National seafood market information and analysis of demand factors

Papageorgiou P.A.

in

Paquotte P. (ed.), Mariojouls C. (ed.), Young J. (ed.).
Seafood market studies for the introduction of new aquaculture products

Zaragoza : CIHEAM
Cahiers Options Méditerranéennes; n. 59

2002
pages 47-57

National seafood market information and analysis of demand factors

P.A. Papageorgiou
Lamans Management Services SA[1], GR104 33 Athens, Greece
lamans@compulink.gr; p_philippos@hotmail.com

SUMMARY – The contemporary seafood industry is globally well established and highly competitive as its products compete against the wider category of foods made available by the retailers. Hence, the need to understand consumer behaviour becomes an issue of weighed value. Since food consumption in general is strongly related to national culture and several socio-economic phenomena – which in turn affect consumer behaviour – differences can be found between and within the European countries. Within this context, two broad market segments can be observed within the European geographical area for the market of seafood products: the north (and centre) and the south. During the last decade or so, a number of European-wide food market issues, have initiated a market transformation process. The main ones concerned with the consumption of seafood are briefly discussed in this paper, along with a number of general consumer concerns and perceptions that are shared amongst the diverse European market.

Keywords: Seafood market, consumer perceptions, trends.

***RESUME –** "Information sur les marchés nationaux de produits de la mer et analyse des facteurs de la demande". L'industrie des produits de la mer apparaît aujourd'hui bien intégrée et compétitive au sein de l'ensemble de la distribution alimentaire. La nécessité de comprendre le comportement du consommateur est devenue une question clé. Si la consommation en général est influencée par les facteurs socio-économiques, c'est dans le domaine alimentaire que les préférences culturelles s'expriment le plus. Les différences dans les habitudes de consommation s'observent au sein d'un même pays et entre pays européens. En ce qui concerne les produits de la mer, on distingue principalement deux grandes zones géographiques : l'Europe du Nord (et centrale) et du Sud. Au cours de la dernière décennie, la sensibilisation croissante des consommateurs européens aux questions soulevées par l'alimentation, a initié un processus de transformation des marchés. Les facteurs de la demande spécifiques aux produits aquatiques sont discutés brièvement dans ce papier, et resitués par rapport aux principales tendances de consommation observées en Europe.*

***Mots-clés :** Marché des produits de la mer, attentes des consommateurs, tendances de consommation.*

Introduction

Fish, and "seafood" in general (food products of aquatic origin), has long been considered as an important source of food protein. In many parts of the world, the fisheries industry has supplied not only a significant part of local and national alimentation requirements but has also supported respective economies and socio-demographic issues of importance. However, over the last few years, the contribution of capture fisheries to food fish supplies has been decreasing, while that of aquaculture has been steadily increasing. It is indicative that for the world as a whole (excluding mainland China), aquaculture supplied 2.12 kg/capita/year in 1998, rise of just over 0.5 kg within 7 years only (FAO).

During the last decades, per capita consumption of seafood at global level has been rising, in many cases in direct relation to economic growth. In general, it has been estimated that demand for seafood in 2010 will range between 105 million and 110 million tonnes (FAO).

In Europe, the seafood industry is a sector with long tradition and history. Initially based and developed on the capture fisheries and landings from coastal and international waters, the increased

[1]Present address: Ministry of Agriculture, Managing Authority of Operational Programs of Fisheries, Athens, Greece.

demand for such products created a significant trade deficit, which was (and still is) catered for by import volumes. The rapid advancements in the husbandry of aquatic animals, initially developed in the northern European countries (culture of salmon and trout) and soon transferred to the Mediterranean countries (culture of sea-bass and sea-bream), coupled by the favourable socio-economic environment and the significant financing from the EU, acted as a catalyst with soon astonishing results in the volumes produced. A new channel of supply was created with valued products initially entering the market as a delicacy, and ending as a commodity due to the high volumes produced, the specific (limited) markets targeted and consequently the prices obtained.

Nonetheless, while aquaculture production satisfied part of the demand within the European countries, the increasing per capita consumption (Fig. 1) sustained the seafood trade deficit, particularly as demand started shifting from the "fresh" forms towards the added-value and processed types of presentation.

