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MEAT SAFETY AS A TOOL OF DIFFERENTIATION FOR RETAILERS: SPANISH AND FRENCH EXAMPLES OF MEAT «SUPPLY CHAIN BRANDS»

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ABSTRACT:

Paper type:

Research paper

Purpose:

The purpose of this article is to analyse how the health crises have contributed to increasing the segmentation of the supply of fresh and little-processed food products under the impetus of a reinforcement of regulations (affecting the supply chain as a whole) and of strategies adopted by the stakeholders. Indeed, since several food crises have strongly affected the production of animal food products, food safety has become one of the most important aspects of quality products for both consumers and retailers.

Design:

The authors carry out an empirical and comparative analysis of the reactions of two neighbouring countries (Spain and France) faced with major health crises caused by similar events: the emergence of BSE cases. A special focus is made on the initiatives taken privately by two French retail groups (Carrefour and Auchan) operating in both countries.

Findings:

The analysis shows that retailers have developed systems of quality insurance developed in order to reduce uncertainty and to restore consumers' confidence in the quality of the products they buy. These programmes of actions pave the way for policies of product differentiation. In a

relatively different context from that of France, the two big French retail groups Carrefour and Auchan operating in Spain have developed similar approaches, which had not been the case in France.

Value of paper:

The paper provide useful keys for a better understanding of the strategies of retailers (use of "supply chain brands" as tools of differentiation to ensure consumers' loyalty, marketing communication) in a context of sharp competition and of relative dissatisfaction with respect to «minimum quality» standards.

KEY WORDS : BEEF, MEAT, RETAILERS, SUPPLY CHAIN, SPAIN, FRANCE

ECONLIT CODES : L150, L660, L810

INTRODUCTION:

The question of consumer-oriented quality policies is timely inasmuch as the consumer is the final link in the food chain. In a competitive market, the objectives of farmers, processors and retailers should correspond to consumers' demands. Traditionally the EU quality policy has rested on a product-oriented approach. In recent years, the EUROP classification of meat has been introduced as regulation concerning aspects of process-oriented quality policy. However, in future, the consumer-oriented quality approach is likely to dominate discussions on food quality. The reforms of the Common Agricultural Policy take into consideration "the increased importance of quality products and the consequent introduction of rules (geographical indications, certificates of specific character)" and the key issues affecting consumer behaviour, consumer attitudes and acceptability, the impact of new technologies on consumer confidence, the improved understanding of food choice, environmental and ethical aspects, socio-economic factors, access and availability and, finally, communication and information flows to consumers, retailers, manufacturers, and primary producers (Briz et al., 1998).

Food safety has become a major concern for consumers, a concern that could turn into widespread alarm. In the case of the meat sector, there is clear evidence of the importance of food safety. The outburst of Bovine Spongiform Encephalopathy in beef has had a significant impact on consumers' attitude to food, and has led to substitution effects in favour of alternative foods and to the development of quality policies and trade control. Enterprises are looking for ways to be competitive, either by offering products of a better quality (but more expensive) than those offered by their competitors, or by supplying products of similar quality at a lower price.

The aim of this article is to analyse how the health crises have contributed to increasing the segmentation of the supply of fresh and little-processed food products under the impetus of a reinforcement of regulations (affecting the supply chain as a whole) and of strategies adopted by the actors of the supply chains. In the first section, we show that consumers' difficulties to evaluate certain attributes of the products (such as food safety) pave the way for policies of differentiation aiming to reduce uncertainty as to the quality of food products. In the second section, we carry out an empirical and comparative analysis of the reactions of two neighbouring countries (Spain and France) faced with major health crises caused by similar events: the emergence of BSE cases (sections 2 and 3). We focus in particular on the initiatives taken privately by two French retail groups operating in both countries. By comparing the strategies of segmentation of the beef supply chain adopted by both groups and by analysing their marketing communication strategies, we have been able to identify differences between both countries and to provide explanations for these differences.

1. MEAT QUALITY AS A TOOL OF DIFFERENTIATION

In developed countries, competitiveness necessitates, in many sectors, product differentiation, which consists in exploiting the diversity of consumers' preferences by replacing cost and price-based competition by non-price related competition. The question of consumer information then becomes central: the studies carried out by information economists have shown that consumers are often uncertain as to the quality of the products they buy.

1.1. CONSUMERS' EXPECTATIONS AND THEIR PERCEPTION OF BEEF QUALITY

In the case of beef, the question of information is critical: indeed, consumers often have difficulties in evaluating the quality of a beef product before they actually buy it. The latter can be defined as the combination of three types of attributes (Nelson, 1970 ; Darby and Karni, 1973):

- Search qualities (such as the aspect of the meat) that can be evaluated before purchasing a product and that influence the buyer's perception of the product's quality;
- Experience qualities (such as taste) which can only be evaluated once the product has been consumed;
- Credence qualities (such as the nutritional value) which cannot be evaluated, even after the product has been eaten.

