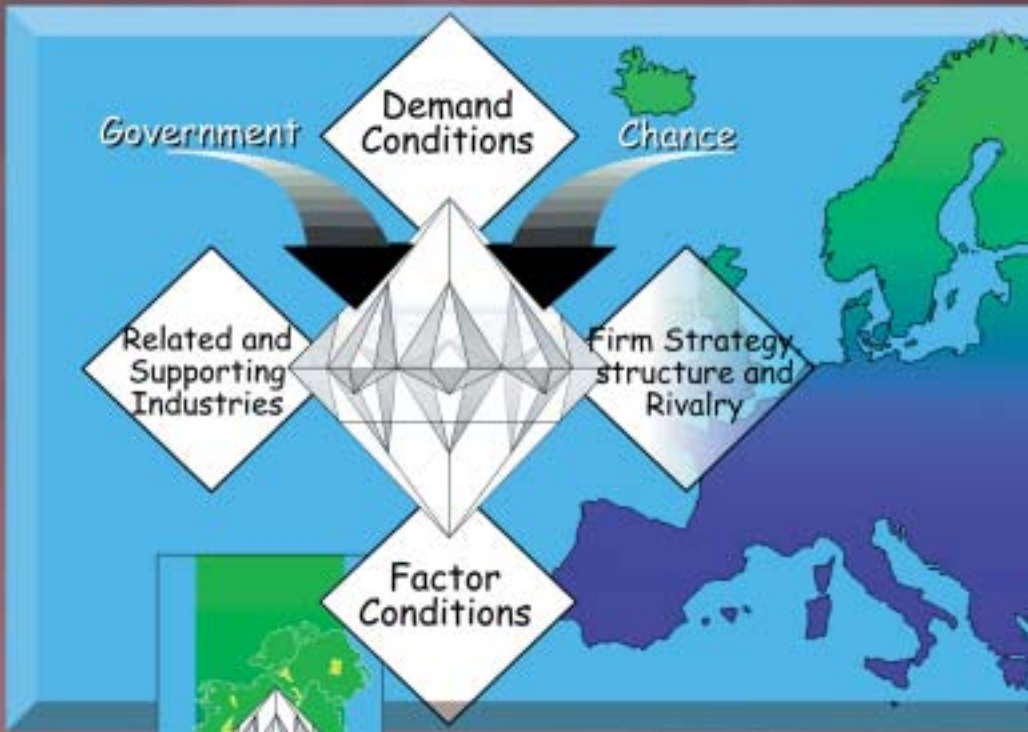


# The Competitiveness of the Irish Food Processing Industry





# THE COMPETITIVENESS OF THE IRISH FOOD PROCESSING INDUSTRY

## Authors:

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Eamonn Pitts B.Comm. M.Econ.Sc.

Larry O'Connell B.Agr.Sc. M.B.S.

Breda McCarthy B.B.S. M.B.S. Ph.D.

**The National Food Centre, Dunsinea,  
Castleknock, Dublin 15**

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## CONTENTS

Summary	1
Objective	1
Background	2
Measuring the competitive performance of the Irish food sector	3
Measuring competitive potential of food industry sectors	8
Competitive analysis of the shellfish industry	9
Competitive analysis of the dairy processing industry	10
Competitiveness of the prepared consumer foods sector	14
Conclusions	22
References	22
List of publications generated from this report	23



## SUMMARY

Ways of measuring industrial competitiveness are discussed and an analysis of the competitiveness of the food sector as a whole and of three sub-sectors are presented. The techniques employed were Revealed Comparative Advantage and the Porter Diamond.

Ireland had a strong competitive position in 1994 relative to our EU partners in the large food industry sectors, but when account was taken of the growth in these sectors the competitive position was weaker in that Ireland did not have a strong competitive position in high growth markets. However a later analysis of competitiveness in the prepared consumer foods sector in 1996 revealed a relatively strong position.

Specific analyses of the sources of competitiveness of the shellfish, dairy and prepared consumer food sub-sectors revealed that the competitiveness of the shellfish sector was predominantly based on the quality of the raw material. The dairy industry's competitiveness was positively affected by factor conditions in the Irish market, the operations of multinational companies, the strategic behaviour of Irish dairy companies and the Common Agricultural Policy. Major factors which contributed to the competitiveness of the prepared consumer foods sector were high quality raw materials, population changes and a dynamic retail sector in Ireland.

## OBJECTIVE

To determine appropriate ways of measuring the competitiveness of the food processing industry and to apply these techniques to the shellfish, dairy and prepared consumer foods industries in Ireland.



## BACKGROUND

There has been an explosion of interest in the concept of competitiveness in the past decade but there is also considerable confusion in the usage of this term. This causes problems for policymakers because of inconsistencies of approach and recommendations. The development of the food processing industry was given a special position in national public policy in the recent past, including a specific sub programme in the Operational Programme for Industrial Development, (1994-99), the only sector so selected. Clearly there would be considerable interest in assessing the competitive performance of the sector.