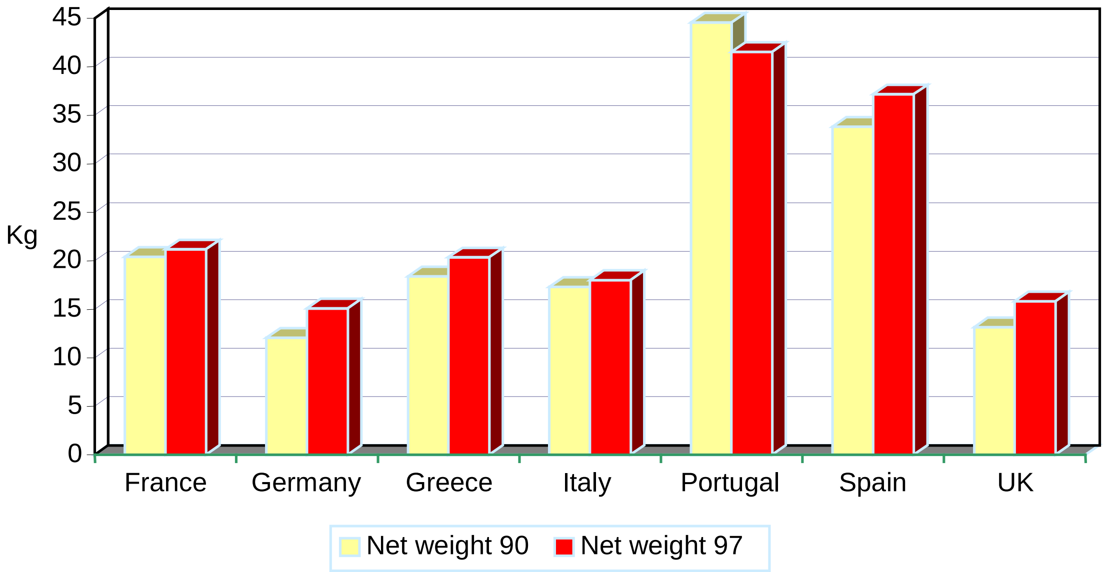

Fig. 1. Apparent seafood per capita consumption, in selected European countries (source: Girard and Papageorgiou, 2000).

The contemporary seafood market

The contemporary seafood industry is globally well established and highly competitive as its products are not only in competition with other seafood products, nor with just the remaining "protein-food" products, but with the wider category of foods made available by the various retailers. However, while the market should be considered as a wider one, consumers should not be in turn considered as homogenous. Since food consumption in general, is strongly related to national cultures as well as economic and social aspects, which in turn affect consumer behaviour, great differences can be found between and within European countries (Paquotte and Guillard, 1996).

Table 1 lists a number of socio-demographic and economic coincidental indicators of importance to a market evaluation, illustrating the diversity of the countries in relation to these factors.

Such differences, along with the ones inherent to certain national and local traditional and cultural issues, are often being expressed in the market through differences observed in the level of consumption per capita, the favourite species, product forms and types, the quality assurance of the products, the importance of the catering sector and the market share of the various distribution and retail channels, etc. (Paquotte and Guillard, 1996).

Table 2 manifests the diverseness observed within a number of selected European countries, in relation to the market share per final retailer, the share of the seafood household expenditure over the total alimentation expenditure, and the share of seafood consumption at home and out-of-home.

Table 1. Socio-demographic and economic indicators of selected European countries (source: Eurostat 1998 data)

Country	Population (millions)	Population (density/km^2)	Unemployment (%)	Female employment (%)	GNP (million €)
Germany	82,060	230	9.4	55.6	1,910.3
Greece	10,508	80	11.6	40.3	107.8
France	58,723	108	11.7	52.9	1,274.5
Italy	57,563	191	12.2	36.7	1,046.7
Portugal	9,957	108	5.1	58.1	95.7
Spain	39,348	78	18.8	34.8	507.7
UK	54,084	244	6.3	63.2	1,220.4
Norway	4,418	14	3.5	65.2	130
EU-15	374,566	117	10	51.2	7,472.5

Table 2. Breakdown of seafood consumption at home and out of home, and share of seafood in the household food budget in selected European countries (year of data: 1998) (source: Girard and Papageorgiou, 2000)

Country	Final retailer (%)					Seafood expenditures/ total food household budget (%)	Seafood consumption	
	Large retailers	Fishmongers and traditional shops	Central and street-markets	Freezer-centre	Other		Home (%)	Catering (%)
France	72	8	10	7	3	5.1	73	27
Greece	50	25	25			7.0	75	25
Italy	47	40	12		1	7.0		
Norway	67	12			21	6.5	80	20
Portugal								
Spain	44	54			2	11.9	74	26
UK	69	8	3	10	10	5.1	52	48

These market aspects, often provide substantial grounds for market and consumer segregation. A number of seafood companies – particularly the ones operating in the international environment – have acknowledged such aspects, and operate towards the optimum exploitation of these. Within the European geographical area, two broad market segments can be observed, with regard to the market of the seafood products: the northern (and central) and the southern one. The former market could be characterised by an aversion of the average consumer towards "whole" fish, and while consumption of seafood has increased, this has been based primarily on added-value forms of products of the capture fisheries and the aquaculture sector. In the latter geographical segment, consumers seem to have a traditional preference towards seafood products in their fresh/chilled form (Fig. 2), which is mainly fresh "whole" fish, a trend which nevertheless seems to be in decline, in favour of more "convenient" products.

