficulties arise for instance when the initiator defends interests other than those of the channel captain's. Small-scale dairies may be the initiators whereas channel captains are big industrial dairies representing more than 70% of total production. In such cases, conflicting interests make it very difficult to establish the code of practice. Tension also arises when the channel captain is not dominant within the interprofessional body, or when the initiator disagrees with decisions of the interprofessional body.

[9] The need for protection and differentiation generally derives from a direct threat (in the case of a substitute of comparable quality to the product) or from an indirect threat, when there is a strong trend towards standardisation of the reference product itself (e.g. Cheddar Cheese). In some cases, the specific product itself is threatened by standardisation because of its success, either for production reasons (automation, more consistent quality) or for market reasons, when the products have such an impact on

2.2.2. Coordination among firms with regard to product and quality management

In assessing how effective coordination and cooperation is with regard to *product management*, we consider two main factors : (i) *the capacity to bring out the product's differentiation potential***.** The product itself may be attractive to consumers. This might be because the product corresponds to a particular taste or use, or because it is particularly convenient. It may be the product itself that appeals to consumers, with no need for collective management of the product or of quality. We ascertain whether the potential appeal of the product is a result of the collective management process by examining product specificity alongside market relevance ; (ii) *The ease with which each operator can appropriate the collective process***.** One of the important factors during the approval procedure is the ability of the firms to adapt their own strategy to the collective one. At the beginning of the process they must negotiate an initial draft of the code of practice. Thereafter, during the implementation phase, they must meet all the constraints imposed by the code of practice (some firms have to invest to adapt their production process to the code of practice), submit to testing and inspection, and pay the fees for product certification (Sylvander, 1995). Even if the product is not highly specific (as defined by the code of practice), good quality management (such as a grading system) may nonetheless guarantee success on the market. We consider that the *grading system* is also a result of a collective process, and take it into account when appraising coordination and cooperation within supply chains. Some supply chains are also able to make up in part for their low degree of specificity through good management of the *intrinsic quality of the product*[10] (See the scores in annex, table 2, column 4).

2.2.3. Coordination among firms with regard to marketing management

Some degree of cooperation between firms is generally required to fulfil the conditions cited above. This leads to the emergence of institutions that carry out certain important functions previously performed by individual firms: defining codes of practice, testing and inspection, grading, promotion, market management, research & development. Several functions traditionally carried out by individual firms may be pooled if the operators think that it is their interest to do so (Richardson,

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the market as to be perceived by consumers as quasi-generic. In such cases, operators react by seeking new ways to reinforce product specificity (Comté, Peza Olive Oil).

1972)[11]. Essential functions subject to cooperation include : quality management of raw material procurement: suitability of raw material to the desired end product ; product definition (code of practice) in accordance with the market and differentiation objectives ; enforcement of the code of practice and grading of the final product in accordance with the market ; payment for the raw material according to the final quality of the product ; promotion and management of the collective brand and/or mark ; management of output and growth: system of supply control ; research, development and training.

At the general level of the set of firms, the main question is one of the degree of consistency : a promotional policy, for example, will not work and may even be detrimental if the product is not differentiated, or is poorly-defined or inadequately controlled, etc. Quality grading is effective only if the raw material and payment for it are directly dependent on compliance with quality criteria (set in order to obtain the best possible end product). A second issue is the relationship between collective management and the *leeway* left to each firm. There must be sufficient market segmentation and competition between firms for the system to evolve. Each firm is supposed to have scope to vary product quality to suit its own strategy (Marty, 1998). This leeway allows firms to manage competition in segmented markets (Lassaut, 1997). Scores for the 21 products are listed in annex, table 2.

2.2.4. The effectiveness of institutional support

In those countries where provisions similar to Regulation 2081/92 were already operative (France, Italy, Spain), national and regional authorities have often given staunch support to designation reservation initiatives. On the same way, EU launched in 1981 a policy concerning the PDO and PGI. This support may take several forms: national and EU regulations, financial assistance with the procedure, advisory boards, but also financial support for individual firms or applicant groups (interprofessional bodies). This financial help may serve other objectives such as promoting employment in less-favoured areas or revitalising economically less-diversified areas. Countries to which the concept of geographical product protection is new may have to help producers' applications for registration by providing them with extra support and advice. The main question here

[10] This is true of Cantal, Noord Hollandse Edammer, Boeren-Leidse met Sleutels, West Country Farmhouse Cheddar, Ternasco Lamb, Scotch Lamb and Peza Olive Oil. By contrast, specific products may be weakened by poor quality management.

is to assess if the forms of this support actually stimulate the development of the actors system or make it used to public help and unable to become independent.