Consumers use different indicators in order to make their choice, a choice that reflects their expectations. Grunert *et al* make a distinction between the intrinsic characteristics, corresponding to the physical characteristics of the product (colour, tenderness, marbling….) and so-called extrinsic characteristics (such as the brand, the price, the retail store, the information concerning the conditions of production…)(Grunert et al., 2004). The gap between expected quality (*ex ante*) and perceived quality (*ex post*) will determine the degree of satisfaction of the customer and his/her willingness to buy the product again. Moreover, repeated positive experiences (that is when there is a high correlation between the perceived quality and the expected quality) will lead the consumer to consider as reliable the intrinsic and extrinsic indicators he/she used to make his/her choice. This quality «signalling» role can be exploited by private brands: by reducing consumers' uncertainty, they encourage them to pay an extra price in return for a guarantee of the perceived quality (Bredahl, 2003). This also applies to quality assessment mechanisms, the function of which is to provide information concerning the products available on the market in order to enable consumers to choose: third party certification guarantees compliance to a number of production and processing standards and, in variable degrees, the final quality of the finished product (withdrawal of non-conforming products) and is displayed on the brand's logo on the label. By clearly defining objectives in terms of quality, these mechanisms encourage producers and retailers to interact in order to adjust the supply to the demand.

Recent studies, based on surveys conducted in several European countries, have confirmed the importance of information in the particular case of beef (Bello Acebron and Calvo Dopico, 2000 ; Sanchez et al., 2001 ; Bredahl, 2003). In view of the major health crises that occurred in

Europe, some authors underline the «food safety» aspect of quality and the measures that must be implemented in order to win back consumers (Barrena et al., 2003 ; Latvala and Kola, 2003).

1.2. Food safety: the credence attribute used as a tool of differentiation

By food safety we mean «the inverse of food risk – the probability of not suffering some hazard from consuming the food in question» (Henson and Traill, 1993). This aspect of a product's quality is clearly a credence attribute inasmuch as it is often very difficult to establish a direct link between the consumption of a product and a health defect, especially if the effects are only noticeable in the long term.

The consumers' difficulty to evaluate this attribute can lead to overreactions fuelled by past crises. The level of risk perceived by consumers then becomes far higher than the actual risk and, as Mairal showed in the case of Spain (Mairal, 2003), the measures implemented to limit the actual risk are not sufficient to close this gap.

The high sensitivity of consumers to food safety issues cannot be ignored by the actors of the supply chains. Thus, beside the reinforcement of national and European regulations that have contributed to rising the minimum standards of health and safety requirements, the stakeholders of the supply chain have taken initiatives to create their own mechanisms. They are based on systems of quality insurance developed in order to restore consumers' confidence in the quality of the products they buy. The scope of these quality systems was for a long time limited to the agro-food industry; but, under the impetus of agricultural and retail organisations, they have now been expanded to include farms. Producers have implemented quality procedures for their systems of production. Retailers, using these initiatives as a foothold, have developed their own systems by including, among others, demands concerning food safety (Fearne, 1999 ; Bredahl and Normile, 2001). Retailers rely on these mechanisms to differentiate the products they offer, in the context of the development of retailers' brands; and by changing the nature of relations between the actors of the supply chain, they also ensure suppliers' loyalty.

However, differentiating a product based on the food safety aspect is no easy task for two reasons:

- the successive health crises have led to the reinforcement of regulations. As health quality standards have been raised, a perceptible and sustainable differentiation of a product based on this attribute has become more difficult to achieve;
- the food safety issue only seems to influence the choices of consumers during periods of crisis. Although it has been observed that in these situations, some consumers perceive a brand as a guarantee, this behaviour tends to change in the absence of crisis: in this case, they seem to consider that all products available on the market are healthy. Thus, their willingness to pay an extra price to obtain a guarantee on this attribute is limited (Grunert *et al*, 2004).

2. MARKET SEGMENTATION AND HEALTH SAFETY: THE CASE OF BEEF IN SPAIN

After highlighting the characteristics of beef consumption in Spain (2.1.), we shall describe aspects of the food distribution sector in Spain (2.2.). We shall then discuss the main procedures implemented in order to differentiate the products and will focus more specifically on those developed by the French groups Carrefour and Auchan.

2.1 Health crises tend to accentuate the decline of beef consumption

The food balance sheet method shows that the apparent consumption of meat in Spain evolved dramatically between 1965 and 1991: the average consumption per capita increased fourfold for all types of meat, and sixfold in the case of pork (Mili et al., 1998). In the last decade, the total consumption of meat per capita has increased further but beef represents a small part of the total meat consumption (approximately 14% in volume).

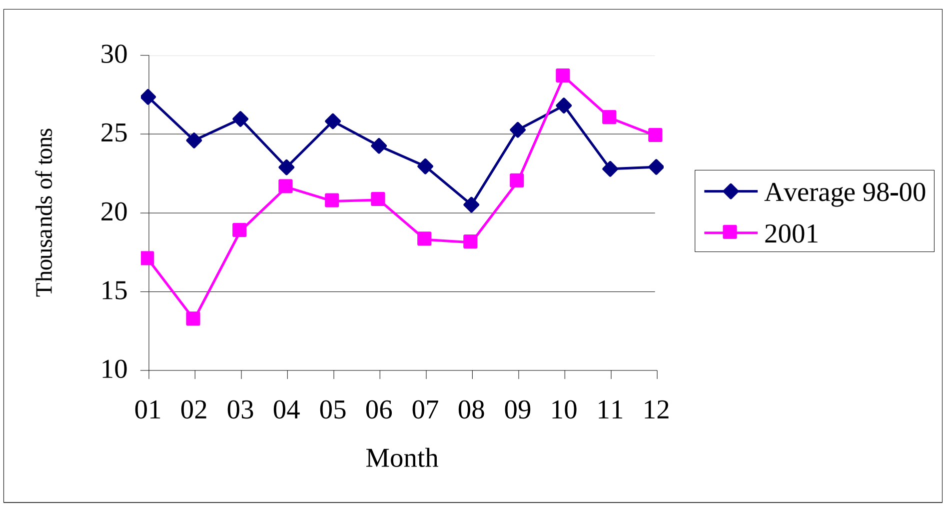
The data provided by the food consumption panel of the Spanish Ministry of Agriculture (MAPYA), shows that beef consumption occupies a relatively small part of the total meat consumption: with an average consumption of 9.8 kg per capita in the year 2000, beef is third far behind chicken (16.7 kg/cap/yr) and fresh pork meat (13.3). There is great regional disparity in beef consumption: the northern regions of Spain (except for Catalonia) over-consume whereas the southern provinces under-consume. The beef consumed comes essentially from young animals (heifer calves, that is animals of less than 14 months of age) and is consumed fresh; the consumption of frozen meat represents less than 3% of total beef or veal consumption.

