

AGROFOOD INDUSTRIES COMPETITIVENESS ACCORDING TO THE PRODUCTS SOLD IN THE MARKET

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Competitiveness by any means is not a new issue as it seems nowadays.

This concept has become more fashionable because of the markets liberalisation and the emphasis in a more global economy.

Competition used to be more localised within regions and nations but now, with an increasing international trade it is applied everywhere.

Competitors are not fully identified as they used to be and now might come from far away places what was not the case previously.

Agrofood firms compete in a more uncertain environment and they are, like other firms, searching the way to have a sound competitive base.

The agrofood sector is moving from a commodity orientation to more finished food products.

International trade of food products is greater than commodity products.

It is a consequence of wealthier consumers all over the world and a need to incorporate more added value to raw materials.

Agrofood firms play an important role in transforming raw materials and adding value to the product. In this process there are quite distinctive situations and we have distinguished, in this paper, agrofood firms deal-

ABSTRACT

Agrofood small and medium size firms encounter a competitive environment like the rest of the economic actors in a global economy. These firms have an important task to create employment and a clear impact on rural development. They have neither strong technostructures nor an easy understanding of how to become more competitive. In this paper, Porter's and industrial district approaches are reviewed. A scheme is offered to determine some of the most important factors affecting agrofood industries competitiveness. Four competitiveness focuses for the agrofood industries are defined: raw materials and their determinants, external business environment, internal firms conditions and products performance. The co-operation and relationships among firms are also taken into consideration.

This particular analysis has been applied to three different agrofood industries in Aragón (Spain). The main driving competitive focus stems from the kind of products they sell in the market. Thus, it has been selected an undifferentiated product (flour), a differentiated product (pastry) and a differentiated product with a specific geographic origin (wine). In all cases we can consider that they are reasonable competitive industries but their strategies are quite different.

RÉSUMÉ

L'impact de l'ouverture de l'économie et la globalisation des marchés sur la compétitivité des grandes et des petites entreprises agro-alimentaires tend à augmenter. En même temps, les entreprises agro-alimentaires jouent un rôle important en ce qui concerne la création d'emploi et la restructuration dans le développement du milieu rural. Nous avons constaté que ces industries n'ont ni suffisant capacité technos-structurelle ni un bon entendement de comment acquérir une position compétitive. Dans cet article nous analysons les approches de Porter et du district industriel. Nous donnons un schéma général pour déterminer les plus importants facteurs qui affectent la compétitivité des industries agro-alimentaires. En effet, nous avons défini quatre aspects importants pour l'industrie agro-alimentaire: les matières premières et leur déterminants, l'environnement extérieur du négoce, les conditions internes des entreprises et la performance du produit. La collaboration et la corrélation entre les entreprises ont été aussi considérées dans ce travail. Cette étude particulière a été appliquée dans trois agro-industries différents en Aragón (Espagne). Du point de vue de la compétitivité, l'élément le plus important est le type de produit mis sur le marché. De cette façon, nous avons choisie trois types de produits: un produit non différencié (farine), un produit différencié (pâtisserie industrielle) et un produit différencié avec appellation d'origine (vin). Dans tous les cas on peut considérer que les entreprises sont raisonnablement compétitives mais leurs stratégies sont largement différentes.

ing with undifferentiated, differentiated and specific geographic origin products. Product differentiation could be of a great importance to approach a competitive analysis, especially for small and medium firms.

There is a general consensus that firms competitiveness is a key element for their development.

However, competitiveness is a complex issue and it is difficult to find a sound approach and even more difficult to measure it. In this paper, first we deal with some distinctive elements which differentiate Porter's and the industrial district approaches.

The next section deals with the approach selected here. Later on it has been applied to small and medium agrofood industries in a regional analysis, namely Aragón (Spain). Finally, some concluding remarks are presented.

PORTER'S AND THE INDUSTRIAL DISTRICT APPROACHES

It is very unusual to find an author who has had such a great impact on any discipline analyses. Porter has achieved that performance

and his works are widely used by many scholars, businessmen and administrators whenever they analyse competitiveness. In Porter (1985) we can find his views about the different situations where a firm could be involved and its main distinctive features to be competitive.

One of the main elements is how the firm behaves as well as the entire industry where it is located.

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Porter distinguishes among three strategies: cost advantage, differentiation and focus. The first strategy deals with the entire industrial and commercial process of achieving a competitive advantage owing to the favourable cost structure. The second strategy concentrates on product differentiation and consumers perceptions about high value products. The third strategy is a mixture of the previous ones because both of them could be applied at a particular market segment. According to Porter a firm has to find its strength in one of those mentioned strategies to be successful.