2.3. Methodology for assessing the success factors and the success

Concerning the "Calculated" success", four groups of factors summarize the assumptions presented previously:

- Specificity, reflecting the objective difference between the product and its substitutes. (See annex, table 2, col. 1)
- Relevance, reflecting market attractiveness, intensity of consumer demand for the product, and the choice of distribution channel. (See annex, table 2, col. 2.)
- Motivation of the firms to build a system of product differentiation and designation reservation. (See annex, table 2, col. 3)
- Coordination, reflecting the ability of firms to achieve collective and efficient product and market management. (annex, table 2, col. 4.). This includes an assessment of the legitimacy and efficiency of the institutional environment.

The scoring of each variable (sub-factors) has been carried out on the following way. In the course of the project, 3 to 4 supply chains in each country have been thoroughly investigated by the research teams. Up to 200 actors have been surveyed (farmers, processors, retailers, PDO / PGI unions) and a large consumer survey has been achieved in the same time[12]. The questionnaire about the supply chains aimed to assess the different factors. The product reports have been summarized through a expert scoring, which can be found in the annex, table 2. These four scores are then multiplied by each other and divided by four, to give the *calculated success*.

Concerning the observed success, let us mention that profitability could not be evaluated directly on a large scale, due to the heterogeneity of the data from one coutry to another. We have assessed "success" by summing the following criteria : (i) Significant turnover and economic importance ; (ii) high growth rate (greater than that of the reference market) ; (iii) notoriety of specific product name and/or mark or collective brand name ; (iv) positive price premium, compared with the closest

[11] A given set of firms is then considered as an "operator system" if it achieves sufficient cohesion to operate like a single firm. We suggest the concept of fundamental competence should then be transferred from the firm to the "operator system".

substitute product.

3. Results

Profitability is a necessary but not a sufficient condition for PDO-PGI supply chains to survive and thrive. Profitability is an expectation of the initiators and a more immediate requirement of their partners. It is dependent on the balance between the need for cooperation and the spur of competition: appropriation by the different firms of the "PDO-PGI supply chain" concept, coordination among these firms on issues such as product definition, testing and inspection, non-Malthusian supply control, collective promotion of the product. However efficient they may be, the institutions must allow scope for the adaptations necessary to continued existence in a changing and competitive environment.

The results are the following (see annex, table 2 for details) :

Table 2 : Calculated success and observed success for the 21 supply chains

	311 Specificity	312 Relevance	321 Motivation	322 Coordination	Calculated Success	Observed Success
Parmiggiano Reggiano	2	2	2	2	4	1,75
Fontina	2	2	2	1,8	3,6	1,75
Cantal	1	1,25	2,2	1,6	1,1	1,25
Comté	2	2,25	1,6	2,2	3,96	2
Feta	2	1,75	1,6	1	1,4	1,5
Noord Hollandse Edammer	1	1,25	1,2	1,2	0,45	1,5
Boeren Leidse met Sleutel	2	1,75	1,2	1,2	1,26	1,5
West Country Farmhouse Cheddar	1	1,25	2,4	1,2	0,9	1,5
Gruyère	2	2,25	2,2	2	4,95	2
Jersey Royal Potatoes	2	2	1,2	1,6	1,92	2
Opperdoeze Ronde	2	2	1,4	1,2	1,68	2
Pomme de terre de Merville	1	1	1,2	1	0,3	1
Abricots du Valais	2	1,75	1,6	1	1,4	2
Zagora Mèla	2	1,5	1,6	1,4	1,68	2
Agneau du Quercy	2	1,75	1,4	1,4	1,71	1,75
Ternasco de Aragon	1	1,25	1,2	1,2	0,45	1,25
Scotch Lamb	1	1,75	1,4	1,8	1,10	1,5
Prosciutto di Parma	2	1,75	1,2	1,8	1,89	2

12 For having a view over all the material gathered, see Sylvander, Barjolles and Arfini (2000) : out of this project, 9 contributions have been made and presented in the framework of the 72° EAAE seminar which was held in Le Mans, 26-28 october 1999.