In the year 2000, 78% of the volumes of beef consumed in Spain were bought by households to be eaten at home. Between 1997 and 2000, beef purchases for home consumption declined by 1.5% per year. However, beef consumption outside home increased by 1.3% per year during the same period and purchases of transformed products containing beef have probably increased. By examining the MAPYA panel, we observe a decline in the consumption of fresh and non-processed beef: the combined total of volumes of meat purchased for home consumption and volumes of beef served in restaurants decreased from 420 000 tons in 1987 to 390 000 tons in the year 2000. We observe, from 1996 onwards (the emergence of BSE cases in Europe and of cases of illegal use of hormones in Spain), a tendency towards the substitution of beef by pork meat.

A survey conducted by Briz *et al* on a random sample of 500 telephone enquiries at national level has enabled us to analyse consumers' perception of quality, their reactions, labels, brands, and trust (Briz et al., 1998). Flavour, tenderness and juiciness are considered important determinants of the eating quality of beef and veal. Colour and smell are considered secondary. With regards meat quality, it is interesting to note that brands are in no way considered as significant factors for assessing the quality of meat bought from the shop. Considering the efforts of the public authorities and of private enterprises to introduce brands in the meat market, these results are somewhat surprising. They may to some extent be explained by the fact that meat has traditionally been sold without any label or brand. The analysis of consumers' concerns shows that the main factor for assessing beef quality is the growth promoters content, whereas the risk of BSE is not as important as could have been expected. This may be due to the fact that no case of BSE was reported in Spain until the end of 2000, whereas a few cases of intoxication by growth promoters residue were recorded. It may be noted that, as in other EU countries, the use of growth promoters is prohibited in Spain. Nevertheless, there is a black market for these products. Discoveries by food safety veterinarians of meat containing hormones are extensively covered by the media. This type of meat is usually sold on national markets, and this may be why EU institutions cannot find these substances in meat imported from Spain. The main characteristics for assessing the safety of beef are freshness and what the animals are fed; the country of origin, the label or the price are not as important (Briz and De Felipe, 2000).

The first BSE case in Spain was announced in November 2000. Through programmes of epidemiological surveillance and systematic tests on cattle of over 24 months of age, 462 confirmed cases have been identified to this date (2 in 2000, 82 in 2001, 127 in 2002, 167 in 2003 and 84 at the end of August 2004, that is a possible decline of the epidemic). The announcement of the first case triggered, just as in other European countries, a confidence crisis that translated into a sudden and important decline in beef consumption (see Figure 1) in 2001 (-18% with per capita consumption decreasing from 9.8 kg in 2000 to 7.9 kg in 2001). Pork meat and fish have been the beneficiaries of this decline through the substitution effect. Although the prices of live animals rapidly dropped, retail prices of beef and veal remained stable compared to the years 1999 and 2000.

Figure 1: Impact of the announcement of the first BSE cases on home consumption of beef and veal in Spain (expressed in thousands of tons of finished products).



Source : MAPYA consumption panel

However, the crisis only had a short-term impact on consumption: less than one year after the announcement of the first BSE case, beef consumption was back to its pre-crisis levels. It even increased: in 2003, the total per capita consumption observed by the panel (home consumption and consumption outside home) had increased to 10kg/year (against 9.8 kg in 2000).

2.2 DISTRIBUTION NETWORKS IN EVOLUTION

Food distribution in Spain is dominated by supermarkets (< 2 500 m^2): in 2001, the 4 700 supermarkets (exc. hard discount) occupied 58% of commercial space and represented 50% of all packaged food products sold. The 320 hypermarkets accounted for 30% of the total sales, the remaining sales being made by hard discount distributors. In parallel with the rapid rise in the number of retail stores since the mid 1970s, there has been a trend toward the concentration of retail trade: in 2001, the four biggest retail groups account for almost 50% of the market shares in the food and daily household product sectors (Table 1) (Puelles Perez and Puelles Gallo, 2003).

Table 1: Market shares of the first 10 food retail groups in Spain.

Firm	**Market share**	**Cumulated market shares**
Carrefour	**20,9**	**20,9**
Eroski	10,6	31,5
Mercadona	9,1	40,6
Auchan	**7,3**	**47,9**

El Corte Ingles	7,2	55,1
Ahold	4,2	59,3
Caprabo	3,5	62,8
El Arbol	2,0	64,8
Lidl	1,9	66,7
Ahorramas	1,5	68,2

Source: Nielsen panel in (Puelles Perez & Puelles Gallo, 2003)

The French food retail groups are well established in Spain: since the take-over of the Promodes group by Carrefour, the latter has become the leading hypermarket and hard discount chain (120 Carrefour hypermarkets, 175 Champion supermarkets, 2160 hard discount stores).