Teagasc was involved at the start of this project in an EU Project which assessed methodologies for measuring competitiveness at the sectoral level. This led to case studies of competitiveness in each country. Parallel with these activities, national funding enabled in-depth research in the area to be carried out and the techniques to be applied to two key sectors of dairy processing and prepared consumer foods.

### *How best to measure competitiveness*

Analyses of competitiveness are broken down into two main groups (i) analyses of competitive performance and (ii) analyses of competitive potential. The first group measures profitability, growth, market share, trade, etc.; the second group is concerned with explaining why performance is good or bad. The techniques also differ with the level of the analysis; techniques appropriate for measuring the competitiveness of individual firms or of the national economy are not necessarily valid for measuring the competitiveness of a sector.



## MEASURING THE COMPETITIVE PERFORMANCE OF THE IRISH FOOD SECTOR

The preferred method for measuring *performance* of *sectors* is Revealed Comparative Advantage (RCA). It measures success in export markets *relative to the performance of the economy in general*. Its advantages are that the data are generally available at a highly disaggregated level and can be calculated annually. A disadvantage is that performance on the home market is ignored. The level of the index cannot be used to measure competitiveness of the same sector in two countries except in a very general way.

### *Results*

(1) Indices of Revealed Comparative Advantage (RCA) were compiled for 92 agriculture and food industry sub-sectors for 11 EU states for 1994. Ireland was competitive (i.e had an export market share greater than our average export market share) in 29 of these. This compares with 46 for Belgium and 44 for Denmark but only 9 for Germany, 12 for the UK, 17 for Portugal and 18 for Italy. The sectors in which Ireland showed the highest level of RCA were soft drink concentrate, sheepmeat, frozen beef, butter, chocolate bars, fresh beef, offal, whey products, “other preserved meat”, dried vegetables, milk powder, animal fats, beer, fresh fish, spirits, soups, chocolate, “cider etc.” and cheese.

Not all of these markets are of similar importance. In 31 sectors, total imports of EU 12 members exceeded 1,000 million ecus while in some other groups, the level of total imports was below 100 million ecus. When the analysis is confined to those categories exceeding 1,000 million ecus, Ireland is competitive (as defined above) in 16. This compares with 17 each for Denmark and Greece and 14 for Belgium but only four each for UK and Italy and only one for Germany.

When this analysis was extended to take account of the level of growth in markets as well as the scale, the picture from Ireland’s perspective was not so attractive. Our strategic position was somewhat weaker than that of some of our competitors in that we did not have strong competitive positions in high growth markets.



(2) The analysis to date has been concerned with relatively broad markets and product groups. The prepared consumer foods sector has become an important focus of policy in recent years. For the purposes of this study, we defined prepared consumer foods as “ready-to-eat products, normally sold in retail outlets, that cater for the consumer’s demand for convenience in terms of food preparation, cooking or eating”. Figure 1 gives an indication of the scope of the sector.

RCAs were calculated for 44 different product categories, representative of prepared consumer foods as defined above for each year from 1993 to 1996 inclusive. (The categories in general are much smaller and disaggregated than those used in the food industry analysis). Results for Ireland for each of the years are shown in Table 1 while in Table 2 the number of product groups in which each EU member state was competitive in 1996 is shown.

Ireland was “competitive” - (i.e. had an export market share greater than our average export market share) in 16 of the 44 product groups in 1996. This

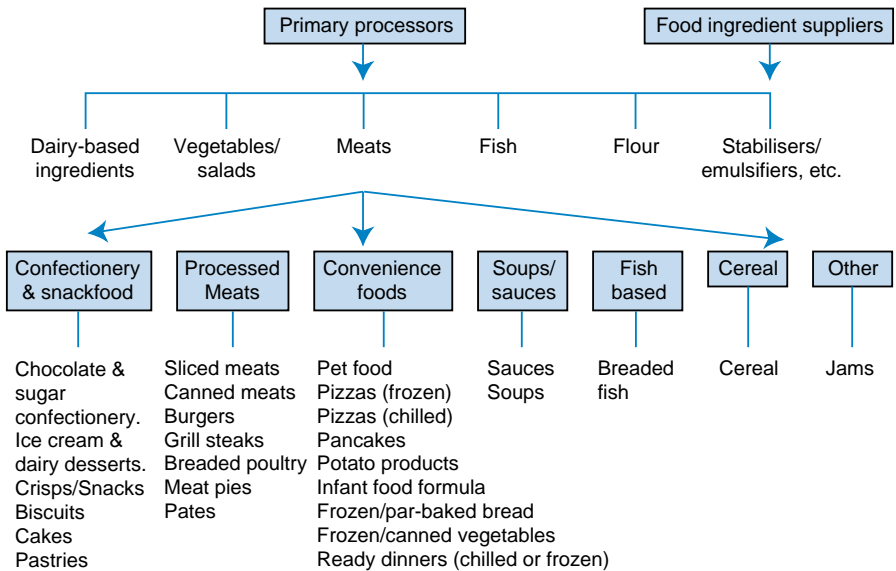


Figure 1: Consumer food sub-sectors and raw material requirements.



