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Competitive position of some PDO cheeses on their own reference market: identification of the key success factors

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Abstract

This paper presents a method to assess the success of some PDO cheeses in a comparative way. The first part is a review of different meanings of the concept of performance according to the main theoretical approaches. We give a definition of the filière and select some criteria to assess the competitive position and the attractiveness of the reference markets in order to get an evaluation of the success in terms of prices and market shares. We try then to identify the main factors, which influence the competitive position of the product.

Our research highlights that the success of the PDO cheeses is determined mainly by four determinants :

- *The specificity of the product (its typicality, price, convenience, taste, symbolic component and its representation by the consumers) ;*
- *The effectiveness of the co-ordination (code of practice, governance structure, variety and quality management, promotional and research policies, lobbying ability) ;*
- *The market attractiveness ;*
- *The public supports.*

In conclusion, the concept of filière has to be studied more in depth at the theoretical level. If it is possible to highlight the role played by these production channels (several small-scaled firms) on the rural employment, it will be necessary to set up a better legal framework to encourage their activities and common strategies.

Keywords : AOC, protected designations of origin, PDO cheeses, performance, competitive position, specificity, co-ordination, filiière, industrial organisational economy, new industrial organisation theory, market attractiveness, Comté, Cantal, Parmigiano Reggiano, Fontina, Feta, Boeren Leidse met Sleutels, Noord Hollandse Edammer, West Country Farmhouse Cheddar cheese, Gruyère

INTRODUCTION

The purpose of this paper is to identify the factors of success of PDO products in a comparative way. The aim of the PDO/PGI policy goes much beyond a strict economic performance. Its objectives are not only to protect traditional denominations and to allow products to compete effectively against cheaper lines, but also to have value-added products in decentralised regions often experiencing low economic outputs. A number of social, environmental and cultural benefits should thus emerge from such an approach, which would be the stability of rural populations in remote areas, the protection of the landscape, the heritage and the tradition. This paper will only consider the economic performance of a PDO product.

Firstly, we take into consideration several theoretical approaches related to the concept of "performance" (chap. 1). We define the meaning of the term *filière*, useful to speak about the factors of success. We then decide to take the competitive position of the PDO product on its reference market as a measure of its performance. We choose a method (chap. 2) to explain the relationship between the competitive position of a product and the attractiveness of its market of reference which is based on the effectiveness of the conduct of the *filière*.

Secondly, we assess the competitive position of nine PDO cheeses[1] and the attractiveness of their own reference market (chap. 3). Care is taken to have a methodological approach which is adapted to the specificity of the PDO *filière*. This specificity is to have various actors and firms which all work to produce a well-defined and very similar product.

This analysis will show us that the co-ordination within the *filière* and the producers' understanding to valorise their product through its specificity are among the most important factors to explain the marketing success of a PDO cheese (chap. 4).

1. THE NOTION OF "PERFORMANCE" IN VARIOUS THEORETICAL APPROACHES

We want to identify factors of success in order to provide some best-practice recommendations to the professionals involved in PDO products management as well as to the policy makers at regional, national and European level (the recommendations are not part of this paper[2]). To identify the factors of success, we had to compare the success of different products and to analyse the explanatory factors of the observed differences. To achieve this analyse, we decided to elaborate a specific method after having examined several theoretical approaches and established that the performance is a word subject to competing meanings in the economic literature.

1.1. General equilibrium and market competition : the welfare as a performance

The Neo-Classical Approach (NCA) defines the main components of the firm's behaviour as the cost minimisation and the profit maximisation. The firm's performance is not studied for itself.

From the NCA point of view, the performance of one firm is not isolated from the others. NCA considers the **efficiency of competitive markets** as a whole. The general equilibrium and the economic efficiency are the results of an economic process which is the adjustment between supply and demand. For any initial allocation of resources, a competitive process of exchange among individuals through exchange, input markets or output markets, would lead to an economically efficient outcome. A competitive market, built on the individual goals of consumers and producers and on the ability of market prices to convey information to both parties, will achieve an efficient allocation of resource thanks to Adam Smith's invisible hand. That is the first paradigm of welfare economics (Debreu, 1959 ; Arrow and Hahn, 1970). Taking into account that the consumer preferences curve is convex, any efficient allocation of resources can be achieved by a competitive process with a suitable redistribution of those resources. These theorems of welfare economics depend crucially on the assumption that markets are competitive (Pindyck & Rubinfeld, 1998). This approach does not suit for our purpose because its method is not strategy oriented (i.e. it gives indications at the end of a selection process of an optimal equilibrium). Moreover it does not offer any answer to the question of why a strategy succeeds when another does not.

1.2. Industry's performance related to market's structure and conduct

Mason (1939, 1949), who used inferences from micro-economic analysis to discuss industrial organisations, introduced the traditional Structure-Conduct-Performance approach (SCP). Following the mainstream approach, the Industrial Organisation Theory (IO) associates the industry's performance with the structure

of the market and the strategies of the firms composing the industry. Three different measures, reflecting directly or not the profits or the relationship between the price and the costs, are commonly used to appreciate how close the performance of an industry is to the competitive benchmark (Carlton, D. W, Perloff J. M., 1994) :

- The rate of return, which is based upon profits ;
- The price-cost margin, which should be based upon the difference between price and marginal cost ;
- The ratio of the market value of a firm to its value based upon the replacement cost of its assets (*Tobin's q*).

To describe the structure of a market, several measures are used. They are all considered as having some relation with the degree of competitiveness in an industry, for example :

- Industry concentration (market shares of the different firms present on the market) ;
- Barriers to entry (i.e. the ability of the firms to enter the industry).

SCP takes into account the conduct of sellers and buyers because it assumes that their strategic choices can explain the relationships between the market structure and the performance of the industry. We face difficulties in using this approach for our research because that the conduct analysis is adapted to a well-defined industry as a whole when we want to compare different strategies conducted by competitors on the same market.

1.3. The analysis of the performance of a firm

Coase's analysis of the transaction and the related costs highlighted that the firm is an alternative to the market as governance structure of the exchange process (Coase, 1937). Simon's contribution related to bounded rationality (Simon, 1955) was also decisive for a new generation of economists. Transaction Cost Analysis (TCA) put away one assumption of the mainstream economy that is the perfect rationality (Williamson, 1975). TCA is also based on institutional economy which deeply considers the transaction at the agent level in order to better explain the economic phenomena (Commons, 1934).

One point of neo-institutional economy is to observe how the structure, the strategy and the performance of a firm are influenced by several internal and external factors. The opportunist behaviour of agents as well as the costs of the seller's assets or the frequency of the transactions are the three main factors explaining the governance structure for a given transaction.