Super/hypermarket stores play an increasing role in the distribution of meat. Between 1994-1999, the market shares of butchers and other traditional meat shops decreased from 41% to 38%. Meanwhile, the share of supermarkets increased from 27% to 35%, and the share of hypermarkets from 4% to 12% (Source : Spanish Agriculture Ministry panel - 2000). However, thanks to the BSE crisis, small retail butcheries have regained a few market share points (43% in 2002 for beef against 38% in 1999): this “backward trend” could be interpreted as a sign that consumers wish to have one-to-one relationships with a professional (the butcher) and his suppliers (breeders). This phenomenon was also observed in France after the second BSE crisis.

2.3. The health crises as the driving force behind the initiatives of supply segmentation

The Spanish beef trade balance is almost balanced, and consumers usually eat national products. Before the emergence of the BSE crisis, unlike in other EU countries, there was no label indicating the Spanish origin of the meat. Nevertheless, the meat imported from some countries, such as Argentina and Uruguay for example, enjoyed a good image among consumers.

It was not before the beginning of the year 2000 that the voluntary labelling of beef products was introduced in compliance with European regulation CE820/70 [1]. Until then, the trade name of the product had to be indicated (Table 2).

Table 2: Brand names used for beef products in Spain

Commercial name	Gender	Age
Ternera	Male or Female	< 14 months
Añojo	Male or Female	From 14 to 24 months
Novillo ou novilla	Male or Female	From 24 to 48 months
Cebon	Male castrated	< 48 months

1. The CE820/70 regulation implemented in 1998 by the European Union, establishes a system of identification of the animals and of labelling of beef and veal. The 2071/99 decree of December 30th 1999 indicates its modalities of application on the Spanish territory.

Buey	Male castrated	> 48 months
Vaca	Female	> 48 months
Toro	Male	> 48 months

Source : Spanish regulation n°1698

Traditionally in Spain, fresh meat has been sold with no label nor brand, whereas there have been brands of processed products containing beef. Beef sold under official quality labels only represents 5% of the total amount of beef sold in Spain. Nevertheless, the decline in household consumption of fresh and non-processed beef and veal, and the consumers' loss of confidence in the healthfulness of beef (due to published reports concerning growth promoters, BSE and cholesterol) have opened the eyes of the different stakeholders of the supply chain on the usefulness of labels. Farmers groups or meat procesors, individually or in association have initiated many of these quality programs in the Spanish meat sector.

Two types of differentiation exist:

- Initiatives based on Protected Geographic Indications (PGI). Special institutions (*Consejos Reguladores*) have been created: their role is to assess the quality system developed by the actors of the supply chain and to indicate the Spanish regional origin (Table 3).

Table 3: Spanish Protected Geographic Indications for fresh beef.

Designation	Year when the Spanish quality sign was obtained	Year when the European quality sign (PGI) was obtained	Sale volumes (in tons) (1999)
Ternera gallega	1995	1996	9 800
Ternera de Navarra	1994	2000	-
Carne de Avila	1990	1996	640
Carne de Morucha de Salamanca	1995	1996	270

- Programmes of third party certification with no reference to the geographic origin (Generic programmes). These procedures developed by producers and meat processing firms are often used by the supermarket sector in order to initiate a differentiation program before creating their own brands. The most significant example of this type of initiative is the CLARA programme. Since October 1996, the national CLARA programme (which means "additive-free beef, regulated and endorsed program) is the main quality standard used in Spain.

Supported by an inter-supply chain association (INTERVAC) with the collaboration of the Spanish Ministry of agriculture, it is endorsed by the European Quality Beef (EQB) programme. The regulation establishes the requirements that must be fulfilled by all the farmers and the meat processing enterprises (slaughterhouses, processing plants, butcher's shops) included in this initiative. The CLARA certification is a guarantee to customers that the beef (and veal) endorsed by the programme is subject to regular inspections and that it is produced in compliance with strict breeding directives that are even more demanding than those established by the Spanish or European regulations. Inspections are carried out without prior notice by an independent organisation in order to ensure regulation compliance and to guarantee the safety and quality of the food fed to the animals. The programme guarantees, in particular, that CLARA certified beef and veal are produced without using growth stimulators. The question of the use of hormones is the most important safety concern for Spanish consumers: no case of BSE was found in Spain until November 2000, but there have been frequent allegations of illegal use of hormones. For example, a Spanish consumer organisation (OCU) has blamed the Administration for the lack of guarantees that became apparent when consumers were exposed to beef and veal that contained growth stimulators. So, samples of cattle feed and meat are occasionally collected from farms and slaughterhouses that belong to the CLARA programme and are exhaustively analysed by an independent laboratory. By performing continuous and exhaustive inspections, it is possible to guarantee that no additives, hormones or prohibited substances have been used. The CLARA programme, implemented in 1996, has therefore played a pioneering role in the Spanish supply chain by establishing full traceability and therefore by reassuring consumers concerning what is perceived as the primary health risk in Spain: the use of growth stimulators. Nevertheless, this programme only concerns approximately 5% of the beef and veal consumed in Spain in 1999.

The emergence of the first BSE case in Spain coincided with the implementation in this country of the compulsory labelling of beef (added to the brand name used until then – see 2.1.). In compliance with the European regulations 1760/2000 and 1825/2000[2], all labels on beef products must, since September 1st 2000, display the reference number allowing identification of the animal, carcass or group of animals from which the meat was derived, the license number and country of the slaughterhouse and cutting plant. Since January 1st 2002, the countries where the animals were born and fattened must also be displayed on the label.