Another key follow up of Porter (1990) works deals with the elements that a nation needs to be competitive. He expressed his ideas through his now famous diamond approach. Porter differentiated four main elements: factor conditions, demand conditions, related and supporting industries, and firm strategy structure and rivalry. There were two complementary elements: chance and the Government.

It is not the purpose of this paper to go through those elements as they are explained elsewhere. Nonetheless, it should be mentioned that empirical analyses find great difficulties in applying their writings because they offer an appealing direction to analyse competitiveness but not clear indications of how to do it. A great emphasis is given to how each person is able to put the data and experts insights together based on historical grounds and actual performance. His diamond approach has been applied to country studies as well as to industries or sectors.

Porter is by far the most mentioned author but there are other approaches which have been applied in the agro-food sector (Pitts and Lagnevik, 1998). There is one of particular interest which is called the industrial district approach which has been developed in Italy by Becattini (1987) and hardly applied elsewhere. An industrial district is defined as a concentration of agrofood firms, more or less specialised, which are established in a determined region (Cecchi, 1992). It could be applied as a development regional model (Becattini, 1989) with all social forces taken into consideration. Rosenfeld (1995) has applied similar concepts in a regional development framework and Iacoponi (1990) has extended the concept to agricultural and agrofood firms. Goodman & Bamford (1989) and Tremblay (1996) have analysed this approach to small firms and local development, respectively. In the industrial district approach not only economic forces are taken into account to analyse competitiveness but also social interactions in the area where firms are established.

In this case, co-operation among firms and socioeconomic agents is considered an important element to reinforce an industrial network which could be accomplished with firms of a different character. This approach has a more localised geographical focus and it could be confined to a region or part of a region. Both

competition and co-operation are taken together as driving forces to develop firms and industries. Porter's and industrial district approaches try to cluster successful examples at different levels. Nevertheless the latter approach seems more appropriated for small and medium firms at limited geographical environments. Although Barkley and Henry (1997) wonder whether clustering could be a successful strategy for rural industrialisation. In these and other approaches which have emerged from the industrial organisation theory, there is an important effort to avoid a single index or a number of indices and instead to put together a considerable number of elements to be analysed. Traditional economists are trying to incorporate more integrative approaches which have been mostly applied to international trade (Bredhal *et al.*, 1994).

SELECTING AN APPROACH

In this paper the analysis is confined to a region in Spain, Aragón. Spain is becoming a highly decentralised administrative country where each Autonomous region has significant power to set up its own rules for industrial development which affect consequently the agro-food sector. However, without any doubts firms established in the region are under the competition of global trends and policies coming from the European Union and the Spanish government.

Nevertheless, there are distinctive features in each region which make meaningful to analyse competitiveness at a regional level. It is at that level where co-operation, in certain cases, reaches its main strength. Firms in a region compete and collaborate with other firms in the same region. The industrial concentration is growing and the agrofood sector is not an exception. Multinationals are the dominant players everywhere (Dunning, 1993). Big multinationals change their strategies accommodating themselves to global forces and take quite rapidly their decisions. Their strategies are of paramount importance for any country or region, and the term region usually involves several countries. There is a trend for big multinationals to depend on small and medium firms for some outsourcing services as they find they are more competitive for particular purposes.

However, there is a great amount of small and medium size enterprises, which altogether do not have such an economic impact as the big firms, but are of great significance for employment. They also have their significance on rural development as they are usually spread all over large territories and are not so close to big urban areas. Small and medium enterprises have a limited amount of information and their technostructures are usually weak. The public sector can have a greater influence on small and medium enterprises than on big multinational firms. It can be stated that in the first case, competitiveness analyses can have a greater input in

their decision processes than in the latter. This is the reason why this paper will be dealing with that kind of enterprises. One of the main problems of the approaches described above and many others (Bredahl and Blanchard, 1997) is that they offer a large amount of factors which influence competitiveness. But small and medium size firms do have neither the skills nor the strengths to put a great emphasis in a large amount of elements. They have to decide which ones are the most important in order to put their human and technical resources on those elements. It does not mean that they have to forget the rest but they have to be very selective on their decisions. Then, the scheme that should be offered to them has to be simple in order to achieve results.

The elements selected here are a combination of Porter works and the industrial district approaches.

