

The Market for Organic Liquid Milk in Ireland



**The National
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THE MARKET FOR ORGANIC LIQUID MILK IN IRELAND

Authors:

Cathal Cowan B.Agr.Sc. M.Agr.Sc. (Econ.) M.Sc.

Dearbhla Ni Ghraith B.Comm

The National Food Centre

Ashtown, Dublin 15

and

Aidan Daly BA (Econ.). MBA. PhD. FMII.

Department of Marketing,

University College Galway

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SUMMARY

The key research question was "what is the market potential in Ireland for organic liquid milk and related products up to 2006"?

Denmark and Austria are among the most developed organic food markets in the world. Using the Diamond Model of factors contributing to competitiveness, detailed case studies of these countries were undertaken to identify the drivers in the growth of consumption of organic food and milk products. Market share for organic liquid milk in Ireland is less than 0.1% compared with 20% in Denmark and 9% in Austria. All the factors of the Diamond Model worked to grow the organic food market in Denmark and Austria. The Austrian and Danish Governments were the first in Europe to introduce legislation on organic farming and also subsidised farmers to bridge conversion to organic farming. The conventional milk sector in Ireland is very competitive but has not shown an interest in organics, whereas in Denmark the largest conventional milk processor is the main player. The small size of the Irish organic milk market means it is not a major area of rivalry at retail level. This contrasts with Denmark and Austria where retailers have driven the market. In Denmark, following approaches in 1993 from farmers' representatives, the major retail group, FDB, lowered organic milk prices to entice consumers to switch from conventional milk. The main Danish milk processor successfully launched the 'Harmonie' organic brand and moved the market from niche to mainstream. In Austria, Billa, a major retailer, set market targets and introduced a high quality organic own-label brand. They encouraged farmers to switch and increase organic production by offering them five-year contracts at fixed prices.

Delphi forecasts showed that the organic liquid milk market in Ireland is expected to grow but remain a small niche. The yoghurt market is expected to almost double in size and the butter and cheese markets will also experience growth.

These Delphi growth expectations are supported by depth interviews. There is considerable consumer interest but a lack of supply is curtailing retailer



action. Experts felt that if farmers received a good price for their milk, they would be more encouraged to convert to organic production. The higher price of organic milk will not deter consumers from buying, provided the premium is not too high, but a strong brand is needed for market growth.

In Denmark and Austria all of the elements of the Diamond Model worked independently but cohesively to drive growth in organic milk products in those countries. In Ireland there is considerable consumer interest in organic foods. However none of the other Diamond factors are ready to drive the introduction and development of organic milk products. If it were otherwise, faster growth rates could be achieved than those forecasted in this study.

INTRODUCTION

The market for organic products has seen considerable growth in Europe in the last five years. The factors driving the market include health and environmental issues and marketing campaigns to promote organic products. The organic milk market has become one of the main growth areas. Austria and Denmark have developed high retail market shares for organic liquid milk.

The Diamond Model was used to investigate the success of organic milk products in Austria and Denmark, and the market in Ireland. A forecasting model and in-depth interviews with industry personnel were used to estimate market size and potential for the organic milk market in Ireland.

The dairy market is an important part of Ireland's economy. Dairying accounts for a third of total agricultural output. The liquid milk market in the Republic of Ireland is worth approximately €430 million per annum. Per capita consumption of milk is about 146 litres per annum, or 400 ml a day per head of population. Almost 98% of the population consume milk. Milk products, including cheese, yoghurt and butter are also a significant part of the dairy industry.



OBJECTIVES

The purpose of the research was:

- to identify and analyse the factors influencing the acceptance and growth of organic milk products in Austria and Denmark,
- to estimate the current market size for organic liquid milk, yoghurt, butter and cheese in Ireland,
- to predict future market shares for organic liquid milk, yoghurt, butter and cheese, and
- to assess the market potential for liquid organic milk in Ireland.

METHODS

Considerable growth has occurred in the organic food market in European countries. Denmark is one of the most developed organic food markets in the world and Austria is one of the most significant in Europe. Because both show high market shares in organic liquid milk and milk products, it was appropriate to investigate the reasons for their success. The analysis of both countries and of Ireland was structured around the elements of Porter's Diamond Model, described below. In Ireland, the Delphi Technique was used to estimate market potential for organic liquid milk, yogurt, butter and cheese in the years 2003 and 2006. Further in-depth interviews were conducted with the industry to gain a better understanding of the factors that could affect the Irish organic milk market.

Diamond

The Diamond Model can indicate how a nation can achieve success in a particular industry. The Model is structured around six elements as shown in Figure 1 below. An advantage in one element can produce, or improve, an advantage in another. The elements work inter-dependently and is not necessary for industry success to have an advantage in all of them.

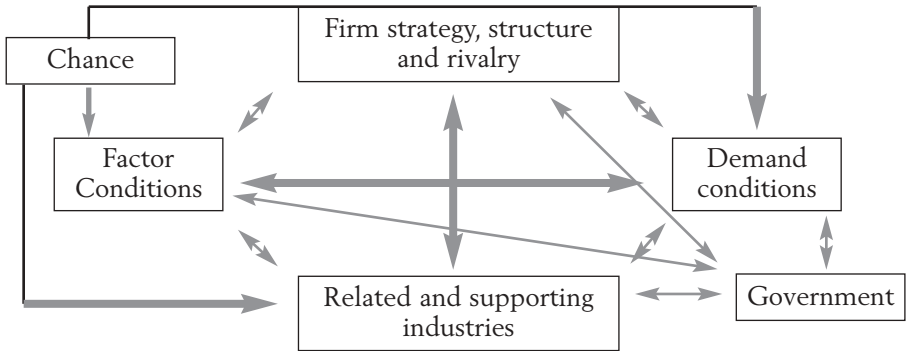


Figure 1: Porter's Diamond model showing interdependent variables that determine the competitiveness of an industry

The Danish and Austrian cases were analysed under each element of the Diamond Model and particular emphasis was placed on the relevance of market strategy. The strategies used by firms are discussed in the strategy, structure and rivalry section. The elements of the model are explained below.