Besides the compulsory information on labels, European regulations have, since 1998, authorised operators to include voluntary information. The conditions under which this voluntary labelling may be used were recently outlined in Spain by Decree number 1698 of December 12th 2003: one may add information concerning the characteristics of the animal (breed, gender, age, region of origin…), the breeding system (food, extensive production…) or the slaughtering and cutting conditions (maturation time, ritual slaughter…). To this end, the group of producers concerned, must submit to the competent autonomous organisation (region) the specification that must include the information to be displayed on the label, the measures to be taken to guarantee that the information provided on the label is accurate and the inspection plan to be implemented (including internal and external inspections). An independent third party organisation, accredited according to standard EN 45 0011, performs external inspections. Thus, the term «certified» may

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[2] Commission Regulation (EC) No 1760/2000 of the European Parliament and of the Council of 17 July 2000 establishing a system for the identification and registration of bovine animals and regarding the labelling of beef and beef products.

Commission Regulation (EC) No 1825/2000 of 25 August 2000 laying down detailed rules for the application of Regulation (EC) No 1760/2000 of the European Parliament and of the Council as regards the labelling of beef and beef products.

not be used if the certifying organisation and the certified characteristics are not explicitly referred to on the label. Furthermore, the use of geographic terms is reserved for the products protected by a Protected Designation of Origin or by a Protected Geographic Indication, or to those whose origin is certified.

The opportunity given to producers of informing consumers about certain certified characteristics has led to deep changes in the beef supply chain in Spain. For the breeders and meat processing firms grouped within Intervac, it represented a natural development of the CLARA programme (which has now disappeared). Thus, with the support of the Eroski retail group and two consumers associations, they created the first accredited certifying organisation in order to certify beef meat: the CERTICAR. The scope of activities of this body, founded in 2000, has rapidly expanded: in 2003 it governed approximately 50 product specification files, each corresponding to a brand. The implementation of these procedures concerns 400 000 animals, that is 25% of the national production and 20% of the beef consumed in Spain. Besides Certicar, which is specialised in the certification of meat products, polyvalent certifying organisations (such as the SGS-Iberica) also operate; their role is to certify that the information provided in the framework of voluntary labelling is accurate.

The main retail groups make the most of their right to provide voluntary information in order to develop certified brands. They adopt multi-product policies: they aim to differentiate a range of products carrying the same brand, highlighting common concepts (Table 4).

Table 4: Brands of certified beef developed by retailers in Spain

Name of retailer	Brand names / year of creation	Characteristics
Carrefour	Calidad Tradición Carrefour (1999, certified in 2001)	Pure cattle breeds and cross-breeds 100% vegetable fed Full traceability from farm to store Slaughtered and cut in Spain
Auchan	Producción Controlada Auchan «Villa del Monte» brand (december 2001)	Animals bred in Certicar certified farms 100% vegetable fed Packaged between 48 and 96h after slaughtering Reinforced control mechanism concerning the use of growth promoters and antibiotics. Full traceability from farm to store
Eroski	Carnspalleja, Consumer Natur Q, Consumer Natur, Vacuno Kampio (march 2001)	Animals bred in Certicar certified farms 100% vegetable fed, without use of growth promoter antibiotics Full traceability from farm to store

		Minimum maturation period (varies according to the weight of the carcass)

We describe below the procedures followed by the two largest French retail groups operating in Spain.

In 1997, Carrefour created an umbrella brand «Calidad Tradición Carrefour»: the first product commercialised under this name was a type of bread made with organic products. In 2003, the range included 42 products with over 140 references of fruit and vegetable, meat, poultry, fish, pork products. The first batch of beef carrying this brand was commercialised in 1999. The label was certified in 2001 and by 2003 it was sold in the 120 hypermarkets of the group and represented a volume of 6 250 tons (that is 23% of the volume of beef meat sold by the group). Carrefour signs formal contracts with associations of breeders and 4 slaughtering and cutting plants. The specifications concern the whole breeding and transformation process; an independent third-party organisation and Carrefour's auditors check compliance to the specifications. In order to ensure the development of this initiative, Carrefour and their suppliers hold regular discussions in order to solve problems concerning the application of the rules and in order to change their content when necessary. No provisions are made in the contracts for premiums to suppliers engaged in these initiatives. The suppliers' loyalty to the group rests on prospects of long-term development and on the signature of agreements in which all parties concerned commit publicly. Finally, the marketing communication strategies for «Calidad Tradición Carrefour» products are related to the guaranteed safety of these food products, the respect of the environment and the sustainability of the mode of production. It also indicates the group’s wish to support Spanish farmers: the procedures implemented by the stakeholders of the supply chain are developed in the framework of the agreement signed in October 2000 between the Carrefour group and the Spanish Ministry of agriculture in which Carrefour commits to promote the commercialisation of Spanish agricultural and food products over the period 2000-2004 for an amount of 6 billion Euros.

Auchan’s approach is very similar to that followed by Carrefour. Since December 2001, Auchan has been distributing, in its Alcampo hypermarkets and its Sabeco supermarkets, a «Villa Del Monte» certified meat. This product is part of a range of 10 different fresh products (fruit and vegetables, chicken, eggs, fish…) commercialised under the umbrella brand «Produccion Controlada Auchan». The marketing communication strategy developed by the group for this range of products consists in highlighting the collaboration between the group and the Spanish producers and breeders who have committed to supplying safe and healthy products, while respecting the environment and promoting the animal welfare. This private initiative was also taken in the framework of an agreement signed in July 2001 between the Auchan group and the Spanish ministry of agriculture in order to support Spanish producers and small and medium agro-food enterprises.