Without overlooking the importance of the size of each particular market segment, it is considered more important, in the context of this paper, to obtain a more concise picture of the contemporary market trends which shape the current and future demand patterns.

Consumer perceptions and market trends affecting seafood demand

As noted earlier, the seafood market operates within the wider food-market sector, where competition is merciless in the present era of consumer awareness. Habits are being altered and largely internationalised and customer loyally can hardly been taken for-granted with the variety of alternative products offered. It therefore becomes an issue of weighted value, the need to understand consumer behaviour and its underlying relation to a number of contemporary socio-economic and coincidental factors which largely affect such behaviour. It is the actual identification and evaluation of such factors that determine the purchase decision, and which – in turn – should be used in planning the optimal marketing effort necessary to ensure the consumer's positive approach towards a product (Papageorgiou, 1999).

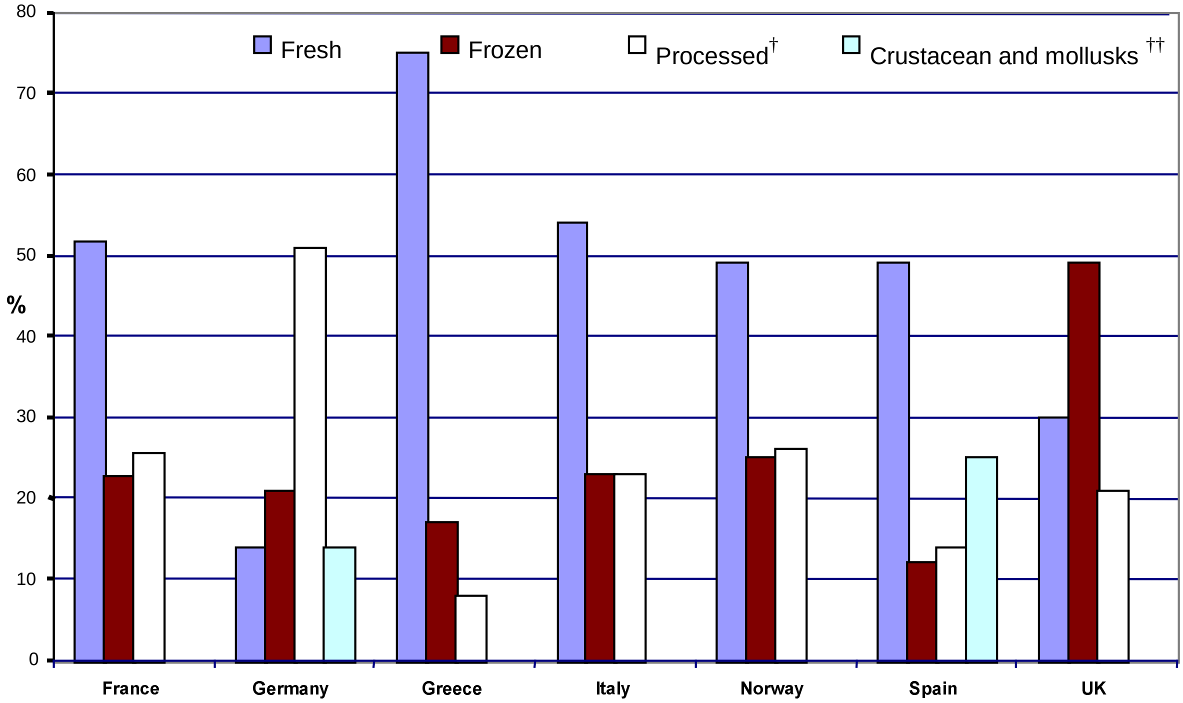

Fig. 2. Share of household consumption per "type" of seafood at selected European countries (year of data: 1998) (source: Girard and Papageorgiou, 2000). †Marinated, salted, canned, etc. ††When not included as fresh or frozen "seafood".

In a pan-European level, a number of food-market issues have initiated a market transformation process, during the last decade or so (Paquotte, 1998). The principal ones, which directly or indirectly are concerned with the demand of seafood are briefly presented hereafter, preceded by a number of general consumer concerns and perceptions that are shared amongst the diverse European market.