This way to consider a firm allows a new field of investigation for the economists : the firm itself. Not only the practitioners could also discuss the question of "firm management" but also the academic corpus. For example, Liebenstein (1976, 1982) introduced the notion of X-efficiency related to individual firm performance. He argued that the quality of the internal organisation of the firm (i.e. its ability to combine in an efficient way the different production factors) plays a determinant role in explaining its success vis-à-vis its competitors. What he called X-factor was the way of combining the internal and external resources within a firm. He took into account more factors than the two traditional factors (labour and capital).

Organisational Economy (OE) considers the firm as the main subject matter. There are currently two main theoretical points of view in considering the firm. On the one hand, there is the Agency Theory, which tries to elaborate some mathematical representation in a normative way. The organisation is considered as a nexus of contracts. In this contractual system, the agents (single persons) are maximising their own, diverse and conflicting objectives (which are not necessary the cost minimisation or the profit maximisation). In that view, the behaviour of the organisation is like the equilibrium behaviour of a market (Jensen, 1998). This first point of view agrees with some of the main assumptions of NCA.

On the other hand, there is the New Industrial Organisation theory (NIO) (Tirole, 1988). It is based on the welfare economic paradigms but it rejects some assumptions like the lack of externalities, the ignorance of the public goods existence as well as the consumer's perfect information (Tirole takes into account the product quality problem). NIO also deals with the existence of market power when few firms serve the market. Tirole (1988) considers the firm as the main subject matter. Following several authors, he gives four definitions of the firm : the firm as (1) a loophole for the

exercise of the monopoly power, (2) a static synergy, (3) a long-run relationship, (4) an incomplete contract. He does not propose himself an analysis of the performance of the firm. However he wishes that the conclusions of NIO will remain valid (at least at a descriptive level) when the profit-maximisation postulate will be abandoned for a full-fledged model of internal organisation as described by Liebenstein (Tirole, 1988, p. 51). This postulate has been until now nothing more than a wish. As it has been explained by Barney (1996), TCA, Agency Theory and NIO can be used to explain why firms exist. They cannot be used to explain why some firms outperform others. In effect, these approaches assume that all the firms, facing similar market context, will develop similar governance solutions. They do not take into account the heterogeneity of the firms (internal resources).

1.4. Firms which outperform others

OE second way of thinking progresses in a less normative manner, closer to the strategic management literature. The two questions "Why do some organisation outperform others ?" and "How can organisations co-operate ?" are definitively in the middle of this kind of investigations. Rumelt (1984), Wernerfelt (1984) and Barney (1986) following Teece (1982) and Prahalad and Bettis (1986) have recently introduced the resource-based view of the firm. For these authors, any analysis of a firm must be based on its resources and capabilities, which are divided into four types : (1) financial, (2) physical, (3) human, (4) organisational resources. Two main assumptions are used to explore the heterogeneity among several firms belonging to the same industry : first, the assumption of firm heterogeneity and second, the resource immobility. For Barney (1991), the resources which give a firm its best chance to outperform others are : (1) valuable (i. e. resources which enable the firm to exploit environmental opportunities and help it to avoid threats), (2) rare among its competitors, (3) costly to imitate and (4) without close strategic substitutes. This conception of the performance helps us better identify and analyse the different strategic choices and product performances. Methodology remains difficult to be used as an explanatory tool to explore collective strategies. The resource-based view of the firm considers co-operation and strategic alliances mainly in the case of vertical integration or joint ventures. Other forms of collective management are not yet analysed.

1.5. From industry and market to *filière* and *reference market*

The above approaches are not very helpful to consider co-operative strategies between firms along a supply chain. Indeed, an *industry* is defined as a group of firms, all producing the same good and addressing it to the same consumers.

To analyse the performance of a system of firms[3] producing a same good, we have to consider the whole *filière* as a production and marketing entity in competition with other entities (*filières* or organisations) producing very close substitutes composing a *Reference Market*.

We define the *filière* as a system composed by several different firms at different production levels in the supply chain (for example : milk producers, cheese producers, ripening houses). This system might act like one single organisation because (1) all the firms are producing either raw material or intermediary products with the same standards[4] and (2) they have interest to share expenses in advertising or research (Barjolle, Chappuis, Sylvander, 1998). The strategy of the whole filière on the market of reference is generally more efficient than addition of the individual ones due to the synergies. Supply Chain definition[5] usually includes all the stages from raw material producers to consumers. Our conception of the *filière* is different because only the production side is included. In extension, several organisations and *filières*, all producing very close substitutes and addressing the same consumer segment, can compose a supply chain.

The *Reference Market* (Day G.S., Shocker A. D. et Srivastava R.K., 1979) is defined by the ***substitute*** products[6]. Clear definition of what is a market is easy to give from a theoretical point of view, but difficult to transpose into the praxis (Tirole, 1997). Due to the difficulties to be right (neither narrow nor too broad) when defining the substitute products of a market, we decided to define case by case what we considered as the *Reference Market*.

In the following chapter, we will try to explain the relations between the **competitive position of the product** and the **attractiveness of the reference market** with the **effectiveness of the strategic choices** made by the *filière* (more exactly by one body

representative of it, like a union). We will also take into account **any other factor** which might influence the competitive position of the cheese.

2. THE CHOSEN METHODOLOGY

Our aim is to better understand the reasons of the success of some typical products in terms of price or sales increasing. We also wanted to establish in which way the PDO Regulation could play a role in the performance of the product. Firstly, and in order to measure their success, we took into consideration two elements which are the **attractiveness of the reference market** and the **competitive position** of the product. We characterised these two elements for each product in a comparative way. The indicators chosen to assess the attractiveness and the competitive position follow a free adaptation of several methodologies (La Rue T. Hormer, 1982 ; Hinterhuber, 1989 ; Kotler, 1994 ; Lombriser et Ablanalp, 1998).

Secondly, we discussed the results in order to identify the factors which seem to have an influence of the observed success. We found out that the most important factor to explain the success of the product is the degree of effectiveness of the system of firms within the *filière* (Barjolle & al., 1998), but that it is not the only one. Some other factors are to be found in the institutional framework and in the own resources of the *filières.*

2.1. the attractiveness of the various reference markets

To assess the attractiveness of the various reference markets, we should ideally look at different determinants which are :

- The size of the market of reference ;
- The growth rate of the market of reference ;
- The structure of the partners downstream in the supply chain ;
- The barriers to entry on the reference market ;
- The benefit margins realised in the past ;
- The economic stability on the reference market (sensitiveness to inflation in particular, evolution of the purchasing power).
- The access conditions to the market (tariffs or non-tariffs barriers).
- The image of the sector (impacts on environment and public health in particular) ;
- The legal, political and social frame ;
- The intensity of competition.