**Table 1:** Revealed Comparative Advantage for consumer foods sub sectors for Ireland 1993-1996. Sub-sectors in which Ireland was competitive are shown in bold typescript.

RCA levels for Ireland	1993	1994	1995	1996
Fresh bread	74	115	153	141
<b>Pizzas</b>	<b>89</b>	<b>219</b>	<b>355</b>	<b>335</b>
Other jams	27	3	9	17
Jams and marmalades of citrus fruits	194	352	332	228
Preparations of beef and veal (burgers, meat pies)	<b>809</b>	<b>1,059</b>	<b>1,242</b>	<b>1,308</b>
Pig-meat, shoulders and cuts (cooked hams)	49	10	10	12
Pig-meat: hams and cuts (cooked meats)	128	167		267
Other prepared poultry meat (ready meals, breaded chicken)	221	271	290	197
<b>Other prepared turkey meat (breaded turkey)</b>	<b>495</b>	<b>502</b>	<b>488</b>	<b>406</b>
Preparations of pork including mixtures (ready meals)	253	279		316
<b>Extruded products, savoury and salted (eg. Crisps)</b>	<b>94</b>	<b>275</b>	<b>399</b>	<b>279</b>
Sweet biscuits, biscuits without cocoa	53	65	98	78
Pet food	81	101	106	108
Nuts: prepared or preserved	2	0	4	20
Other prepared fish (excluding fish-fingers)		54	20	21
Fish fingers		59	20	32
Smoked salmon: (Pacific, Atlantic and Danube)	126	129	145	132
<b>Infant food</b>	<b>1,139</b>	<b>1,384</b>	<b>1,347</b>	<b>1,364</b>
Ice cream	57	27	34	30
Frozen potatoes, preserved (chips)	45	8	12	15
Fruit and veg (preserved)	4	2	6	1
Peas: preserved	1	1	0	0
Shelled beans	0	0	0	4
Dried potatoes (eg. Mashed)	24	44	78	10
Soups and broths	108	117	88	86
<b>Soya sauce</b>	<b>52</b>	<b>99</b>	<b>366</b>	<b>742</b>
Prepared mustard	9	12	3	2
Mixed condiments and seasonings	20	36	30	23
Tomato ketchup and tomato-based sauces	6	61	23	26
Couscous			0	0
<b>Chewing gum</b>	<b>185</b>	<b>256</b>	<b>207</b>	<b>248</b>
Dried pasta	7	61	16	13
Cooked or stuffed pasta	59	17	38	41
Chocolate and sugar confectionery	230	242	209	192
Cocoa with added sugar	45	37	40	61
Gingerbread	15	7	8	4
Cakes and pastries	0	0	2	7
Breakfast cereals: roasting of cereals	8	5	2	
Breakfast cereals: other than maize	394	414	97	62
Crispbread	43	6	3	0
Rusks and toasted bread	3	0	23	13
Biscuits, excluding chocolate-coated	0	1	3	1
Sweet biscuits, waffles, wafers, chocolate-coated	147	204	153	175
Food preparations with added cocoa	12	7	7	4



compares with 20 for the Netherlands, 20 for Belgium, 26 for Denmark, 15 for the UK, 14 for Italy, 9 for Germany and 6 for Portugal (see Table 2). When analysis is confined to product areas where the combined EU export market sales exceeded 200 million ecus, Ireland's relative position is strong, with three quarters of its competitive sectors being in large markets.

In Ireland, the highest indices in 1996 (highlighted in Table 1) were for infant food; pizzas; preparations of beef; jams of citrus fruits; pig-meat, hams and cuts thereof; other prepared turkey meat; preparations of pork including mixtures; crisps; chewing gum and soya sauce.

The high RCA level for pizzas (335) in 1996 is not surprising given the success of Green Isle and Heinz Custom Foods in this sector. The exceptionally high RCA level for infant food (1364) reflects the activities of multi-nationals based in Ireland. The high RCA level for soya sauce (742) is surprising, but may be the result of a company that is importing and re-exporting a product and doing well in a small niche market. The high RCA figure for "other prepared turkey meat" (406) is also interesting given the highly competitive nature of the poultry market. It may reflect the success of Irish producers who have developed niche export markets.

Another interesting fact to emerge is Ireland's competitiveness in the fresh bread market (141); this may be due to a large company exporting to Northern Ireland or to the emergence of Cuisine de France as a significant player in the par-baked bread market. Ireland has a long coastline and natural potential production advantages in seafood and fish processing. This is converted into a competitive advantage in smoked salmon (132) but not in fish-fingers (32) or other breaded fish (21).

The results tend to confirm general perceptions of the European food industry. The Netherlands, Denmark, Spain, Belgium/Luxembourg and France all have a large number of competitive sub-sectors, predominantly in the large markets. The Netherlands is a large food exporter, partly due to the Dutch role as an entry port for exports to and from the EU. Denmark, like Ireland, is a small country that is specialised in food. Its competitive sub-sectors include breakfast cereals, processed meat, chewing gum, "sweet biscuits, without cocoa" and cakes and pastries.