Consumer's health concerns

Progressively, consumers tend to move towards new lighter and healthier foods, a trend that seems to take place at a fast rate within the European countries, particularly as national economies improve. Fish, and seafood in general, has long been perceived as food that satisfies the needs for healthy products thanks to its high dietary attributes. The high protein content, along with the high content in Polyunsaturated Fatty Acids (PUFAs) – perceived as guardians against heart diseases – have been increasingly recognised and desirable by the food consumers, as manifested by the increasing demand for such products.

Consumer's environmental concerns

Within the last couple of decades there has been an increasing trend towards the protection of the environment and the promotion of environmentally friendly products. Consumers want to know whether the production of an item causes damage to the environment and many times require some sort of labelling guarantee that the product is in compliance with environmental, and social responsibility requirements.

It is also within this category that consumer concerns for the production and the animal welfare and rights fall in. The demand for eco-labelled products varies strongly by region, the strongest demand being concentrated in NW Europe, Scandinavia and North America. To date, "dolphin-friendly" tuna is one of the very few products with this kind of labelling. The Marine Stewardship Council (MSC) is a more recent initiative within the fishing industry, while a small number of signs/labels have also been improvised by producer organisations, exporters and independent national and international bodies for use in the seafood industry. Aquaculture has seen several recent initiatives, such as the Global Aquaculture Alliance, which is seeking to develop codes of practice for sustainable development of the sector.

Consumer’s need for reassurance

This is a trend that is being recently observed in the developed countries, as consumers are faced with a continuously expanding range of food products, a great number of which is processed and cannot be guaranteed of the quality. The recent BSE (Bovine Spongiform Encephalopathy) crisis, caused great concerns amongst consumers which are progressively becoming more responsible and demanding of information related to the food production processes (Mariojouls and Paquotte, 1998). The making consumers aware of quality, has therefore become a concern of increasing importance (Monfort, 1998). During the last 3 to 5 years, within the seafood industry, national and/or international health regulations are being seen as a positive marketing tool. Both consumers and retailers become more and more demanding, thus applying strong pressure to the producers for higher levels of quality, and more importantly for certified and communicated quality.

In general, concerning seafood, consumers tend to be less anxious with regard to the consumption of fish, in particular, compared to other types of food. According to a poll exercised in France by IFOP for the mass media (Table 3), fish seemed to be amongst the most trusted food products (Paquotte, 2000).

Table 3. Consumer’s "worries" on various food products (source: IFOP poll; from Paquotte, 2000)

Beef	29%
Poultry	24%
Pork	19%
Eggs	16%
Fish	12%
Lamb	11%
Fruits and vegetables	11%
Cheese	10%

It should be noted that while in Table 3, "fish" was not differentiated by origin (wild or farmed) which would have resulted in different outcomes, and the recent "foot and mouth" disease had not struck the livestock of many European countries, which would in turn have provided a different picture, most probably in favour of fish, in general.

Another important finding of the aforementioned poll was that 75% of the consumers asked replied that they would welcome and expect some sort of state-controlled labelling that would guarantee the origin and security of the product.

Such labels, though they are becoming increasingly present in the seafood market, and come in a variety of forms – from gill attachments or tail tags to quality mark symbols incorporated on packaged forms of display – are nonetheless quite limited if one considers the variety of products offered (Young, 2000). Particularly with regard to fresh fish, such schemes have been mainly limited to products of aquaculture origin of the northern and central European regions (salmon, trout), and only recently started being incorporated in products of the Mediterranean aquaculture sector.

Less time available for food preparation

In the European, as well as the global, environment, the rapidly increasing number of working women, along with the extended working hours and in general the accelerated pace of the modern lifestyle, have significantly reduced the time available for the preparation of meals within a household. As a result, ready-to-cook meals and frozen food have increased their share in the market.

With regard to seafood, the increased demand for pre-packed fish and other seafood, and the growing importance of the supermarkets (as being presented later in detail) clearly support this trend. Moreover, the general increase of the catering sector, and the out-of-home consumption of seafood in particular (Mariojouls and Paquotte, 1998), clearly indicate the convenience sought by the consumers, due to the lack of time to prepare meals.