Unfortunately this information was not always available to conduct such an elaborate study. We could only take into account :

- The size of the market of reference, which has been the only criteria for which quantitative data could be collected for each studied supply chain.
- The region's image (through a qualitative appreciation conducted in a comparative way) ;
- The sector's image (using the same way) ;
- The socio-economic context of the countries of production and of the countries importing the cheeses (using the same way).

2.2. The competitive position of the product

To assess the competitive position of the various products, we should also ideally look at different determinants which are :

- The evolution of the volumes (average annual growth) ;
- The evolution of the price (price tendency in relation to similar products) ;
- The evolution of the part in the consumption ;
- The effect of scarcity, measured differently according to the product (for cheeses, this could be appreciated by checking the average age of stored cheeses and comparing it with the optimal length of storage[7]) ;
- The consistency of the product's sensorial qualities (quality problems).
- The notoriety of the product in its country of origin (do the consumers know the product and do they associate the product with its production area ?) ;
- The presence of similar products on the market or direct substitutes which could disturb the PDO product's sales, by disrupting the balance volume/price ;
- The diffusion of the product outside the country of origin ; assessment of the potential for further exportation (expansion to larger markets) ;
- The resistance of the product to a hypothetical withdrawal of public support which strengthens the product position.

As already mentioned for the evaluation of market attractiveness, some determinants are difficult to measure. We have finally assessed the competitive position of the various products looking simultaneously at different determinants, which are :

- Evolution of sales ;
- Price tendency ;
- Notoriety of the product ;
- Image of the product ;
- Threats through imitations (direct substitutes) ;
- Geographical spreading of the sales ;
- Dependency to public support / measures.

3. RESULTS

Nine different cheeses were studied in the frame of a European research programme[8] : the *Comté* and the *Cantal* in France, the *Parmigiano Reggiano* and the *Fontina* in Italy, the *Feta* in Greece, the *Boeren Leidse met Sleutels* and the *Noord Hollandse Edammer* in the Netherlands, the *West Country Farmhouse Cheddar* Cheese in Great Britain and the *Gruyère* in Switzerland. All these cheeses are very traditional cheeses produced only in a delimited area.

A link does exist between every cheese and its geographical area. All these cheeses are usually named by a geographical denomination. This geographical denomination cannot be registered as a brand reserved for only one firm because several firms have been producing the same cheese in the region for several centuries. So, all these cheeses (except the Swiss one) did apply for having a special protection at the European level, which is given by the Regulation EC 2081/92. The name of the region, used for a traditional product specific to this area, is then protected against misuses outside the region of origin. To use the geographical name, all the firms have to respect the same specifications, which are also registered at the European level. It gives a common rule to all the firms, which are concerned by the production : the milk and cheese producers as well as the cheese ripeners.

3.1. Reference markets

Under this point, we will summarise the evaluation of the various reference markets as defined and perceived by the different teams of the European project in each country. General results are given in table 2.

3.1.1. The size and the growth of the reference market

Table 1 gives the different closest substitutes of the studied products.
Table 2 presents the size of the various markets of reference and their evolution in the last years.
We could identify 2 types of reference markets in the different countries.

- **The market of reference is growing**

  Here we can rank the cheese market in general (with a growth of 7% to 15% between 1990 and 1996), the PDO cheese market (with a growth of 10% to 30% between 1990 and 1996), the soft cheeses market in general and the mature cheeses markets.

- **The market of reference is stable or decreasing**

  The semi-hard cheeses market in general, the hard cheeses market in Switzerland, the Edammer cheese market in the Netherlands and the Cheddar cheese market in the UK are either stable or decreasing.

3.1.2. The sector's image

With all the problems relative to meat production and consumption ("mad cow", "chicken disease"), the cheese market is attractive (Table 5). The nutritional quality of the dairy products does not need to be proved anymore. The American Department for Agriculture assesses that the world cheese consumption might have reached 11.69 million tons in 1997, which would represent an increase of 1.75 % between 1996 and 1997. This same Department expects an increase of the cheese consumption in Europe of 0.8 %. According to the *Fédération Internationale Laitière* (FIL) in France, the world cheese production increased of 8.4 % between 1987 and 1996 and reached 15 million tons in 1997. The international exchanges increased of 19 % between 1987 and 1994 thanks to the general agreement on tariffs and trade. The average cheese consumption in Europe is of 16.7 kilos a year per person. It increased of 23.7 % between 1986 and 1997. We can really say that the cheese sector has a very positive image. The polemic of raw milk cheese which was initiated by the United States and which could be followed by Great Britain could have a negative effect on the sales of cheeses like *Comté, Fontina Gruyère or Parmigiano Reggiano.*

3.1.3. The region

Several factors can contribute to the image and potential of a region. First there are the landscapes, the notoriety and the perception that consumers have about this region which might be under the influence of a promotional strategy. The *Comté* region is considered as a natural and authentic region, an image highlighted by the advertisement. The province of Noord-Holland has such a reputation to produce high quality cheeses that the consumers agree to pay more for the cheeses produced in this part of the Netherlands (Van Ittersum, 1999).

Greece is seen as a sunny country where it is nice to spend holidays, with traditional customs and exotic dishes ; this image is very positive for the exportation of the *Feta*. The fact that a region producing a PDO cheese is touristic can be regarded as a factor which will extend the reputation of the cheese beyond its production area.

The transport network is important as well as the proximity to large consumption centres. For instance, the *Cantal* or the *Fontina* production areas are far from the large cities. That could increase their price in Paris or Roma.

The fact that a region can be constituted of several regional and cultural identities might weaken the *filière* and the negotiations between the actors. The *Gruyère* PDO area includes several regions with strong identities and different administrative bodies ; this did not help the actors find quickly collective solutions when they were setting up the product specifications.

3.1.4. The socio-economic situation

High costs of production, like in Switzerland, are of course a negative economic factor. It weakens the opportunities of exports and threatens the products' sale inside the native country itself if imported products tend to be cheaper.

3.2. Competitive position

General results are given in Table 4.

3.2.1. Consumption

The habits of consumption of the studied PDO cheeses are very different. It depends on the average quantity of cheeses consumed by inhabitant in the country of production, on the cheese production volume, on its notoriety inside and outside the production area, on the general consumption of cheese. The general trend in the consumption is appreciated by the development of national and exported sales (Table 3). The exported quantities also vary a lot according to each considered cheese.