Markets requirements determine the effort that a firm or entire industry has to undertake to finally meet consumers. Here a product approach has been selected because it is believed that competitiveness varies mainly according to the type of product sold in the market, which results in a marketing approach. A distinction has been made for undifferentiated, differentiated and of specific geographic origin products.

The difference between the first two stems from the fact that undifferentiated products can be either semi-processed or consumers products. In both cases there is not a great number of marketing activities involved. This is not the case for differentiated products. Products with a specific geographic origin have been developed mostly in the Mediterranean countries; they are ready for consumption and involve a necessary co-operation among firms in any particular industry.

The general scheme, which is offered here, is provided in **figure 1**.

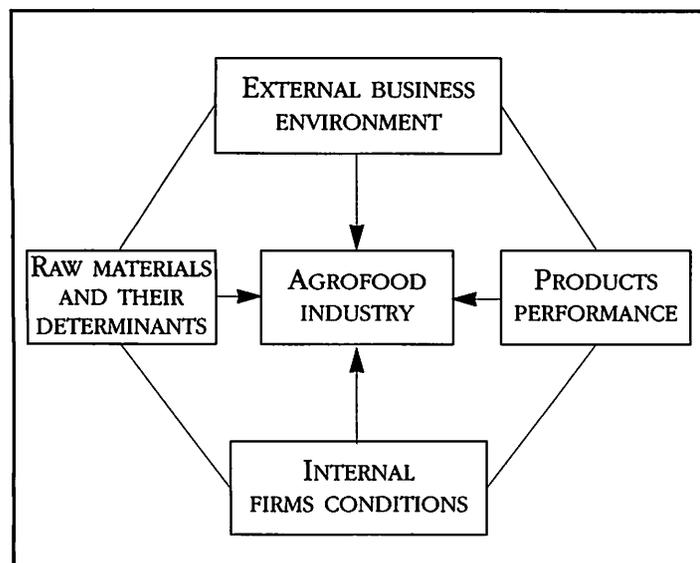


Figure 1. Competitive focuses for agrofood industries.

The analysis will not be singled out for a particular firm but for entire industries in a region, as it is the optimum desegregation level. Then, we consider mostly Marshallian clusters, which are composed primarily of locally owned, small and medium enterprises, according to Markusen (1994). The product itself of any particular industry is the main linkage to analyse competitiveness in a region owing to the degree of homogeneity within the industry in comparison with the heterogeneity of other industries providing different products. This specially applies for industries and firms, which are mainly developed, based on the physical resources of the region, what is the case for most small and medium firms. Although there are other types of firms whose main strength is their technology or their location close to large consumer markets (Connor and Schiek, 1997).

The agrofood industry competitiveness is affected by what we call competitiveness focuses, which are: the type of raw materials and their determinants, its external business environment and the internal firms conditions. The final proof will be the evaluation that the market makes of its products or products performance. In each competitive focus we have only selected a limited number of elements that should be analysed with greater emphasis as they are considered the main driving forces.

For raw materials and their determinants they are: productive structure, water requirements and quality. The productive structure involves dealing with physical and human resources. Water is a key element in areas with low precipitation due to its impact on quantity and also on quality. Raw materials quality is a prerequisite to reach final products of a desired quality level.

Two elements will be selected to analyse the external business environment of the agrofood industry, which are: the supply chain connections and the agrofood industry situation outside the region. In the first case it applies to vertical integration and coordination. The second element is a reference to competition coming from nearby and far away locations.

The internal firm's conditions are based on two pillars: technological development and management skills. Finally, products performance is evaluated by their position in the national and international markets.

The arrows in the figure indicate the main direction of their influence. Then, the agrofood industry is influenced by three competitive focuses mostly in a unique direction. This is not the case for products performance which is an outcome of the entire industry and it is a result of its activities evaluated outside the industry but with clear influences over the competitiveness of the agrofood industry analysed. Other lines without arrows indicate linkages but not so strong as in the case of the arrows.

The final aim is to be competitive and we take as a reference the definition given by Agriculture Canada

(1991) that "a competitive industry is one that possesses the sustained ability to profitability gain and maintain market share in domestic and/or foreign markets".

DEFINING THE SCOPE OF THE ANALYSIS

According to the explanations offered above, the kind of product that they sell in the market has been selected as the main feature to differentiate industries. Flour has been chosen as an undifferentiated product, pastry products for differentiated products and wine for differentiated products labelled with a specific geographic origin. The analysis refers to a particular region in Spain, namely Aragón, which accounts for 10% of the total Spanish territory and 3% of the country population.