Figure 3 supports the latter notion, illustrating the increased apparent consumption of frozen and processed seafood in the Greek market from 1993 to 1998, at a time where fresh fish of local aquaculture firms "flooded" the marked at affordable and largely competitive prices

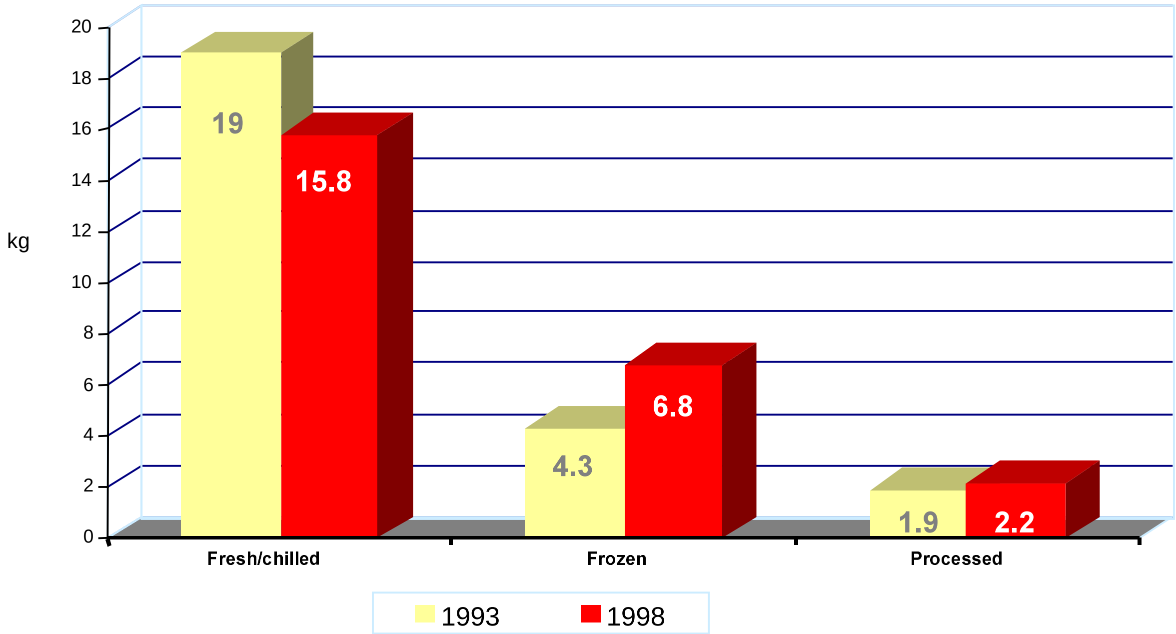

Fig. 3. Development of the apparent consumption per "type" of seafood, in Greece (source: Hellenic Ministry of Agriculture; from Papageorgiou, 2000).

Demand for added-value fish-food products

Within this category fall a variety of products forms such as filleted, gutted, boneless, headed fish, etc., products which have increased their value namely through their convenience added. In general, there is a tendency for the basic tasks undertaken to transform a raw product into a product for use in the kitchen, to be increasingly performed outside the kitchen, whether this involves household cooks or restaurant chefs. Cleaning, cutting into portions, pre-cooking and assembling, are all the more often done at an industrial level. This growing trend for convenience products, easy to prepare and easy to cook, has been visible for nearly a decade with increasing sales of fillet, portions, etc. In fact, of the almost eighty million tonnes of food for human consumption per year that fisheries contribute for, roughly two-thirds of it is processed in some way (FAO).

Adding value through some sort of "transforming" is a particularly important issue with regard to fish-products, considering that the increase in consumption of fresh fish in most European countries is due to the steaks and fillets rather than to whole fish (Paquotte, 1998). In France for instance, fresh steaks and fillets fish have reached a 63% volume market share in super/hyper markets in 1998, but only 45% in traditional outlets.

Inductively, Table 4 lists the market share of different presentations of fresh fish on the French market. If one considers the relative importance of the large retailers to the national seafood trade, the "depth" of the market for added-value products becomes apparent.

Table 4. Market share of different fresh-fish presentations on the French market (source: FIOM/SECODIP, 1996 data; from Paquotte, 1998)

Product form	Super/hyper market		Traditional outlets	
	Volume (%)	Value (%)	Volume (%)	Value (%)
Whole	37	30	55	47
Steaks and fillets	63	70	45	53
Pre-packed	13	15	3	2

Increasing market share of pre-packed fish

Today consumers want more from the industry; not only do they prefer pre-processed products but they increasingly want fully prepared items (ready meals and "elaborated delicatessen") which require as little intervention as possible, and bring novelty, exoticism and quality into their lives.

There are a number of producers who pre-pack their product, namely fresh fish. This sort of differentiation provides marked advantages against the ones that are plainly displayed on ice.

The packing, apart from its convenience for purchasing – as it does not entail "confrontation" with the fish-monger or in-store specialist but can be directly selected – has the advantage of providing essential information rendering the product directly competitive to its alternative ones of the same form (pre-packed meat, poultry, etc.). The package may include a variety of information, from the country of origin and company name, to sell-by date and cooking instructions.