3.2.2. Evolution of sales and price tendency

Except for the *West Country Farmhouse Cheddar*, the *Noord-Hollandse Edammer* and the *Parmigiano Reggiano*, we can see that the production of the studied PDO cheeses increased. The most significant growth was for the *Comté* and the *Feta*. Exportations contributed to their development but it was mainly in the country of production that sales increased.

If the *Comté* production increased so much, it is partly because the PDO procedure contributed to have (1) an improvement of the cheese intrinsic quality, (2) a strong co-ordination for the promotion of the product with an efficient image of authenticity and (3) a strong *terroir*[9]-effect.

The over-production of *Parmigiano Reggiano* in 1990 was not sold at remunerative prices and the demand leads to a decrease of the production afterwards. The production of *West Country Farmhouse Cheddar* has fallen as well, because several producers have left the industry since 1994 and that others have cut back their production as a result of the high prices for milk.

3.2.3. Notoriety of the product and image of the product

We give an assessment of the notoriety for each studied product. We can distinguish between products which are known only around the production area like *West Country Farmhouse Cheddar* or *Boeren Leidse met Sleutels*, products which are well-known at the national level like *Cantal, Fontina* or *Noord-Hollandse Edammer* and products which have a high notoriety all over Europe or even over the world, like *Feta, Gruyère* or *Parmigiano Reggiano.* We assessed also that the image of the product was quite similar for all the products except for *Cantal* and *West Country Farmhouse Cheddar* because only few people recognise them as a must.

3.2.4. Imitations (direct substitutes)

When direct substitutes are in the stores, it creates a weakness for the competitive position of the product. We assess that the threat is particularly high for *Feta* (Danish and French imitations), *Boeren Leidse met Sleutels* (other Leidse cheeses), *Noord-Hollandse Edammer* (other Edammer cheeses all around the world) and *West Country Farmhouse Cheddar* (British and North-American cheddar cheeses). Some products have specific substitutes but they are not very dangerous (*Fontal* and *Etivaz*) or not at the same position in the mind of the consumer (*Grana Padano* is less prestigious than *Parmigiano Reggiano*). Some have few direct substitutes and are more unique on their market, like *Cantal* or *Comté*.

3.2.5. Geographical diffusion of the products

It is also important to look at if the PDO cheese is mainly consumed within the PDO area or if it is also consumed outside of the PDO area (in the surroundings, in the whole country or even at an international level). We also have to take into consideration that a cheese can be eaten nearly daily or only on special occasions. These two parameters can be crossed (Table 6) in order to see if the diet habit regarding the PDO cheese is different for consumers inside or outside the production area.

Table 6 shows us that the *Comté, Cantal, Fontina* and *Gruyère* are consumed mainly in their area of production and that they become more and more particular and festive cheeses as we go away from the production area. On the other hand the *Parmigiano Reggiano* and the *Feta* are nearly consumed everywhere, even at an international level. Some other products like the *West Country Farmhouse Cheddar* and the Boeren Leidse met Sleutels are consumed only on special occasions outside of their production area.

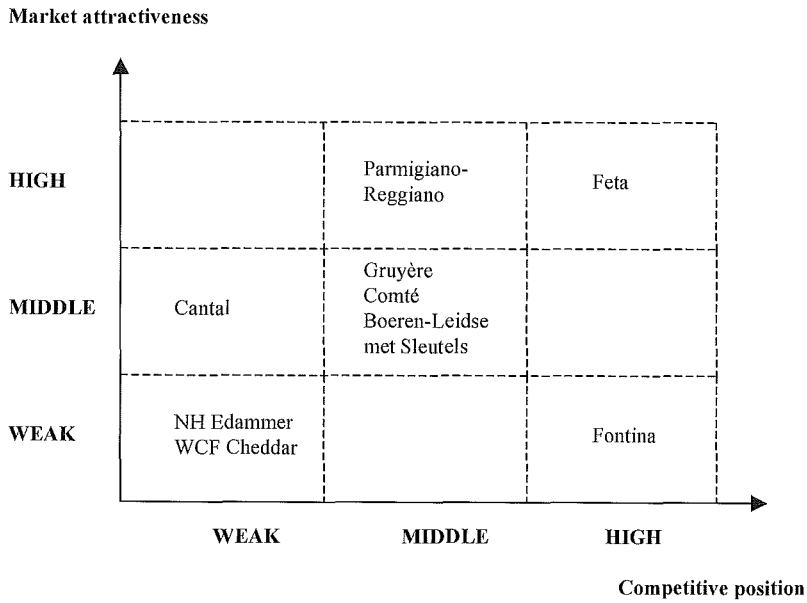
3.2.6. Dependency to public support

Public subsidies and support to farming activities are positive for the production of a PDO product and for the performance of its *filière*, as long as it is not a "poisonous gift" contributing to develop a kind of passivity among the actors. A general interest in preserving a regional identity and therefore local products can help the actors cooperate and involve themselves in a *filière* with collective objectives. In the *Fontina* case for instance, the regional administration of the Autonomous Region of the Aosta Valley is involved at all levels of the Fontina production (financial help for the construction of new cow sheds, of dairies, for helicopter transport bringing down to the valley cheese rounds produced in the mountains, etc.).

4. DISCUSSION

The research allows us to speak about products whose competitive position is weak, medium or strong. We try to explain hereafter which are the determinant factors which make us rank for each studied PDO cheese in one of these three categories. We position each product in a diagram in relation to their competitive position and the attractiveness of their main reference market.

Figure 1 : Competitive position of the products in relation to the attractiveness of their main reference market



4.1. The products with a weak competitive position

The *Cantal*, the *Noord-Hollandse Edammer* and the *West Country Farmhouse Cheddar* have a competitive position which has been evaluated as low.

Despite medium market attractiveness, the ***Cantal*** has a weak competitive position, mainly because the co-ordination within the *filière* is not effective. The *Cantal* is a good example of a *filière* where there are no collective objectives and coherent activities to promote the product or to strengthen its specificity. This failure gave rise to a code of practice which does not reflect the *typicity* of the product. One possible explanation could be the existence of powerful industrial firms which are not very interested in the product quality and *typicity*, as their main economic interests are exogenous to the region and to the *Cantal*.

The ***Noord-Hollandse Edammer*** and the ***West Country Farmhouse Cheddar*** have both partly a generic name which is not very attractive on a market for typical products. The PDO refers to few differences (the manual cheddaring for the *West Country Farmhouse Cheddar*, the content of salt of the *Noord-Hollandse Edammer*) which do not give a strong specifi-city to the products. Moreover, they are both on an unattractive market. The Edammer and the Cheddar sectors in general are characterised by a strong compe-tition where the price becomes the most important factor in the retailer's and consumer's purchase decision.