3. Synthesis: Is the segmentation of the beef market in Spain converging toward the French model of segmentation ?

In order to compare the reactions of both countries to the BSE crisis, we briefly describe its effects on the supply of beef in France (3.1.). We then analyse the strategies of segmentation adopted by two big French retailers present in both countries by trying to explain the differences observed: we focus more particularly on the importance of food safety as a marketing argument (3.2.).

3.1. THE IMPACT OF THE HEALTH CRISES ON THE CONSUMPTION AND SUPPLY OF BEEF IN FRANCE

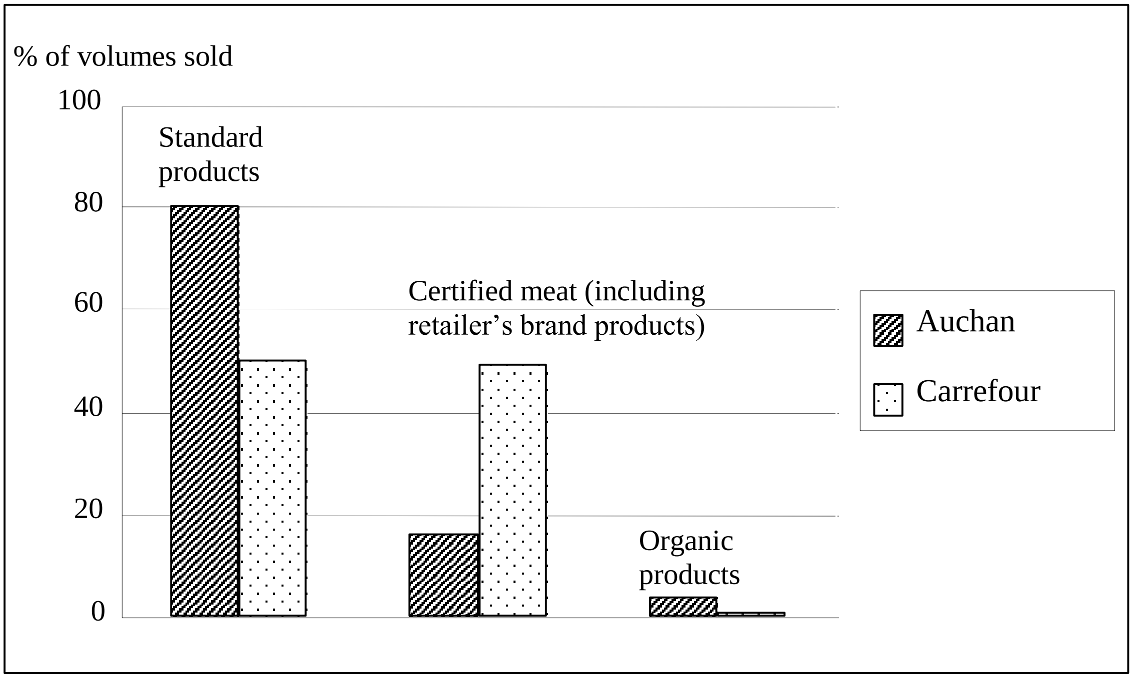
In France, since 1950, the economic development has resulted in an unprecedented increase in the income per capita, and at the same time in an increase in meat consumption. This evolution has resulted in a high level of meat consumption; but the latter has now stagnated. Beef consumption started showing signs of weakness towards the end of the 1970s, foreshadowing the trend reversal observed in 1980. Beef represented 29% of the meat consumed in the country (calculation based on the food balance sheets of the Ministry of Agriculture). This share had dropped to 24.8% in 2002: the decline in beef consumption benefited the poultry sector; indeed during that period the consumption of poultry meat increased from 17.8% to 26.5% thanks to the relatively attractive prices of poultry products and to the high segmentation of the supply chain based on quality and origin and on product convenience.

The health crises accentuated the structural decline of beef consumption: in March 1996, the first crisis of Bovine Spongiform Encephalopathy (BSE) triggered a 20% decline in beef consumption for three months in a row, with a return to normal approximately 6 months later. The second BSE crisis, in October 2000, had a more significant and more durable effect on consumption (-36 % at the beginning of the crisis) (Halliez, 2002). This dramatic decline in beef consumption indicates a loss of confidence in the product. Measures have been taken in order to reassure consumers and meet their increased demands in terms of quality (French meat logo, compulsory informative labelling…). The retail sector quickly adopted a long term policy consisting in favouring French suppliers and in reassuring consumers by using the Interprofessional logo «French beef»; it also improved its products in terms of labelling and traceability.

Thus, whereas at the beginning of the 1990s, differentiation through quality and origin only concerned a limited volume of beef meat, it now concerns between 30 and 40% of supermarkets' supply of fresh beef. This evolution translates the will of retailers to provide consumers with increased guarantees with regard the safety and quality of the products they sell, often in return for an extra price (Sans and de Fontguyon, 1999). Although they have one common objective, the strategies adopted by the different groups vary, in particular with respect to the role given to their own brand in relation to standard products. Their strategies can be summarised as follows:

- Either there is a small difference in quality between their brand products and standard products but a large part of their supply carries their brand: the extra cost to pay at production and retail level will be low.
- Or their brand products are strongly differentiated from standard products, and will be obtained at a higher cost: the difference in retail prices will be important but full guarantees of quality will be provided to the consumer. In this case the quality products only represent a small part of the supply. Both strategies can be illustrated by comparing the policies of beef differentiation implemented in the last ten years by two major French distributors: Carrefour and Auchan (see figure 2).