**Table 2:** Number of sub-sectors of prepared consumer foods, in which each EU country shows Revealed Comparative Advantage index for 1996 exceeding 100.

Country	No. of sub-sectors in which country shows comparative advantage (n= 44)	No. of larger sub sectors in which each country shows comparative advantage (n = 23)
Austria	9	6
Belgium/Luxembourg	20	11
Denmark	26	17
Finland	4	2
France	17	11
Germany	9	1
Greece	9	4
Ireland	16	12
Italy	14	7
Netherlands	20	15
Portugal	6	4
Spain	20	12
Sweden	6	1
United Kingdom	15	7

Spain, Belgium and France are competitive in many sub-sectors of the prepared consumer food sector. The United Kingdom is competitive in 15 sub-sectors and approximately half of these can be considered large sub sectors (including other prepared poultry meat, sweet biscuits without cocoa;



waffles and wafers; breakfast cereals; sugar confectionery; fresh bread; pet-food). Germany is competitive in nine sub-sectors (gingerbread; biscuits excluding chocolate coated; crispbread; cocoa powder; dried potatoes; preserved fruit/vegetables; fishfingers; breaded fish and nuts) but only one of these markets could be considered large (i.e. the market for fish-fingers). Sweden has only two competitive sub-sectors, crispbread and rusks.

Greece is exceptionally competitive in preserved vegetables and fruit and enjoys a strong position in jams and marmalades, rusks, cakes and pastries, chewing gum and nuts. Portugal has few competitive sub-sectors but is competitive in the crisps market.

## MEASURING COMPETITIVE POTENTIAL OF FOOD INDUSTRY SECTORS

Analyses of competitive potential and management process are concerned with why a company or sector is or is not competitive. Measures of competitive potential would incorporate availability or cost of key raw materials or skills or technology, leading to price and cost competitiveness and higher productivity. Measures of competitive process seek to measure the management process - or how competitive potential is turned into performance. These measures often include qualitative dimensions such as “marketing outlook”

We found at least five different approaches to explain the sources of competitiveness. The most widely used is that of Porter in his book “The Competitive Advantage of Nations”. The Industrial Districts approach, developed in Italy, has many similar characteristics to the Porter approach and a combination of the two approaches offers the best analysis of the sources of competitiveness.

In particular, we incorporated co-operation as well as competition as potential drivers of competitiveness : we allowed that success could arise even when the home market is small or unsophisticated and we placed particular attention on the role of retailers in stimulating development. A further element



affecting competitiveness of food processing firms in Europe is the operation of the Common Agricultural Policy. All of these points are elaborations of the “Diamond model” proposed by Porter (Figure 2). Porter analyses (with these elaborations) have been carried out on the shellfish, dairy processing and prepared consumer foods industries in Ireland.

### Competitive analysis of the shellfish industry

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The competitive position of the Irish shellfish processing industry is weak. Yet 95% of the firms interviewed believe the industry will continue to be successful in the future. This strong belief was based solely on one factor - the high quality of Irish shellfish supplies.

Processors admit problems exist and that issues such as supply stocks, quality, new product development and marketing seriously need to be tackled. However, the continuous process of innovation needed for gaining and sustaining competitive advantage is not happening. Processors seem to accept the environment as it is. The interactions between the determinants are weak, as industry clustering and geographic concentration have not occurred. The key sources of competitive advantage and disadvantages can be seen in Figure 3.

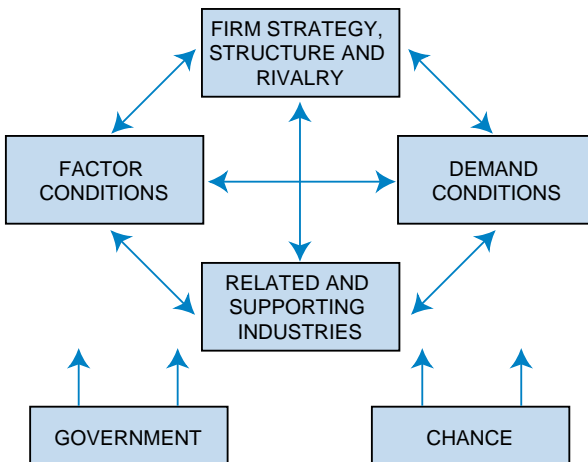


Figure 2: Porter’s ‘diamond’ model - the determinants of national advantage.