The performance of the *Noord-Hollandse Edammer* appears to be lower than the performance of other Edammer cheeses. Some retailers might be reluctant to pay a higher price for a product whose reputation is high but whose differentiation with other Edammer is not sufficient enough.

The *West Country Farmhouse Cheddar filière* has a lack of coherence between its main objectives (sales developments and financial returns) and the applied common policies. Because they have no financial means to promote their cheese and to highlight its specificity on the market, the actors are now still struggling on the price. They consider the PDO as a long-term investment, and they expect promotional campaigns on PDO and PGI led by the European Community to better differentiate their product.

4.2. The products with a medium competitive position

We are now going to look at four products which can be considered as having a medium competitive position : the *Boeren Leidse met Sleutels*, the *Comté*, the *Gruyère* and the *Parmigiano Reggiano*. In all these *filières*, the professionals have common goals and the market attractiveness of the sector is either good (*Parmigiano Reggiano*) or medium.

The ***Parmigiano Reggiano*** could have a very good competitive position when considering its specificity. It is an *artisanal* product with a strong code of practice (prohibition to use milk produced from silage fodder, milk collected twice a day, natural starters and natural way of skimming the milk, two years of ripening) which differentiates well the *Parmigiano Reggiano* from its closest substitute, the *Grana Padano*. The union is well organised to promote the product by highlighting its cultural and traditional aspects. The problem is the lack of a successful agreement to manage the production volumes, which leads to regular crises on the market (overproduction with price dropping down, stocks), like in 1990-1993 when 30% of the enterprises had to stop their activities. The *filière* did not succeed in managing the volumes, despite a good co-ordination between the milk producers, the cheese makers and the ripeners, because the Italian Antitrust Commission did not allow them to control the quantities.

The ***Boeren Leidse met Sleutels*** has a problem with its quality. The cheese makers do not manage to master the production and the quality is not regular. The retailers thus prefer to buy factory-made Leidse cheese whose quality is more constant. The *Boeren Leidse met Sleutels* is nevertheless on an attractive market but the actors are not yet well enough organised to position their product on a high segment.

The ***Comté*** has a strong specificity well defined in the code of practices (the collect area and the production area have even been recently reduced in order to strengthen the link to the *terroir*). The *filière* is well co-ordinated to promote the *Comté* (high promotional budget), it managed to reduce the volumes and it was successful in maintaining economic activities in a less favoured area. The *Comté* has nevertheless only a medium competitive position because the market of the hard cheeses is not so attractive. Moreover the *Comté* has an important production volume (41'000 tons) which makes the *filière* dependent on big retailers. These few big retailers have an increasing market power (bottle-neck in the supply chain) : they know that they are necessary to market the large volumes and they put pressure on the prices.

The ***Gruyère*** is on a market of reference where the competition is strong and it has such high production costs that its performance can be considered as low. Its competitive position is however medium because the *filière* has benefited until recently from very important financial subsidies and because its quality is well managed at all the levels of the *filière*. This situation is yet very frail and the *Gruyère* competitive position is threatened in the short term by the evolution of the Agricultural Policy in Switzerland.

4.3. The products with a high competitive position

We will now speak of the two last products, which can be considered as having a good competitive position, the *Feta* and the *Fontina*. The comparison between the two products is particularly interesting, because they are very different in many aspects.

On one hand, we find the ***Feta*** which is positioned on a very high attractive market, despite a strong competition with several substitutes and imitations[10] (Danish, German or French cheeses kept in brine, several substitutes in Greece). The *Feta* has benefited from a growing consumption trend for sheep and goat milk cheese for the last five years. The growth of the market, especially outside of Greece, was partly due to the PDO protection : the possible protection of the denomination *Feta* for cheeses produced in Greece only has boosted the efforts of some large Greek firms, which wanted to be the first ones on the export market. The competitive position of the *Feta* could have been threatened by the fact that the *filière* has only one common goal, which is to protect the designation *Feta*. Except this objective, the firms have no common strategies or policies. The lack of co-ordination within the *filière* has however been compensated by a very strong involvement of the Ministry of Agriculture and the Government.

On the other hand, we find the ***Fontina*** which is characterised by a strong development of the production

volumes (volume is however not very high, with only 3'500 tons a year). The *filière* is well co-ordinated, the milk production is regulated since 1991 in order to strengthen the cheese specificity and the professionals benefit from a strong public support at the regional level. The production volume is well managed and a large diversity of other regional cheeses can be processed from the extra milk. The consumption is growing in the PDO production area and outside of the region, partly thanks to the tourism development and to the promotion of the Fontina as a traditional and authentic product. The tourism, the co-ordination within the *filière* and the public support seem to compensate for the relative unattractiveness of the market of reference (semi-hard Italian cheeses).

4.4. Influence of the PDO on the cheese competitive position

We cannot consider today the PDO as a well-known sign which would lead the consumers to buy a PDO cheese just because it has a PDO sign. Consumers do most often ignore the PDO existence or its signification[11]. The perspective of the PDO as a label which would be famous enough to become a sufficient purchase argument was yet a motivation for some *filières* (for instance the CONO : Company for the *Noord-Hollandse Edammer* cheese or the *West Country Farmhouse Cheddar* producers).

A PDO can have a major influence on the product competitive position for three other reasons. The first one is the fact that a PDO strategy chosen by a *filière* will force the professionals to define the quality of their product in a code of practice and to stick to it. It can thus help a *filière* to preserve and to strengthen the quality of its product, and to prevent the cheese from becoming more and more standardised. This is a positive effect of the PDO in the *Comté filière*, where the actors became aware of the potential of their cheese as a typical product and worked together to assert its specificity and its link with the *terroir*).

The second indirect effect of the PDO is on the structure of the whole *filière* itself and on the co-ordination of the actors. The necessity to work together in order to define the specificity of their product, to improve its quality, to promote the cheese, to find solutions to manage the quantities might encourage the professionals to organise their *filière* in a better way. This improvement may help the *filière* to reduce for instance the transaction costs and to be more efficient and effective in general. This could be a positive effect of the PDO on the *Gruyère filière*, because the perspective of a PDO was for the professionals a strong incentive to create quickly a professional organisation, a body which would help them overcome the important difficulties arising with the actual system being deregulated[12]. This is rather a positive effect for both Italian cheeses (*Fontina* and *Parmigiano Reggiano*) because the actors really learnt to co-operate and to fight together for their product performance.