In general, the market for these products still is very much in its infancy. However, wider acceptance of fresh, chilled and frozen elaborated seafood is expected by manufacturers and retailers, as demand for this type of presentation for fish has been increasing, particularly so in northern European countries like the Netherlands, Belgium. According to Paquotte (1998), "pre-packing" is considered as a most promising way to expand the market for fish and to reach new generations of customers and as practice has repeatedly shown, *what is today a niche will become a much wider market in the years to come.* It is indicative that in the UK market, while the trend for fresh seafood is downward, the fresh/pre-packed forms are increasing their share in the market. The ready meal market has increased five-fold since 1991, and in 1998 sales exceeded 5000 tonnes (Young and Smith, 2000).

Large retailer's increase in market share

In direct and/or coincidental relation to the market issues and the phenomena previously described, a trend of significant importance to the seafood marketing and trade has emerged: the increasing share of the large retailers to the overall national (and international) seafood trade.

Within the last 10 years the invasion and continuous expansion of the hyper/supermarkets and multiples to the seafood, and in particular to the fresh fish trade, has been taking place. The market share of such stores has been increasing in the European countries, while the traditional channel (specialist retailers, fishmongers and wholesalers) are losing their share. Indeed, fish, particularly in its fresh/chilled form, has been one of the last major product sectors to be incorporated within this evolutionary environment (Young, 1996). The UK market provides an example on how such stores have managed to account for the largest part of the national seafood trade, as the already high share on the frozen seafood trade of 58.5% in 1987 was further increased to almost 72% by 1998. More impressive however, is the increase observed in the fresh seafood trade. While in 1987 the super and hyper markets accounted for just 14.3 % of the value sold, by 1998, these retailers had managed to account for over 60% of the national sales, claiming the greatest majority from the traditional retailers of fresh fish (Fig. 4).

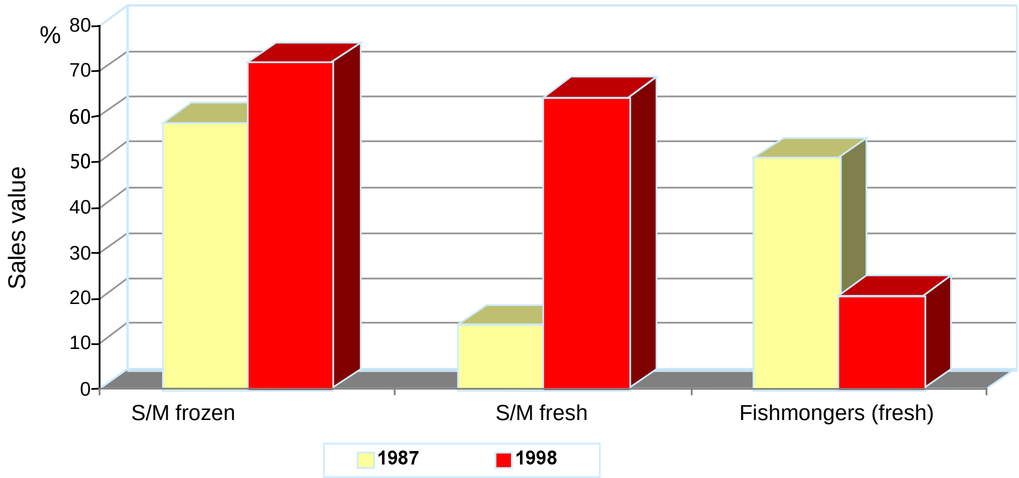

Fig. 4. Intrusion of the large retailers to the fresh fish market, in Great-Britain (source: TNS consumer panel survey; from Young and Smith, 2000).

In general, the intrusion of the super/hyper markets to the fresh seafood trade, and more specifically the incorporation of traditional specialist outlets within the stores has also proved to have positive effects on fresh fish sales – in countries or regions, such as Germany, the Netherlands, and inland Italy – where fresh fish consumption has been traditionally low (Paquotte, 1998).

Super and hyper markets have also increased their share in the seafood trade in countries where seafood consumption is relatively high, such as in Spain where consumption per capita is among the highest in Europe. As Fig. 5 depicts, from 1987 to 1995 the super/hyper markets increased their share in the seafood trade at the expense of an almost equal share lost by the traditional retailers. It is important to note that the most severe loss within the traditional fishmongers seems to have already occurred, and that the remaining outlets will most probably serve as strong players in niche and/or local market segments.