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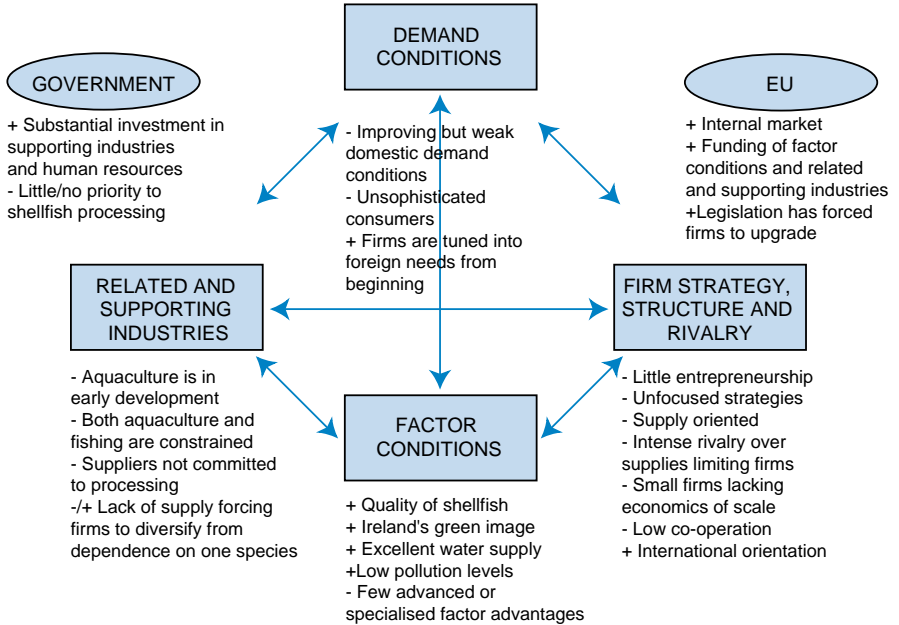


Figure 3: The Irish shellfish processing industry's diamond.

Unique sources of competitive advantage within the industry are rare with the only significant advantage being the superior quality of Irish shellfish supplies. Yet even this advantage is not being taken full advantage of. The EU Commission remarked that in competitive terms the Irish (fishery) industry is particularly vulnerable from foreign competitors. Its limited marketing and processing capacities are promoting the shipment of raw and part-processed material to more market-orientated processors in Europe, thus discouraging value-added activities within Ireland (Commission of the European Communities, 1992, p.46)

### Competitive analysis of the dairy processing industry

The detailed findings of an analysis of the factors contributing to the competitiveness of the Irish dairy processing industry may be found in O'Connell et al (1997 and 1998).



The dairy industry performed strongly during the eighties and up to mid 1990s. Trade statistics demonstrate that Ireland has a comparative advantage in dairy products. However, there are a number of problems in using traditional measures of competitiveness in the dairy sector as growth in output is restricted by quotas and the market is heavily dominated and distorted by various support mechanisms. Furthermore comparisons on profitability are distorted by variations in ownership structure.

Notwithstanding these difficulties, we compared the Irish dairy industry to two other 'small' EU competitors, Denmark and the Netherlands and three large competitors, the UK, France and Germany. Irish growth rates have been among the highest in Europe, as has productivity and the level of investment. Profitability has also improved. At the same time employment has decreased, broadly in line with that seen elsewhere. In terms of value added, Ireland remains somewhat below that of competitors.

Collectively these measures suggest that the sector has performed very well and is competitive. The sector has concentrated on increasing the level of output through a focus on the cost effective production of commodities with some sacrifice in the levels of employment. However, the rate of growth in the value of output has been among the highest in Europe, as has productivity and the level of investment, and profitability has also improved strongly.

The contribution of the various elements of Porter's Diamond (Figure 2) to explaining this competitiveness is now considered.

Ireland has a reasonable endowment of *factor conditions*. For example, the level of technical expertise, operational skills, the supply of graduates and a healthy national image were all identified as relatively strong elements. As regards the cost base, costs of logistics and, to a lesser extent, labour and energy have a somewhat negative impact on progress in the Irish dairy industry. Finally, the level of marketing skills were identified as a negative factor. The Irish educational institutions and the supporting agencies / institutions were seen to play an important, positive role. Overall, factor conditions in Ireland have an important and positive impact on the competitiveness of the dairy processing industry.



*Home demand conditions* have been less important. Irish consumption patterns might have worked against the development of some consumer products such as yoghurt and desserts.

Retailers and multinational enterprises (MNEs) located in Ireland have a positive influence on the competitiveness of the sector. The Irish multiples are sophisticated and demanding buyers and are, to some extent, responsible for upgrading the standards of the larger Irish dairy processors. However, a more important influence of the retailers has been their constant pressure on the processors to reduce prices and the consequent effects on cost efficiency. Most processors also learned from the standards and systems employed by the MNEs, an experience that helped them in international markets. Many processors are also fostering intensive and beneficial relations with multiples and MNEs located abroad.

Apart from the Irish dairy farmers, *related and supporting industries* in Ireland contribute little to the competitive advantage of the Irish dairy processing industry. The Irish dairy farmer is both a supplier and a shareholder of the Irish dairy processing industry. Because of this, it is difficult to determine the exact contribution of the farmers to the competitiveness of the processing industry. The data suggest that Irish farmers, compared to farmers in most other European countries, are competitive producers but this advantage is partly offset by a highly seasonal supply.