The third potential effect of the PDO is of course the protection of the designation which can give new opportunities of development, in particular on foreign markets. This could have been the case for the *Feta*, but the recent decision of the European Court of Justice will probably take off the scaling-up effect of the PDO. The PDO had however a negative consequence in Greece, which should not be underestimated when taking into account the objectives of the European regulation. The PDO perspective encouraged the large firms to develop even more their *Feta* production, but their development and their economies of a scale were to the detriment of smaller production units. The preservation of economic activities in less favoured areas was in that case threatened by the strategy of the actors regarding the PDO use.

4.5. Main factors of success

We believe that the performance of a *filière* is its capacity to give a good and high specificity to the product and to influence the public institutions in order to get financial subsidies and supports. It supposes first an effective co-ordination between all the firms involved in the *filière*.

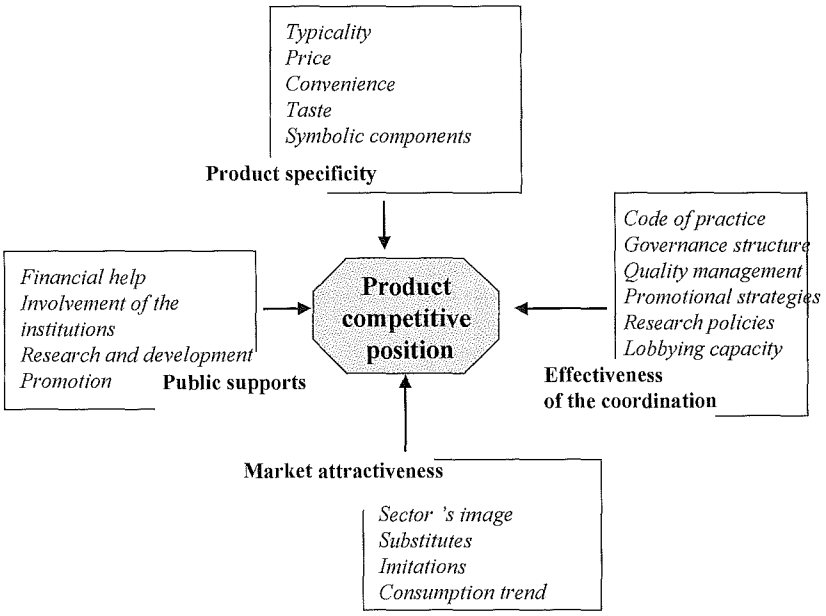
The studied cheeses show us that the competitive position of a PDO product does not depend neither on its **country of origin** (the *Cantal* and the *Comté* are for instance both French products but their competitive position is different) nor on its **volume** (the *Fontina*, 3'500 tons, and the Feta, 76'000 tons, have both a good competitive position), nor on the **extend of the consumption** outside the production area (the *Fontina* is mainly consumed around the production area when the *Feta* is well exported), nor on the degree of the **vertical integration** in the *filière* (both the *Boeren*

Leidse met Sleutels and the *West Country Farmhouse Cheddar* have a strong vertical integration but they have a different competitive position).

Our research highlight indeed four main determinants which will contribute to the product competitive position (Figure 2) :

- The **specificity** of the product (its *typicity*[13], price, convenience, taste, symbolic components and the consumers' representations) ;
- The **effectiveness of the co-ordination** (code of practice, governance structure, variety and quality management, promotional and research policies, lobbying ability) ;
- The **market attractiveness** ;
- The **public supports**.

Figure 2 : The four determinants of the Product Competitive Position



If one of these determinants is weak, it can be compensated by another strong factor. For instance, the market is not very attractive for the *Fontina* (the hard cheese market is decreasing in Italy), but the effective co-ordination within the *filière* and an important public support of the region contribute to give a very good competitive position to the *Fontina*.

We can also understand that if a *filière* is not successful in differentiating its product from its substitutes, the competition will take place at the price level. We believe that such a competition will lead to a decreasing quality of the product, a loss of its *typicity* since quality and *typicity* require some extra production costs. We also think, and the *Parmigiano Reggiano* is a very good example, that a certain management of the quantities should be possible in order to secure the performance of the *filière* and, in the long term, the quality of the product.

5. CONCLUSION

Our aim was to identify how some typical products could have some success on their own reference market, in terms of price or sales. In order to set up an appropriate method, we did a review of several theoretical approaches of the concept of performance. It made sense for us to assess the success of the product in

terms of competitive position. We took then the **attractiveness of the market of reference** as the first factor of success, already identified by several authors in strategic management. We found out other explanatory factors coming both from the institutional framework and the internal resources of the *filières*[14].

These results are similar to those of other researches in organisational economics (Liebenstein, 1976, 1982, Barney, 1986 and more generally authors dealing with the resource-based view of the firm). Those highlight that a lot of internal and external factors have to be taken into consideration to assess the performance of several organisations in a comparative way.

We found out that the factor which might influence the success is mainly the co-operation within a *filière* in the pursuit of the competitive advantage. Only a good co-ordination will make possible an efficient strategy to valorise the PDO specificity, to promote the product and to face the market power that the retailers may have. Other factors are the specificity of the product itself and all the public supports given to the *filière*. The concept of *filière* has to be studied more in depth at the theoretical level. If it were possible to highlight the role played by these production channels (several small-scaled firms) on the rural employment, it would be necessary to set up a better legal framework to encourage their activities and common strategies.

NOTES

(1) These products have been studied in the frame of a European research programme on the "PDO-PGI Products: Market, Supply Chain and Institutions" (FAIR 95-306). The programme has been financed by the EU-Commission and the Swiss Federal Government.

(2) They are part of the final report of the European research (see footnote 2) (Barjolle D., Chappuis J.-M., Dufour M., 1998, Cheese Synthesis, PDO-PGI Products : Market, Supply Chain and Institutions, (FAIR 95-306).

(3) In the case of PDO products, this system can be composed by a lot of small-scaled firms. It can be as well composed by very diverse kind of firms. But generally, these firms have common goals and close relationships.

(4) Some differentiation is possible, but the product specifications are the same.

(5) SAPORTA B.,1989, p. 4 et 6 : *Une chaîne verticale d'activités successives*.

(6) 1.- Two goods are substitutes if they can satisfy the same need (*Dictionnaire d'économie et de sciences sociales*, Nathan, 1996). 2.- Substitute : what can replace something else (*Larousse Dictionary*).

(7) If the average age is lower than the optimal time span, the product is rare and very demanded on the market ; restrictions and production crises also have direct effects on the scarcity of the product.