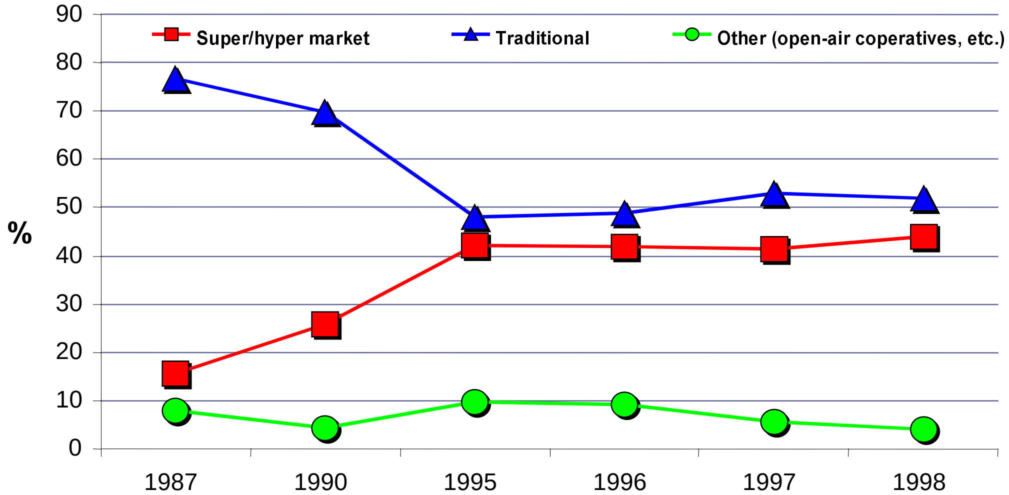

Fig. 5. Evolution of the seafood trade share per retail channel in Spain (source: MAPA survey; from Millán, 2000).

To a great extend, the increase of the share of these retailers to the total national markets has been based on products of aquaculture. Considering that the "production" of fish could be to a great degree controlled, the supermarket requirements of supply regularity, homogeneity of product characteristics and product quality were to a large extend met. Additionally, in most cases the species which better fit the market needs with regard to weight, appearance and type could be chosen in such a way as to satisfy customer needs.

The intrusion of the large retailers to the fresh seafood market provided another beneficiary step for the rise in demand for such products. The chances of selling the product were increased, as the "roof" of a super market brand seem to have provided some sort of quality guarantee (Paquotte, 1998), which these product largely lack.

Despite the success to the fresh-fish trade, large retailers are moving a step further. The opening of in-store exotic and/or delicatessen "bars" within such retailers, presents a novelty that aims to cater for the majority of the consumer needs and concerns. In the UK market, the first in-store sushi bar was opened in 2000 within one of the largest retailers, while a major competitor had already sold GBP 7 million worth of sushi dishes the year before (Globefish News, 2000). Moreover, within the latter market, the ready seafood department in super and hyper markets exhibited a volume sales increase by 10% within just a year from July 98 to July 99, with a 25% increase in surimi, 5% in smoked salmon and 10% in items to be eaten hot, such as breaded fish and fish steaks (Globefish News, 2000).

Growing importance of the catering sector

As noted earlier, the less time available for meal preparation, along with the higher demand for seafood combined by the leisure needs and supported by the improving economies has rendered the catering sector an all-the-more influential seafood channel.

Despite the great diversity, amongst the European nations on the patterns of consumption of fish within this market channel (Table 1), overall the catering sector has been steadily increasing its market share, whether this involves out-of-home consumption or home-delivery services. Caterers have acknowledged the potential of the regular supplies from aquaculture and its "controllable" quality, and seem to start capitalising the benefits that such products present for the sector. Nonetheless, more friendly products for mass-producing dishes would certainly be welcomed, thus indicating once more the importance of the transformation needed towards more convenient forms of presentation and preparation.

Spain presents a typical example of such an increase of the catering sector over the total consumption of seafood, as Fig. 6 illustrates.