Figure 2: Segmentation of the beef supplies (exc. promotions) in the Carrefour and Auchan groups in 2002.



Before the first BSE crisis (1996), Carrefour was already concerned about the quality of standard products and doubted that it would improve fast enough: thus, the beef sold under the «Filière Qualité Carrefour» brand represented up to 70% of the beef sold by the group. This certified brand announced the emergence of a new generation of retailer brands: it implies three party agreements with groups of breeders and slaughterhouses, as well as a long-term commitment of the different parties to guarantee the stable and objective quality of the finished products (de Fontguyon et al., 2003). This organisation of the supply chain also gives Carrefour good marketing opportunities, opportunities that are particularly efficient in times of crisis. By ensuring the satisfactory quality of important volumes and a transparency of the supply chain, Carrefour pushes producers to organise themselves into groups and to collaborate. By so doing the group readily loses some of its negotiating power in terms of pricing in return for a better control of quality. In the last few years, the «Filière Qualité» beef sold by Carrefour has been certified, even though this brand name is not displayed on the packaging nor on advertising material. The quantity of «Filière Qualité» beef offered by the group has been reduced to approximately 50% to 55% (exc. promotions) in favour of standard products that are more competitive in terms of price; in some stores, the «Filière Qualité Carrefour» beef products have been divided into two categories (a suckling breed and a dual purposes breed). And in 2002, Carrefour started offering certified organic beef meat.

Auchan, as opposed to Carrefour, had expected a progressive improvement of the quality of standard products thanks to the development of products produced in compliance with the principles of "reasoned agriculture"; the importance of environmental aspects, with respect to beef production, were highlighted as early as 1995 with the supply of organic meat; but this only served a small market niche (4% of Auchan’s supply of fresh beef). As a response to the BSE crisis of 1996, Auchan launched its range of certified «Boeuf Sélection Auchan» beef, but this segment was not developed voluntarily (it currently represents just over 10% of its total supply). For this group, product differentiation through quality and origin seems to rest on the creation of partnerships with local producers in order to supply in priority the stores close to the production zone; a large part (approx. 80%) of the products sold by the group are standard products.

Beyond these two examples, this differentiation through quality and origin implemented by retail groups in a context of generalisation of traceability and labelling, has contributed to creating a segmented supply that is more easily identifiable and more diversified.

3.2. Comparison of the French and Spanish situations

The effects of the BSE crisis on beef consumption in both countries have not been the same. The reaction of rejection of Spanish consumers following the announcement of the first BSE crisis in Spain was not as radical and long lasting as that of French consumers during the same period (2nd BSE crisis in France). A survey of consumers conducted in Spain in the Spring 2001 shows that they are increasingly concerned about the safety of the food they consume: beef meat and ready-to-eat meals are the products that score the lowest in terms of consumer confidence. But, this concern does not translate into a marked change in the purchasing behaviour of consumers (Angulo et al., 2002). Three explanations can be proposed. One first explanation is related to the fact that most of the beef consumed in Spain comes from young animals (less than 14 months of age), which are not considered as infectious. Furthermore, the start of the crisis was immediately followed by the implementation of systematic screening tests on animals of over 30 months of age (and later of animals of over 24 months of age); even though these measures have led to a dramatic increase in the number of recorded cases (2 in 2000; 82 in 2001), their very existence reassures people who eat meat from older cattle, inasmuch as the carcass of an animal that has been declared positive does not enter the food chain. Finally, the Spanish crisis occurred a relatively long time after the French crisis (1996); thus it emerged in a country where the population was already well informed, through the media, about the issue, and traditionally eat less beef than the French do.

Besides the fact that consumers' purchasing behaviour has hardly changed, their willingness to pay extra for quality is low (Angulo et al., 2002): 72% of the people surveyed are not prepared to pay this extra-price, however low it might be, in return for a guarantee that the meat they purchase comes from a healthy animal. Thus, the decline in purchases observed on the sample of individual surveyed actually seems to result from the increase in the price of beef (partly related to the cost of traceability). Even though there is always an element of risk in comparing the results of surveys conducted on different samples and at different times, the Spanish consumers' willingness to pay for improved food safety seems lower than that observed with French consumers (Latouche et al., 1998). This situation appears paradoxical inasmuch as we think that the quality of standard products in terms of safety is higher in France than in Spain: in Spain, cases related to the use of illegal substances in order to increase the daily weight gain of animals are regularly exposed by the media.

The Carrefour and Auchan groups have adopted in Spain – that is in a context that is quite different from that found in France - very similar organisational mechanisms. This convergence in the views of both groups on strategic choices related to their beef supply, did not exist in France: each retail group has, in France, reacted differently to the same problem, at least in part because of the competition between the groups; indeed, each group advertises the solutions it proposes as being better than those proposed by its competitors.

Yet, the initial concerns about beef safety have been relatively similar for all retailers both in Spain and France. A recent survey of Spanish retailers based on the Delphi method of forecasting, shows that retailers have three priority objectives (Atance et al., 2003): i) Guarantee the stable quality of the products sold under a brand in all stores, ii) Guarantee the supply of products with certified quality (inspected internally and by a third party organisation), iii) Establish long-term relations with breeders. According to the Delphi method experts, the attributes that are valued most by consumers when they buy a product are i) traceability, ii) the guarantee of an efficient system of control of illegal substances, iii) the guarantees provided in terms of food safety, iv) the intervention of an independent inspection organisation.