Jamon de Teruel	2	1	1,4	1,2	0,84	1,25
Huile d'olive de Nyons	2	1,75	1,4	1,4	1,71	1,75
Peza Olive Oil	1	2	1,2	1,8	1,08	1,75

Table 3: Performances of the 21 products under study

Calculated success → **↓ Observed success**	**[0 – 1 [**	**[1 – 2 [**	**[2 – 4 [**
0 – 1,5 [	Merville Potatoes, Ternasco of Aragon Teruel Ham	Cantal	
[1,5 – 2 [	Noord Hollandse Edammer West Country Farmhouse Cheddar	Boeren-Leidse met Sleutels Feta Quercy Lamb Scotch Lamb Nyons Olive Oil Peza Olive Oil	Fontina Parmiggiano Reggiano
[2 – 3 [	Opperdoezer Ronde	Parma Ham Jersey Royal Potatoes Luizet Apricot Zagora Apple	Comté Gruyère

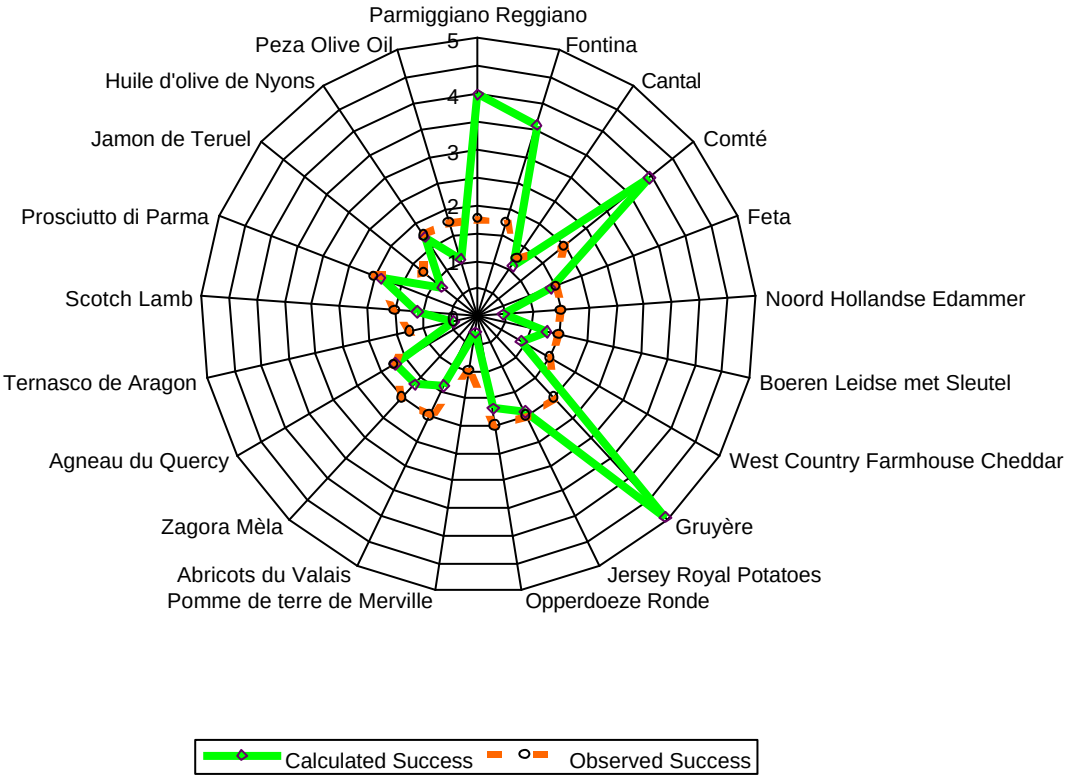

Figure 1 : Evaluating of the economic success of PDO-PGI supply chains

This table prompts the following remarks.

There is a statistically significant correlation between calculated and observed success[13]*. The factors identified therefore really do account for the success of the supply chains studied here.*

Nevertheless, observed success is greater than calculated success for all but three products. This may be because the used indicators are obviouosly not perfect , each of them being not sufficient per se to account for success. For instance, *producer price* is not a perfect indicator of supply chain efficiency, since we are not able to take the costs into account. Furthermore, it may depend on the success factors too, which could influence firms' profits or sale prices (that could not be compared across all the supply chains for want of comparable data).

The issue here is not one of the absolute success of supply chains, but rather of their success relative to the EU's willingness to support them by means of reserved designations in order to promote the interests of consumers and of less-favoured areas (see Regulation 2081/92). Such "new" designations as *Noord Hollandse Edammer, West country Farmhouse Cheddar or Opperdoeze Ronde* certainly presents good performances, but they are not very different from those of its very close substitute Hollandse Edammer, Cheddar or standard potatoes, since their success depends also on the way standard supply chains are working in UK and the Netherlands. That probably is the reason why those supply chains score much better than expected. This result holds whether the product's value is increased without being specific (Noord Hollandse Edammer), or whether its value is not increased greatly (Pommes de terre de Merville).