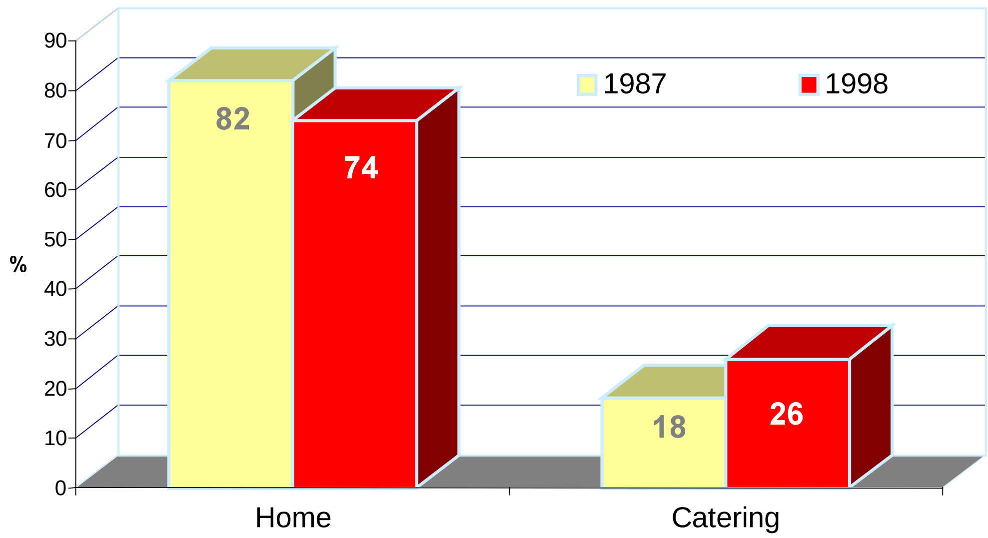

Fig. 6. Development of the catering sector in the Spanish seafood market (source: MAPA survey; from Millán, 2000).

Conclusions

The rapidly changing marketing and trading environment that the seafood industry operates is being largely affected by the consumer and market trends described in this paper. As a result, a number of major "structural" changes have been taking place in order to accommodate for these in an efficient (and profitable) manner. Without being exhaustive a number of these are presented below:

(i) Emergence of high performance large-scale distributors and retailers.

(ii) Improved performance of logistics and transport companies, permitting suppliers to reach efficiently and effectively important market sites.

(iii) Modification of national and international trading routes (from ports to airports and from coastal regions to inland urban areas).

(iv) Pressure on producers from both consumers and distributors to supply quality products (creation of quality certification schemes).

(v) Wide range product availability and increased consumer bargaining power.

As competition within the seafood industry – and food industry in general – increases with the globalisation of the markets and the internationalisation of consumer trends, the seafood industry, and particularly the relatively new players within it (i.e. aquaculture producers), must adopt a more proactive rather than reactive approach, in order to penetrate into new markets and further exploit the existing ones.

In the long-run, it is the companies that will adopt a marketing rather than production oriented approach, and the ones which will adequate promote their products, that will move towards the satisfaction of the consumer needs. Consequently, it will be the same companies that will have gained a valuable competitive advantage that could ensure viability and profitability in the years to come.

References

Girard, S. and Papageorgiou, P.A. (2000). *1st Annual comparative report on seafood consumption data in main European countries and general trends in demand.* CA/Fair-PL98-3500, Report prepared for the Commission of the European Communities, Brussels.

Globefish News (2000). http://www.globefish.org/index2.htm

Mariojouls, C. and Paquotte, P. (1998). Consumer trends: What opportunities for aquaculture products? In: *Modern Aquaculture in the Coastal Zone: Lessons and Opportunities,* North Atlantic Treaty Organization Advanced Research Workshop (NATO/ARW), Porto (Portugal), 13-17 September 1998.

Millán, J.A. (2000). *1st Annual country report on aquatic food consumption and general trends in demand – Spain*. CA/Fair-PL98-3500, Report prepared for the Commission of the European Communities, Brussels.

Monfort, M.C. (1998). Seabass and seabream production explodes in Europe. *Fish Farming International,* Dec. 98: 35-39.

Papageorgiou, P.A. (2000). *1st Annual country report on aquatic food consumption and general trends in demand – Greece*. CA/Fair-PL98-3500, Report prepared for the Commission of the European Communities, Brussels.

Papageorgiou, P.A. (1999). Marketing development for new Mediterranean aquaculture Species: Enterprise strategies. *Options Méditerranéennes, Series Cahiers,* 47: 11-24.

Paquotte, P. (1998). New species in Mediterranean aquaculture: Is it an answer to the market demand for differentiated products? In: *International Symposium on New Species for Mediterranean Aquaculture,* Alghero (Italy), 22-24 April 1998.

Paquotte, P. (2000). Marketing and promotion of quality. The public policy approach, the case of France. *Options Méditerranéennes, Series Cahiers*, 51: 87-92.

Paquotte, P. and Guillard, V. (1996). The seafood markets in the Northern Mediterranean countries. *Options Méditerranéennes, Series Cahiers,* 17: 33-43.

Young, J.A. (1996). The consumption of aquaculture products in non-Mediterranean Europe. *Options*

Méditerranéennes, Series Cahiers, 17: 55-65.
Young, J. A. (2000). Marketing the intrinsic quality of the product. *Options Méditerranéennes, Series Cahiers,* 51: 79-85.
Young, J.A. and Smith, A.P. (2000). *1st Annual country report on aquatic food consumption and general trends in demand – UK*. CA/Fair-PL98-3500, Report prepared for the Commission of the European Communities, Brussels.