Thus, the processes of segmentation of the beef market in both countries have been relatively similar (Calvo Dopico et al., 2003):

- In one hand, the procedures of differentiation have been developed relatively slowly and are based on the geographic origin of the animals. Supported by the actors of the supply chain upstream, these procedures rest on official European or national quality signs (PGI).

- In the other, differentiation procedures, based on the use of brand names, have been implemented by co-operative groups or retailers. Their development is facilitated in Spain by the production structure (geographic and structural separation of the breeding and fattening units). Including the fatteners in the differentiation procedure (or supply contracts with them) has ensured a rapid increase in the quantities of quality meat commercialised, while enhancing the homogeneity of the supply.

Although the organisational structures are quite similar, the marketing arguments used in terms of food safety are different. The problem of the illegal use of toxic substances in Spain being acute, certifying organisations take them into account almost systematically in their control plans. However in Spain, the «food safety» aspect is not much exploited by the retailers in their marketing communications: this could reflect their reluctance to make too much ado about a reinforcement of the control of the use of products…that are prohibited by the regulation! They prefer to draw attention on positive attributes such as the taste quality of their products, the sustainable nature of the production systems (animal welfare, respect of the environment) and their wish to develop partnerships with suppliers (producers and processing firms).

Although these marketing arguments are also used in France[3], food safety is a dominant theme for certain French retail groups, particularly in periods of crisis. In the name of caution and of the protection of consumers' health they exert pressure on the public authorities and demand the immediate implementation of measures that they deem appropriate: thus, Carrefour launched a massive advertising campaign at the end of October 2000 (at the beginning of the second BSE crisis in France) to demand the immediate implementation of systematic BSE screening tests. Moreover, these retailers included in the specifications of their own brands additional constraints that are often a few months ahead of regulation measures.

Table 5: Illustration of the proactive strategy of certain French retailers with regards the safety of the food sold under their own brand.

	French legislation in force (end 1999)	Examples of initiatives taken by Carrefour-France (1999)
Animal meal	Banned for use in ruminants' feed.	Banned for use in all « Filière Qualité Carrefour » products
Animal fat	Not banned for use in cattle feed	No longer authorised in poultry feed
Growth-enhancing	Positive list of authorised growth	Banned for use in all « Filière

[3] For example, the Direction "Prevention Health Safety Environment" of the Carrefour group was renamed « quality and sustainable development ». Furthermore Auchan has just nominated a « Mr Relations with farmers ».

antibiotics	promoters (pork, poultry, bovine)	Qualité Carrefour » products
GMO	Positive list of authorised varieties of maize and soya.	No longer authorised for use in Carrefour brand products

These initiatives may lead the public to think that regulation concerning food safety is remarkably insufficient to protect consumers or that its effective application leaves a lot to be desired. By imposing on their suppliers more severe constraints (for example, some chemical contents authorised by Carrefour is 10 times inferior to the limit authorised by regulation) or constraints that are not imposed by regulation (testing for specific bacteria in the finished products), retailers assume the role of the «white knight» of food safety and enhance the public image of their group. The elements retained are «anxiety producing substances» that is substances for which a possible medium or long-term effect on human health is little known: these substances confer to health safety the status of credence attribute[4]. In this context, the processor and manufacturer of food products can become mere performers of tasks governed by the downstream stakeholders of the supply chain, and must conform to decisions in which they have no say. It is striking to observe that, as they have not launched advertising campaigns comparable to those launched by supermarket groups, the manufacturers of food products have willy-nilly accepted new constraints. The strategy of overbidding might give retailers a short-term competitive advantage, but presents risks. On the one hand, it can cause them to make decisions that have a strong impact on the public but that are not really relevant from the

[4] Inversely, no distributor in France or Spain uses the «guaranteed salmonella free» marketing argument. Yet, 78% of the cases of food poisoning recorded in Spain in the last decade were due to this bacteria. Consumers perceive the risk as low. This situation can be explained by the fact that the consequences of a product's poor quality are in this case noticeable shortly after consumption. Food safety then becomes an experience attribute.

scientific and economic points of view, for the supply chain as a whole, and in so doing damage their relationship with suppliers. Secondly, the rise in the quality of standard products (partly due to the demands of these very groups) forces retailers to seek new differentiation strategies. Otherwise retailers take the risk of commercialising products, whose conception they have financed but whose quality will not be (or no longer be) remunerated (due to the unwillingness of consumers to pay the extra price).

The beef market in Spain and France, far from being immobile, has undergone important changes under the double impetus of the reinforcement of regulations (labelling and traceability) and of the strategies adopted by the actors of the supply chain.

CONCLUSION:

Conscious of its role of interface between concerned consumers seeking reassurance and the actors of the supply chain, the large-scale retailing sector has, following the health crises of recent years, increased its prescription power. Indeed, it has played an active role in the definition of products' intrinsic and extrinsic attributes. This strategy is used in their promotion of fresh, little processed (and little marketed) products whose image is strongly connected to the agricultural world. These initiatives, which engage the group's name, can only give them a competitive advantage if they contribute, with time, to enhancing the reputation of the products concerned. Thus, large-scale retailers have contributed to the diffusion of systems of quality-insurance in sectors that are still highly atomised. The organisational changes that these initiatives have required have not revolutionised the modes of production, but they have helped reinforce consumers' confidence, particularly with respect to credence attributes. By showing that the production process is better controlled, retailers prove to their partners that they have the capacity to expand the scope of their initiatives (the quality procedures can be applied to other animal products; new attributes can be taken into account: environment, animal welfare…) while enhancing the public image of the group.

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