Conclusion

A number of results are worth emphasising by way of conclusion to this analysis of PDO-PGI supply chains.

1. The first important result is that the types of *product we selected for this research project are not discriminating features.* The *nature of the product* does not predominate, even if it is of great

[13] Pearson correlation test : 0,498. P-value : 0,011 ; Signification- alpha= 0,050 : Alpha/2= 0,025 (bilateral test). Thus H0 can be rejected. The correlation is significant.

importance: we can find products in all the categories listed: only four cheeses out of nine are considered highly successful, etc. We observe that raw products may command high prices in spite of seasonal and logistic constraints while a number of processed products command only low prices. Likewise, the *country of origin* is of some (but not overwhelming) importance, because tradition is dependent on country: nonetheless Jersey Royal potatoes, Feta, Zagora apples and Opperdoezer Ronde rank among the successful products. The *number of firms in the supply chain* might be thought a constraint compelling them to coordinate their actions: but this is not the case. Some extensive supply chains are well coordinated (Parma Ham, Parmigiano Reggiano[14]), others less so (Cantal, Luizet Apricot). Similarly some short supply chains are well coordinated (Nyons Olive Oil), other not (Merville potatoes).

2. The second conclusion is that *we are unable to identify any single factor that can guarantee a product will be successful*. It seems a conjunction of factors is required. *Product specificity* is very important: the Regulation forges an association between quality, characteristics and geographical origin. The whole tenor of the Regulation is based on such specificity. However, several specific products have not met with success. Abricot Luizet du Valais is not sufficiently well-perceived by distributors or consumers for it to develop; the very typical Ternasco de Aragon faces stiff competition from typical substitutes; hand-made cheddar is not enough to convince UK consumers to buy farm products; and the list continues. Other less specific products have performed well because they are commercially and technically well managed (e.g. Jersey Royal potatoes). *Market relevance* is certainly an important factor, because it determines consumer purchasing behaviour. However, as we have seen, several products positioned in relevant markets fail to thrive if they are not specific enough. This is generally because of competition from more successful substitutes as with Ternasco de Aragon lamb and Teruel Ham. The Jersey Royal and the Opperdoezer Ronde achieve different results in the same relevant market: a better co-ordinated market organisation between intermediaries and retailers makes the Jersey Royal more successful.

Coordination is, of course, a particularly important factor, because it is both a condition for and a result of the understanding between firms. The origin of such coordination is nevertheless still something of a mystery that could only be unravelled by complex historical research. It is not thought of as an exogenous model for the firms, but is seen instead as a process under construction. The

14 See Antonello, De Roest, Corradini (1997)

existence of a *channel captain* facilitates coordination: this is the case when a single or very few processors dominate the supply chain (Zagora apples, Peza olive oil or Nyons olive oil). This situation often arises when old-established but inefficient firms have gone to the wall. Coordination is closely connected with the constraints on distributors, particularly in the Anglo-Saxon market as far as standard products are concerned. Close but *informal coordination* has been observed with Quercy Lamb and Scotch Lamb, with few downline firms. In some cases an obvious lack of coordination is observed despite there being only a few firms in the supply chain (Cantal). *Government funding* cannot of course be considered an important factor: it can do more harm than good by putting the firms in a position of dependence (as the supply chains which are under administrative control in Switzerland). It may be beneficial for the launch and the early stages of a project, but only under certain circumstances. Government backing is most useful when it contributes to a supportive framework but stops short of doing what the firms are there to do (research assistance for Parma Ham, legal support for Nyons olive oil).

3. The third main result is that *success is based on the capacity of several firms to construct their specific supply chain* by : (i) collectively setting *relevant objectives* (as far as territorial and, if necessary, sector related governance is concerned) on the basis of their individual competencies (technology, know-how, strategic management, innovation, etc.) ; *firm and flexible control* of the functions identified in this paper; firm control to ensure compliance with the essential rules, and flexible control to ensure that each operator can be involved in the project while developing its own strategy.