(8) The partners in the programme are : Fearne A. & Wilson, N., *Wye College* (GB), De Roest K & al, *CRPA* (IT), Galanopoulos K. & al, *University of Thessaloniki*, FotopoulosC., Vakrou A. & al, *NAGREF* (GR), Sylvander B. & Lassaut B., *INRA-UREQUA*, Leusie M., *Crisalide* (F), Van Ittersum K. & al., *Wageningen* (NL), Barjolle D, Chappuis JM, Dufour M, *IER-EPFZ* (CH).

(9) *Terroir* is a difficult word to translate into English. *Terroir* is a combination between natural conditions and human skills which provide a unique context. This context permits a unique quality for a product composed by its taste, its sensory properties, its aroma, its texture and often its appearance (Barjolle.D., Boisseaux S., Dufour M., 1998).

(10) The Danish and German imitations are however made from cow milk : the Greek Feta is always made from a mixture of sheep and goat milk.

(11) The *Eurobaromètre* 50.1 requested in 1998 by the European Commission shows that only 6,3% of the consumers knows the three letters "PDO", and 13,5% the full denomination "protected designation of origin". Moreover, consumers do not always know what guarantees a PDO. A third of them knows that it means that the product has a well-defined geographical origin but only a quarter can say that the main ingredients must all come from the production area. Many consumers only consider the PDO as a quality label without highlighting the importance of the origin.

(12) Switzerland has to revise the objectives of its agricultural policy under the influence of GATT negotiations (of which Switzerland is a signatory) and under political pressure for a more sustainable production and a reduction of the governmental costs. The goal of Swiss agricultural policy was mainly, until the 90s, to ensure the food supply in the country. It was associated with the maintenance of farm incomes and reasonable prices to consumers. All these objectives lead to a policy which was very protectionist : guaranteed prices and marketing of some products, safeguards against foreign trade, customs duties, financial support for cheese exports. The State involvement was particularly important in the milk sector through state-associated institutions mandated by public law. By 1990 this Swiss agricultural policy was reviewed to reduce the costs of implementation of protectionism, to liberalise agricultural trade in the wake of the GATT negotiations, to develop alignments for European economic integration, and to reduce the difference in food price between Swiss products and the ones in the EU member states. These markets conditions will be mainly achieved by the liberalisation of the main markets (milk in 1999 and cereals in 2000), an important reduction in cross-border protection (within the manoeuvrability afforded by the GATT agreement), the disappearance of the guaranteed prices and guaranteed marketing by the State.

(13) *Typicity* has to be understood as an intrinsic component of the product, rooted in a historical and geographical context specific to the region of origin. The *typicity* will help the product performance, if it is well transcribed in the code of practice (crucial points of the technology and of the product definition).

(14) We had to introduce this specific element to be able to identify the factors of success. It is the system of the firms acting together as one single organisation.

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ANNEX

Table 1 : Evolution of the volumes on the various reference markets. Comparisons with the studied PDO cheeses.

Product	Market of reference	Evolution of the production volumes	
Boeren-Leidse met Sleutels	▪ Leidse cheeses	Cheese consumption increased of 6.3% between 1990 and 1994 in the NL. Meanwhile the domestic mature cheeses win 74% of market share (from 12.3% in 1990 to 21.4% in 1994).	↑
Cantal	▪ Farmhouse cheeses (France)	Production **increased** of 7.4% between 1992 and 1995.	↑
	▪ French PDO cheeses	Production **increased** of 10% between 1992 and 1995.	↑
	▪ Auvergne PDO cheeses	Production **increased** of 5.9% between 1992 and 1995.	↑
	▪ Pressed and uncooked paste cheeses	Production **increased** of 8.7% between 1992 and 1995.	↑
	▪ All French cheeses	Production **increased** of 6.9% between 1992 and 1995.	↑
Comté	▪ French PDO cheeses	Production **increased** of 10% between 1992 and 1995.	↑
	▪ Pressed and cooked paste cheeses	Production **increased** in the last years (+ 7% in 1995 ; libre service).	↑
	▪ All French cheeses	Production **increased** of 6.9% between 1992 and 1995.	↑
Feta	▪ Sheep/Goat Greek cheeses	Production **increased** of 27.8% between 1990 and 1994.	↑
	▪ All Greek cheeses	Production **increased** of 15.2% between 1990 and 1994.	↑
Fontina	▪ Semi hard cheeses	Production **decreased** of 3.8% between 1990 and 1996.	⇩
	▪ Fontal		
	▪ PDO cheeses in Italy	Production **increased** of 29.1% between 1990 and 1996.	↑
	▪ All Italian cheeses	Production **increased** of 9.5% between 1990 and 1996.	↑
Gruyère	▪ Swiss hard and semi-hard cheeses	Production **decreased** of 9.6% between 1991 and 1996. Market share decreased from 77% in 1991 to 72% in 1996.	⇩
	▪ All Swiss cheeses	Production **decreased** of 4.7% between 1991 and 1996. Production of soft cheeses is increasing though.	⇩
	▪ Cheeses (in and outside Switzerland)	Consumption has **increased** both in Switzerland (+8.9% between 1992 and 1995) and in the rest of Europe.	↑
Noord-Hollandse-Edammer	▪ Edammer cheeses	Cheese consumption increased of 6.3% between 1990 and 1994 in the NL. Meanwhile the Edammer cheeses lost 30.6% of their market share (from 4.9% in 1990 to 3.4% in 1994).	⇩
Parmigiano-Reggiano	▪ Hard cheeses out of cow milk (Italy)	Production **increased** of 14.1% between 1990 and 1996.	↑
	▪ PDO cheeses in Italy	Production **increased** of 29.1% between 1990 and 1996.	↑
	▪ Grana Padano	Production **increased** of 35.2% between 1990 and 1996.	↑
	▪ All Italian cheeses	Production **increased** of 9.5% between 1990 and 1996.	↑
West Country Farmhouse Cheddar	▪ Cheddar cheese	The most important cheese (57% of sales in 1996) although losing market shares. Consumption of cheese in the UK has stabilised. The soft cheeses are increasing their share steadily.	⇩
	▪ Mature Cheddar	Stronger flavours are becoming more important and the higher value mature Cheddar sector has been gaining share since 1991.	⇨