The data have been gathered through secondary sources and by interviews to almost all the directors or owners of the agrofood firms. Also, we have participated in experts discussions where technical staff from the administration, the industry and the distribution were present (Albisu *et al.*, 1997). Previously, a competitive analysis of supra regional coverage was performed (Albisu *et al.*, 1994).

The analysis presented here is based on data as well as qualitative comments. There are many subjective judgements as a result of all opinions expressed by many executives and the authors own judgements.

Firms size have been defined according to their sales as a unique indicator independently from the kind of products they sell.

Small firms are those with sales below 7 million dollars or 1,000 million pesetas and medium firms are above that figure and below 35 million dollars or 5,000 million pesetas.

UNDERSTANDING COMPETITIVENESS

The flour industry

Wheat, soft or hard, is the main raw material to manufacture flour in the region. In both cases the productive structure has been mainly determined by the Common Agriculture Policy since Spain joined the European Union in 1986. The area dedicated to soft wheat has been mostly determined by the EU rules about land retirement and, in the case of hard wheat, by the premium given to farmers located in specific regions. Then, hard wheat is only grown where farmers receive income compensations and this has a direct implication for flour factories and other factories which use that kind of ingredient to make pasta.

The Common Agricultural Policy, during the last years, has brought uncertainties to farmers in a sense that subsidies through direct compensations are more clear to them than through artificial high market prices. They suspect that those subsidies might finish quite soon and, as a result, many of them are not will-

ing to invest their current profits in better technology and improved varieties. This environment does not encourage to produce at high quality standards. On top of that, agrofood firms do not have clear price policies to pay for better quality.

To understand the significance of water on the production of wheat we have to compare yields and we realise that yields on irrigated lands is four to ten times those on dry lands. It is also important to point out the quality regularity that water brings in comparison to wheat cultivated on dry lands.

Human resources to run farms are limited and the retirement of many farmers might encourage young farmers to accumulate more land and use more and better their mechanic equipment. The weakest part for farmers is the lack of training to incorporate modern technology and managerial techniques. Extension services to spread technology among farmers are not so important as they used to be due to their commitment to administrative procedures.

The external business environment indicates that co-operatives, especially second degree co-operatives, play an important role to gather wheat produced at farms and then sold to flour firms. There is a lack of contractual relationships and trading is not regular. No clear indications about the desired quality are provided to suppliers and there are not sustained price policies to differentiate quality. Industrial concentration is affecting the flour industry in Spain and 10 firms handle 50% of total sales, four of them are medium size firms settled down in the Aragón region. There is a tendency to allocate flour factories close to harbours as an easy way to get raw materials from other countries and, in that respect, Aragón has a clear disadvantage.

Flour factories in Aragón have been developed because of the cultivation of wheat as the starting point. However, many small factories have run out of business. At present all the viable firms are family business with very little labour, cost effective, and good management. We could consider them as an industrial cluster with very little co-operation among firms and a remarkable competitive environment. Nevertheless, they share a considerable number of services.

Their products are mostly undifferentiated although they try to have a certain specialisation. There have not brands or the amount sold under brands is very small and all goes to the national market. Their final products are nowadays not so dependent from raw materials coming from the region but how reaching the ability to produce homogeneous products in terms of quality. Their managerial capabilities and technical know-how are their strengths to produce their final products, which are used by consumers or as intermediate ingredients to produce more elaborated consumers products.

In summary, we can state that the flour industry benefits from the advantages of having a kind of regional industry district. Likewise, the undifferentiated product leads them to be cost effective to be competitive in the market, both in terms of prices and services. Cupertino exists among firms but is not strong.

Pastry industry

One of the main ingredients for this industry is the flour although there are many other ingredients, such as eggs, sugar, etc. Close flour factories are a safeguard for them and they have been an important part of their development. Flour from the region was predominant at the beginning but the quantity required for their industrial processes is not enough and it has to be provided by other factories from other regions. Nevertheless, the regional competitive flour firms described above have been able to supply high quality ingredients at reasonable prices. Water requirements are not so demanding and it is similar to other industrial processes. In this respect there is enough water coming from the Pyrenees and no problems are foreseen.

The external business environment in Spain indicates a mixture of multinational and national firms, which are growing and seeking the export market for their expansion, because the national market seems rather saturated. There are three firms from the region which are among the twelve most important in Spain for pastry products but they occupy the first, second and fourth place in exports. There is also a good example in the pasta business with a firm at the very top that also is expanding its exports and it is the second largest exporter in Spain. Connections with suppliers are loose in terms of capital dependence but quite strong if we consider their business interrelations as to know what they want and how it should be accomplished.