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Annex

Table 1 : assessing the *"observed success"*

	Turnover	Growth	Reputation	Price premium	Observed Success
Parmiggiano Reggiano	2	1	2	2	1,75
Fontina	2	2	2	1	1,75
Cantal	2	1	1	1	1,25
Comté	2	2	2	2	2
Feta	2	2	1	1	1,5
Noord Hollandse Edammer	1	1	2	2	1,5
Boeren Leidse met Sleutel	1	1	2	2	1,5
West Country Farmhouse Cheddar	1	1	2	2	1,5
Gruyère	2	2	2	2	2
Jersey Royal Potatoes	2	2	2	2	2
Opperdoeze Ronde	2	2	2	2	2
Pomme de terre de Merville	1	1	1	1	1
Abricots du Valais	2	2	2	2	2
Zagora Mèla	2	2	2	2	2
Agneau du Quercy	1	2	2	2	1,75
Ternasco de Aragon	2	1	1	1	1,25
Scotch Lamb	2	1	2	1	1,5
Prosciutto di Parma	2	2	2	2	2
Jamon de Teruel	1	2	1	1	1,25
Huile d'olive de Nyons	1	2	2	2	1,75
Peza Olive Oil	2	1	2	2	1,75

Table 2 : assessing the calculated success of the 21 supply chains

	1 - Specificity	2 – Market Relevance					3 – Motivation of Firms						4 – Coordination						
	Specificity	Attractiveness	Willingness to pay*	Distribution	Is the market relevant ?	Total Relevance	Initiator exists	Operator motivation	Risk or trend of standardisation	Pressure of substitutes	Misuse of the name	Total Motivation	Collective Quality management	Do'es Interprofessiona Body exist ?	Firm without external assistance ?	Final taste evaluation	Collective marketing managem ent	Total coordination	Calculated Success
Parmiggiano Reggiano	2	2	2	2	2	2	2	2	1	3	2	2	2	2	2	2	2	2	4
Fontina	2	2	2	2	2	2	2	2	1	3	2	2	2	2	2	2	1	1,8	3,6
Cantal	1	2	1	1	1	1,25	2	2	3	2	2	2,2	2	2	1	2	1	1,6	1,1
Comté	2	3	2	2	2	2,25	2	2	2	1	1	1,6	3	2	2	2	2	2,2	3,96
Feta	2	2	2	2	1	1,75	1	1	2	2	2	1,6	1	1	1	1	1	1	1,4
Noord Hollandse Edammer	1	1	1	2	1	1,25	1	1	1	1	2	1,2	1	1	2	1	1	1,2	0,45
Boeren Leidse met Sleutel	2	2	2	2	1	1,75	1	2	1	1	1	1,2	2	1	1	1	1	1,2	1,26
West Country Farmhouse Cheddar	1	1	2	1	1	1,25	2	2	3	3	2	2,4	1	1	2	1	1	1,2	0,9
Gruyère	2	3	2	2	2	2,25	2	2	2	2	3	2,2	3	2	1	2	2	2	4,95
Jersey Royal Potatoes	2	2	2	2	2	2	1	1	2	1	1	1,2	2	1	2	2	1	1,6	1,92
Opperdoeze Ronde	2	2	2	2	2	2	2	1	1	2	1	1,4	1	1	2	1	1	1,2	1,68
Pomme de terre de Merville	1	1	1	1	1	1	1	1	2	1	1	1,2	1	1	1	1	1	1	0,3
Abricots du Valais	2	2	2	1	2	1,75	1	2	2	2	1	1,6	1	1	1	1	1	1	1,4
Zagora Mèla	2	2	2	1	1	1,5	2	1	2	2	1	1,6	2	1	1	1	2	1,4	1,68
Agneau du Quercy	2	2	2	1	2	1,75	2	1	1	2	1	1,4	1	1	2	1	2	1,4	1,715
Ternasco de Aragon	1	1	1	2	1	1,25	1	1	1	2	1	1,2	1	1	1	1	2	1,2	0,45
Scotch Lamb	1	2	2	2	1	1,75	1	1	2	2	1	1,4	2	1	2	2	2	1,8	1,103
Prosciutto di Parma	2	2	2	1	2	1,75	2	1	1	1	1	1,2	2	2	2	2	1	1,8	1,89
Jamon de Teruel	2	1	1	1	1	1	2	1	1	2	1	1,4	1	1	1	1	2	1,2	0,84
Huile d'olive de Nyons	2	2	2	1	2	1,75	1	2	1	1	2	1,4	2	1	2	1	1	1,4	1,715
Peza Olive Oil	1	2	2	2	2	2	1	2	1	1	1	1,2	2	1	2	2	2	1,8	1,08