There is little evidence that Irish dairy processors benefit from the local presence of other industries. Most machinery is imported. Some suppliers appear to have benefited from indirect links with other processing industries. Most managers did not perceive the lack of related and supporting industries as a competitive disadvantage. However, it is difficult for managers to appreciate the potential benefits of absent industries. Porter argues that the lack of competitive suppliers diminishes the potential for ongoing co-ordination, important for innovation and upgrading (Porter, 1990). This would place Irish processors at a disadvantage.

As regards the contribution of *Firm Strategy, Structure and Rivalry*, an important characteristic is the role played by co-operatives. Co-operation



through the Irish Dairy Board (IDB) partly overcame the disadvantage of the relatively small size of the Irish companies in international markets. The Irish dairy processors also showed a willingness to adopt innovative ownership structures, e.g. the co-op/plc structure. An examination of the strategies suggests that often a cost-based competitive focus has been pursued. The companies have become active in international acquisitions and are actively attempting to add value. The primary mechanism is through the formation and maintenance of relationships, either directly or via the IDB. The companies are directing efforts towards growth in areas of competitive strength rather than in downstream activities.

Porter (1990) believes that the existence of rigorous domestic rivalry facilitates the creation and persistence of competitive advantage in an industry. Certainly, Irish companies have competed vigorously, mainly within concentrated geographic regions. This competition, focused mainly on raw materials, had a positive impact on competitiveness as processors had to focus on cost reduction. In parallel, co-operation exists at various levels. The companies collaborate and support the IDB, which is now a major international player in the European dairy industry. In a similar vein Moorepark Technology Limited is evidence of joint research. Companies also collaborate informally on international marketing strategies.

The industry has organised itself into a structure consisting of processing companies, a group marketing organisation (IDB) and a number of support organisations e.g. ICOS, which have effectively represented the industry at governmental and supra-governmental level. In parallel, the industry has competed internally to produce a much leaner industry capable of increasing its international position. It is reasonable to conclude that the structure, strategies and rivalry of the Irish dairy industry have a positive impact on competitiveness.

Finally, the *Common Agricultural Policy*, in the same way as 'government', is an additional variable, an outside influence on the four determinants (Figure 2). The CAP has positively influenced the performance of the Irish dairy processing industry. The regime discriminated in favour of the Irish industry and the specifics of the CAP support system suited and reinforced the



particular characteristics of the Irish dairy industry. However, the EU CAP is not just a 'given', influencing the diamond from outside. The industry has organised itself to influence the CAP policies and its outcomes.

However, with the prospect of continued deregulation and declining support for the dairy sector under the CAP regime, the industry is left with a product portfolio which is likely to come under increased competitive pressure. Given the pending deregulation of dairy markets, a strategy focusing on the efficient production of basic commodities is unlikely to create increased wealth in the long term. Changing this focus is one of the most important challenges of the Irish dairy industry. The Irish dairy processing industry is trapped in a 'CAP-web'. The actions necessary for the sustainable development of the Irish dairy processing industry are not likely to be taken before the changes in the CAP regime are actually taking place.

*Conclusions:* The Porter analysis showed that overall, factor conditions in Ireland have an important and positive impact on the competitiveness of the dairy processing industry. The level of technical expertise and of operational skills, the supply of graduates and a healthy national image were all identified as relatively strong elements. Home demand conditions have been less important. Retailers and multinational enterprises located in Ireland have a positive influence on the competitiveness of the sector. There is little evidence that Irish dairy processors benefit from the local presence of other industries. The structure, strategies and rivalry of the Irish dairy industry have had a positive impact on competitiveness. Finally, the CAP has positively influenced the performance of the Irish dairy processing industry.

### Competitiveness of the prepared consumer foods sector

The competitive performance of the prepared consumer foods sector has already been outlined. A Porter analysis was also carried out to analyse the factors leading to the emergence and growth of the sector over the past decade. A survey of firms in the sector was carried out in order to assess company strategies, company performance and factors that facilitated and inhibited growth. The impact of future policy and industry changes on competitiveness was also evaluated and the needs of the sector identified.



### *Factor conditions*

(a) *Raw materials*: Ireland has a reasonable endowment of high-quality, indigenous raw materials (such as dairy ingredients, meat, poultry and fish) which forms the basis for the prepared consumer food sector. The processed meat<sup>1</sup> sector has benefited from Ireland's traditional strength in meat production, along with historically high per capita consumption of meat products in the home market.

(b) *Peripherality*: Ireland is at a disadvantage with regard to its peripheral location and low population density. Higher energy, natural gas and transport costs in relation to the UK are a source of competitive disadvantage (Forfás, 1998). Higher costs have traditionally been offset by favourable exchange rates vis-a-vis the UK. However, with entry into EMU and the absence of currency de-valuation as a policy instrument, control of costs is even more critical.