Table 2 : Market Attractiveness

PDO products	Size of the markets of reference*	Growth of the markets of reference	Image of the sector**	Intensity of the competition from the substitute products	Barriers to entry/ barriers to exit	Market attractiveness		
						Weak	Middle	High
Boeren-Leidse met Sleutels	**Small** (< 15'000 tons)	↑	Traditional product	Strong	Weak		X	
Cantal	**Large** PDO cheeses (172'000 tons) (+10%) PPPNC (200'000 tons) (+8.7%)	↑	Traditional product	Middle	Middle		X	
Comté	**Large** PDO cheeses (172'000 tons) Pressed and cooked cheeses (270'000 tons)	↑	Traditional product	Strong	Middle (ripening time)		X	
Feta	**Middle** (98'000 tons) (+28%)	↑↑↑	Traditional product	Greece: middle Export: strong	Middle (sheep and goat milk)			X
Fontina	**Middle** Semi hard cheeses (75'000 tons) (-3.8%)	⇩	Artisanal and traditional product	Strong	Weak	X		
Gruyère	**Middle** Swiss hard cheeses (80'000 tons) (- 9.6%)	⇩	Artisanal and traditional product	Strong	Middle (ripening)		X	
NH Edammer	**Large** (> 150'000 tons)	⇩	Industrial product	Strong	Weak	X		
Parmigiano Reggiano	**Large** Hard cheese out of cow milk (240'000 tons) (+ 15%)	↑↑	Traditional product	Strong	High (ripening time)			X
WCF Cheddar	**Large** Cheddar sold in the UK (153'000 tons)	⇩	Industrial product	Strong	Middle (ripening time)	X		

* Size of the market of reference; more than 150'000 tons: **large**, between 50'000 and 150'000 tons: **middle**, below 50'000 tons: **small.**

** A family of products can be considered as traditional but not artisanal (traditional does not mean artisanal or industrial).

Table 3 : Production, Exportation and Consumption of the PDO cheeses

	Consumption	Production in 1996	Production in 1991	Exported sales in 1996	Exported sales in 1991	Evolution between 1990 and 1966	
BOEREN-LEIDSE MET SLEUTELS		425 tons		Hardly anything	Hardly anything	Strong competition from PanPan cheese, a factory made Leidse cheese and from other large cheese brands. Some quality problems for the Boeren-Leidse met Sleutels.	⇨
CANTAL		16'500 tons[1]	16'100 tons			Production **decreased** of 1.5%.	⇩
COMTE		41'000 tons	33'400 tons	~ 500 tons (higher than in 1991)		Comté is still the first AOC cheese. Production increased greatly between 1990 and 1994 leading to a decline in prices. The production was limited in 1995. Quotas were imposed to the cheese processors in order to preserve the price level. The stability of the market remains fragile	⇨
FETA	8,5 kg	76'000 tons	54'000 tons	9'600 tons	7'000 tons	Production **increased** of 39.4%. Exports **increased** of 25.5%.	↑↑↑
FONTINA	0.2 kg[2]	3'500 tons	3'300 tons	7-8%	2%	Production **increased** of 32.3%	↑↑
GRUYERE	3,2 kg	24'000 tons	22'400 tons	7'200 tons	8'200 tons	Increase of 4.9% between 1991 and 1996. Market share of the Gruyère raised from 21.6% to 25.1%. Sales of Gruyère on the Swiss market increased of 3.4% between 1991 and 1996. The market share decreased from 15.5% in 1992 to 14.3% in 1995. Exports increased of 12.9% between 1991 and 1995.	↑
NOORD-HOLLANDSE EDAMMER		Confi dential between 5'000 and 15'000 tons	Higher than in 1996	Confi dential infor mation	Confi dential infor mation	Some wholesalers and retailers switched from NH Edammer to Friese Edammer cheese. The production and supply of NH Edammer to the largest wholesaler decrea-sed from 40,000 cheeses per week in 1992 to 17,000 cheeses per week in 1996.	⇩⇩
PARMIGIANO REGGIANO	1.55 kg	104'900 tons	109'000 tons (1990)	6%	4%	Production **decreased** of 4.2% Nevertheless volumes can be considered as stable around a fluctuating trend.	⇨
WCF CHEDDAR	1,55 kg	22'000 tons	24'000 tons	400 tons		Production volumes have fallen since 1994. Several producers have left the industry, others have cut back their production. Higher prices obtained do not lead to an increase of the production. High milk prices paid to the farmers	⇩

1. En 1995.
2. 9 kg in the production area.

Table 4 : Competitive Position of the Product

PDO products	Evolution of sales (volumes)	Price tendency	Notoriety of the product	Image of the product	Imitations (direct substitutes)	Geographic spreading of the sales	Dependency on public support/ measures	Competitive position		
								Weak	Middle	High
Boeren-Leidse met Sleutels	⇨	⇨	Well known in the western part of the NL	++	Pan-Pan ++	No export	-		X	
Cantal	⇩ (- 1.5%)	⇩	Well known in France	+	-	Little export	Direct payments to the farmers	X		
Comté	⇨	⇨	Well known in France	++	-	Little export	Direct payments to the farmers		X	
Feta	↑↑↑ (+ 40%)		Very high	++	+++	15% export (increasing)	EU subsidies			X
Fontina	↑↑ (+ 32%)	⇨	Well known in Italy	++	Fontal +/-	Little export	Very high (regional and EU subsidies)			X
Gruyère	↑ (+ 5%)	⇩	Well known in Switzerland Confusion in France	++	Etivaz +/-	20% export all over Europe	Very high		X	
NH Edammer	⇩⇩	⇨	Well known in the Netherlands	++	Edammer +++	Marketed in the NL	-	X		
Parmigiano Reggiano	⇨ (stable around a fluctuating trend)	Variations (⇨ ↑ ⇩)	Well known in Europe	++	Grana Padano +/-	6% export in 1996; all over Europe	Direct payments to the farmers / subsidies to the ripeners (		X	
WCF Cheddar	⇩		Little known	+	UK Cheddar Canadian Cheddar ++		-	X		

Table 5 : Cheese Consumption per Habitant in Several Countries

	1985	1994	Trend
Switzerland	13.7 kg	16.4	+ 19,7%
France	20.7 kg	22.8 kg	+ 10,1%
Italy	16.4 kg	20.1 kg	+ 22,6%
Netherlands	13.8 kg	15.8 kg	+ 14,5%
Greece	21.0 kg	19.4 kg	- 7,6%
Denmark	11.4 kg	15.4 kg	+ 35,1%
Norway	12,6 kg	14,2 kg	+ 12,7%
Sweden	15.1 kg	16.9 kg	+ 9.9%
Spain	4.7 kg	8.1 kg	+ 72,3%
Canada	11.6 kg	12.6 kg	+ 8,6%
USA	12.0 kg	12.3 kg	+ 2.5

Source : Based on data of the Statisitiques laitière de la Suisse, Brugg : Secrétariat de l'Union Suisse des Paysans , 1996.