Their internal firm's conditions are characterised by a mixture of family firms and other typical firms structures with capital independent from their managers. Again, in this case we can observe a cluster of competitive firms without clear Cupertino links but taking advantage of logistics developed around them and services from which they benefit. They all have selected competent managers, who are aware of their possibilities.

In this industry, product differentiation is their main feature whether it is sold with their own brands or distribution brands.

They are able to produce products with high added value, which provides them with opportunities for new expansion possibilities. The largest regional firms rely on small regional firms to complement their assortment. Innovation is present in all firms with a constant preoccupation to offer new products in the mar-

ket. In summary, in this industry again we find a cluster of firms which are involved in a competitive environment.

They have been able to take advantage of differentiated products to develop their marketing strategies and have found the export market as the main expansion path.

This cluster has not been encouraged externally but is the result of appropriate physical and managerial competitive conditions.

Again, they benefit from other common services and administrative procedures, like the subsidies from EU for new investments.

Wine industry

This industry is quite different from the previous ones in many respects. Raw materials in this industry are more complex and it entails a delicate elaborating process. Thus, vineyards have a large number of varieties which can be elaborated on their own or combined. Plots are very small but the cost of production is not a determinant factor. In the region there are four areas protected under the umbrella of specific origin rules with a different variety structure. Perennial plants do not provide a great flexibility because once they are planted they remain productive for decades and it is not wise to uproot them. Quality is the main factor and irrigation is a key element to achieve the optimum quality and the required homogeneity between seasons. The four areas have improved their quality at a great rate during the last decade and the public sector has enhanced their technological processes.

Firms in Aragón are small but the most prominent ones have been increasing their sales to reach a medium size. Their competitors in Spain have been very active which applies for all sort of sizes. Then, you can find either big and medium size firms, which are very competitive on the base of their sales in the national market but especially in international markets, in those countries with a high growth market and economic development. The role played by co-operatives makes easier the industry connections either because they produce themselves the final products or they are able to put together a great share of the total raw materials supply.

Wine firms in Aragón have invested heavily in new technological processes, which have received a considerable help from the public sector either through EU funds or regional provisions. In that process successful firms have acquired appropriate management and skills to run their enterprises. In each area of specific origin have emerged two or three firms leading the rest and creating a competitive environment but also Cupertino is strong because they have to determine the specific characteristics of the area and their

promotional activities. Their products are evaluated not only for their market share but also for the segment they occupy in the market, whether it is high or low value. In this case the same products could be located in different segments depending on the market they are sold.

Leading firms have been able to take opportunities in far away markets and be aware of constant product innovation plans.

In summary, in the wine industry marketing activities are extremely important to become competitive. Clusters correspond to areas with specific geographic origin and there is a competitive environment among them. Cupertino among firms is a requirement and an important part to achieve success.

CONCLUDING REMARKS

In this paper we have started from the Porter and the industrial district approaches to analyse three different industries in Aragón (Spain). A different scheme is offered with a limited number of factors, which mainly determine their competitive performance. Product differentiation is considered as the main driving force to distinguish competitive behaviour for small and medium firms in a final marketing evaluation.

The industrial district approach jointly with the idea of clustering firms provides a better framework. The cluster has been limited to a region because their interrelations are greater at that geographical level. In Spain the public administration has its main effects at that regional level and its impact on small and medium firms could be quite important.

A distinctive feature, common for all industries, is the cluster competitive and co-operation environment which supports many of their actions. Thus, in all cases they can be considered competitive industries but there are several firms, which are leading the path and managers follow closely decisions taken by their cluster competitors.

This does not mean that they are not aware of external requirements in the national and international markets.

Consumers seeking for a variety of products offer opportunities to small and medium firms, although only the latter are able to take a full benefit of this trend. A prerequisite for those firms in order to be competitive is to have a differentiated product and if possible locate their products in high value market segments. If not, the only solution is to be cost effective and they have serious difficulties to compete with big firms.

Their strategy is to move into more differentiated products as the only way to survive or to merge with other firms.

In our analysis we find that close connections and co-operations among firms enhance their competitiveness. Even if it is loose, such as in the case of the flour

and pastry industries. The wine industry, due to their geographic specific origin rules has stronger relationships among their firms both horizontally and vertically. The public sector policies have a strong influence on small and medium firms.

Either at promoting better structures to produce raw materials or to favour investment or to promote products with generic advertising or to create an appropriate competitive and Cupertino environment by providing training and information. ●

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