(c) *Labour costs*: In terms of labour productivity, Irish rates have been among the highest in Europe (Forfás, 1998). Irish labour costs have been among the lowest in Europe in relation to the processed foods area (Commission of the EU, 1997). However, the survey revealed that lack of human resources was an important factor inhibiting new product development. Companies require highly skilled, experienced and trained people at all levels of the business. Small firms are often disadvantaged in their ability to acquire and retain staff. Furthermore, the success of the Irish economy has made employment in the food sector less attractive than other sectors.

(d) *Capital*: The availability and cost of capital are critical components of competitiveness. The survey identified lack of capital as an impediment to the development of the prepared consumer food sector. For instance, 57% of the sample cited lack of finance as an important barrier to new product development and 63% cited it as an important barrier to export-growth.

(e) *Profitability* : Clarke (1997) found that most sectors of the Irish food industry have a poor record in terms of profitability. Forfás (1998) revealed

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<sup>1</sup> Including burgers, sliced or canned meats, meat pies, ready meals and other meat-based products.



that, in 1996, the profitability of indigenous companies in the food, drink and tobacco industry was 3.6% of sales compared with 7.5% for general manufacturing industry. Profitability has a direct impact on the amount of funds retained for investment, be that in upgrading capacity, investing in technology or new product development. A survey by the Commission of the European Communities (1997) of firms in the “other processed foods” sector<sup>2</sup> showed that Ireland re-invested a very small proportion of its output value in comparison with other EU member states.

Although many firms in the food sector compete on non-price rather than price factors, cost is still a critical component of competitiveness. If company margins are to be preserved in a more competitive environment, then improving cost efficiencies and securing access to capital are of major importance.

### *Demand conditions*

On the demand side, there has been a significant shift towards convenience foods throughout the EU. The Irish consumer has become more “Europeanised” due to converging lifestyles and economic conditions. The population bulge in the 18-45 year old age group, the rise in female participation rates in the labour force, the rise in dual-income families, and growth in disposable incomes are all factors that have resulted in a “cash-rich, time-poor” consumer and contributed to the rise of the prepared consumer food sector in Ireland. In particular, increased numbers of younger consumers with higher disposable income has brought about a change in Irish food consumption patterns.

The retail sector is highly concentrated in Ireland and retailers wield massive buying power. Over the past decade, Irish-owned retailers, notably SuperQuinn, have supported small, niche companies by giving shelf space to new products that were aimed at a narrow demographic or lifestyle segment (Collins, 1997). In Ireland, retailers are beginning to challenge the catering

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<sup>2</sup> Other processed foods include soups, broths, sauces, infant food, breakfast cereals, popcorn, honey, prepared and processed potatoes, flour, baking agents, custard, tea, coffee and other food preparations.



sector for the consumer's expenditure on prepared foods and are expanding their range of fresh, chilled and hot-delicatessen products. Retail buyers are increasingly dictating terms on food standards, quality control, supply chain management and prices.

Population changes and a dynamic retail sector in the home market have therefore contributed to the growth of the prepared consumer foods industry.

#### *Firm strategy, structure and rivalry*

*Scale:* A particular feature of the European food industry (including Ireland's prepared consumer food sector) is the existence of a dual market structure. The sector is characterised by a small number of large firms which operate over a wide range of product sectors and geographical markets, and a large number of SMEs (small and medium sized enterprises) which tend to focus on niche products or regional and local markets. An estimated 92.4% of all firms in the EU food, drink and tobacco industry have less than 20 employees (Eurostat, 1997).

Our survey revealed that most of the turnover, output and employment was accounted for by a small number of firms. Sixteen per cent of the sample had sales of over £20m, 11% employed 200 plus employees, and 17% produced over 20,000 tonnes of product per annum. An estimated 40% of the sample employed less than 10 employees. In view of the structure of the European food industry, Irish firms are not uniquely disadvantaged in terms of company size.

*Innovation :* Innovation, in terms of product development, is often cited as the most important source of competitiveness in the food industry, given the proliferation of new products, short product life cycles and the changing tastes of consumers (Traill and Grunert, 1997). In our survey, we asked managers to rank the factors that facilitated new product development (Table 3).

The survey showed that the incentive to innovate depends to a large extent on the existence of strong demand for the product. Ninety one per cent of the sample cited that new product development was customer-driven and 63% indicated that it was retailer-driven. The survey also shows that the capacity to innovate depends to a large extent on the availability of R&D staff. Table



**Table 3:** Factors that facilitated new product development; results of a survey of firms in Irish prepared consumer foods sector.

Factor	% importance
Availability of finance/grant aid	45%
Availability of R&D staff (eg. food technologists)	64%
Access to universities/research institutes/facilities	29%
Customer-driven: response to market opportunity/customer need	91%
Competitor-driven: pressure of competition forcing firms to react	42%
Supplier-driven: interactions with suppliers of raw materials, food ingredients, packaging or plant & equipment	34%
Retailer-driven: result of interactions with retailer	63%

4 shows the factors that were perceived by respondents to inhibit new product development.

The three major inhibiting factors were lack of people skills, time constraints and finance. As new product development is a critical determinant of competitiveness in the prepared consumer food sector these barriers need to be addressed.

*Marketing capabilities;* Competitiveness also rests on superior marketing capability. Branding is a widely used strategy in the food industry which requires substantial economies of scale (Forbairt, 1995). However there are alternatives to the high-cost, mass-produced, branded product strategy. Niches are opening up in areas such as health foods, regional specialities, supply of chilled foods and delicatessen products for the retail trade, and supply of fully or partially prepared products for the catering trade. Branding may be a less important component of the marketing strategy in these niches.



**Table 4:** Factors that inhibited new product development; results of a survey of firms in Irish prepared consumer foods sector.

Factor	% importance
Lack of finance	57%
Lack of human resources or people skills	58%
Time constraints	58%
Lack of information (e.g. scientific knowledge, legal regulations and developments in other countries)	29%
Lack of scale	49%
Threat of failure/high financial risk involved	39%

Small firms often gain competitive advantage by competing on non-price factors such as customer service and superior quality, rather than on price. The survey showed that firms in the sector generally adopted a strategy of differentiation. Ninety four per cent of the sample adopted a high quality product strategy. Regarding pricing strategy, 60% of the sample described the price of their product as “medium”, 36% described it as “high” and only 4% described price as “low”.

Table 5 summarises the impact of the four main Porter factors on the competitiveness of the prepared consumer food sector.

Regarding outside influences on the diamond, the level of state support available to companies seems to be as good as that available in other European countries and could be seen as a factor that has a mildly positive impact on competitiveness within the prepared consumer food sector.

*Conclusions:* The RCA statistics demonstrate that Ireland has a comparative advantage in several prepared consumer food products. It is reasonable to conclude that Ireland is competitive in the prepared consumer food sector.



Table 5: Sources of competitiveness in the Irish prepared consumer foods sector.

Competitive factors	Factor-driven	Demand conditions	Related & supporting industries	Strategy, structure and rivalry
<b>Factor-driven</b>				
Basic (climate, grassland, natural resources).	High			
Advanced (e.g. research centres, skills).	Moderate			
Specialised (e.g. skills in food science).	Moderate			
Generalised (e.g. the Irish general education system).	High			
<b>Demand (domestic)</b>				
Consumer demand		Moderate		
Retailer-driven.		High		
<b>Related and supporting industries</b>				
Evidence of clustering.			Low	
Capital and equipment suppliers.			Low	
Home-based food ingredient suppliers.			Low but improving	
<b>Strategy, structure and rivalry</b>				
Scale				Low
Rivalry				Medium

Ireland has a reasonable endowment of *factor conditions*. Companies benefit from a well-educated labour force, a supply of high quality indigenous raw materials, a low interest rate environment, well developed sources of capital along with a strong state sector.

The quality and low cost of human resources have positively influenced the country’s competitiveness in prepared consumer foods (However skill



shortages are emerging and survey respondents cited lack of human resources as an important impediment to both new product and export market development).

Domestic *demand conditions* have been important for several prepared consumer food products. Ireland's unique demographic profile - the young, educated workforce which has the disposable income to spend on new food products - has brought about a change in food consumption patterns. The retail sector is highly concentrated in Ireland and retail chains could be considered among the world's most sophisticated and most demanding buyers. They are responsible for supporting new food companies and forcing an increase in product quality, service and delivery standards.

With regard to *firm strategy, structure and rivalry*, the sector is distinguished by its strong customer focus and the degree of importance given to new product development. A number of firms have been successful at building brands and expanding internationally. Irish firms are not particularly disadvantaged in this regard since the structure of the European industry is geared towards small firms. Small firms have worked to overcome scale limitations and have had some modest success in own-label and niche marketing areas.

Related industries do not seem to make a significant contribution towards the competitive advantage of the prepared consumer food sector. Food ingredients have the *potential* of developing into a strong related industry to the prepared consumer food sector.

The prepared consumer food sector in Ireland is not extensively clustered and is not very R&D or knowledge-intensive.



## CONCLUSIONS

- Ireland had a strong competitive position vis-à-vis our EU partners in the large sub-sectors of the food industry in 1994. Our strategic position was somewhat weaker when account was taken of our level of growth in the high growth food sub-sectors.
- In the prepared consumer foods sub-sector, Ireland had a relatively strong competitive position among EU members in 1996.
- The competitiveness of the shellfish sector was predominantly based on the quality of the raw material.
- The dairy industry's competitiveness was positively affected by factor conditions in the Irish market, the operations of multinational companies, the strategic behaviour of Irish dairy companies and the Common Agricultural Policy.
- Major factors which contributed to the competitiveness of the prepared consumer foods sector were high quality raw materials, population changes and a dynamic retail sector in Ireland.

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# The National Food Centre

RESEARCH & TRAINING FOR THE FOOD INDUSTRY

Dunsinea, Castleknock, Dublin 15, Ireland.

Telephone: (+353 1) 805 9500

Fax: (+353 1) 805 9550



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