Factor conditions: These are the factors of production, such as land, labour or infrastructure, which are needed to compete in an industry. Factors can be basic or advanced, generalised or specialised.

Factor creation is most strongly influenced by domestic rivalry. Local competitors will stimulate development of skilled human resources, related technologies, market specific knowledge and specialised infrastructure. Competitors will develop appropriate factors to gain competitive advantage. When factors are advanced and specialised in these markets, competitive advantage is sustainable. Production and processing are the main factors considered in this study.

Demand conditions: This is the type of home demand for products or services. The home base is the nation in which the essential advantages of the enterprise are created and sustained. It is where a firm's strategy is set and core product and process technology are created and maintained. Home demand is very important in perceiving and responding to buyer needs. A characteristic



associated with achieving a competitive advantage in home demand includes large market segments which tend to receive more attention within a country than smaller segments, as they appear more profitable. Competitive advantage can be achieved in smaller niche markets in which larger firms may not be interested.

Another characteristic is sophisticated and demanding buyers, who pressurise the firms within the industry to produce products to a high standard. In this study, consumer demand, market size and retailer premia and promotion are the main entities considered under demand conditions.

Related and supporting industries: These are industries that share activities from development to production to marketing. They share the same technologies, inputs, distribution channels, customers or provide complementary products. Cost-competitive suppliers provide advantages in many ways, such as early and efficient access to cost-effective inputs and beneficial links with home based suppliers and buyers. Other organic industries and players in the dairy sector are the main related and supporting industries and their strength may assist or hinder the development of the organic milk sub-sector.

Firm strategy, structure and rivalry: The strategies and roles of dairy processors and retailers in Denmark and Austria were analysed to identify whether similar strategies are feasible in the Irish situation.

Government: Policy can have a critical influence on the success of an industry. Subsidies affect factor conditions. Demand conditions are affected by product regulations and standards. Government regulations can influence related and supporting industries. Market and tax regulations also affect firm strategy, structure and rivalry.

Chance: Certain events are outside the control of firms, such as pure inventions, breakthroughs in technologies, wars, external political developments, and major shifts in foreign market demand. The BSE scares and the recent 'Foot and Mouth' problem were chance events, which had huge impacts on the food industry. Chance creates discontinuities that change the competition. Exploiting chance may turn a situation to an advantage.



Austrian and Danish case studies

Interviews were completed with companies and agencies in organic businesses in Denmark and Austria including The Danish Dairy Board; The Danish Organic Centre; FDB (the main retailer); MD Foods (the largest processor); The Danish Organic Research Institute; The Austrian Ministry of Agriculture, Billa (the largest Austrian retailer); Tirol Milch (a processor); Agrarmarkt Austria (a food marketing organisation); ERNTE (an organic farmer organisation); Institute für Agrarökonomik, University of Bodenculture (a university agricultural faculty) and SGS Austria (a certification body).

Key personnel in these organisations were interviewed using a semi-structured questionnaire. Observation methods were also used in retail outlets to see how many dairy products were available and how they were merchandised. Published reports and papers were also researched.

Delphi forecasting

This process was used to predict future market shares in Ireland. It uses forecasts made on two or more rounds by a group of independent experts who receive feedback between rounds on the responses from the previous round. Predictions were made for the years 2003 and 2006 by the experts including retailers, milk processors, certification bodies and food institutions/associations.

Five statements about key market factors that helped develop the market in Austria and Denmark were put to the experts, who were asked to agree or disagree with each statement. The statements were:

- lack of supply of produce is hindering growth
- consumers are prepared to pay a price premium for organic dairy produce
- the entry of a large processor would increase market share
- retailer support is strong
- more government support would encourage dairy farmers to go organic

Fifteen of the 23 panellists responded to the first round of the process. The



same questions were used in the second round and the panel were given feedback on the first round to allow respondents consider factors they may have overlooked. The panel were also asked to name one thing, which needs to happen for the organic dairy market to achieve a significant market share (i.e. 5% by 2006). Twelve respondents answered in round 2. The process was terminated as stability in responses was reached.

In-depth Interviews

As liquid organic milk product is a recent market introduction, it is difficult to estimate market potential. To understand what factors would affect the Irish organic milk market, four key decision makers from retailing and processing were interviewed. Depth interviews, with a semi-structured approach, were used to explore ideas and determine if the results of the forecasting technique were likely to be accurate.

THE DANISH ORGANIC MILK MARKET

Factor conditions

Danish farmers established the Danish Association for Organic Farming in 1981. Consumers were becoming concerned about the conventional methods of farming with a concern for the environment related to the over use of fertilisers and sustainable agricultural development. Farmers perceived organic foods as products that would meet a consumer need. In 1986, there were only 8 organic dairy farms in Denmark. By 1999 there were 672. Organic dairy farms are now about 6% of total dairy farms.

Until the mid-1980's, organic milk was sold to conventional milk processors. Some farmers processed their own milk and sold it directly at the farm gate or at local markets. In 1988 MD Foods (now Arla Foods) Denmark's largest conventional dairy company, began processing organic milk. Klover Maelk (since merged with MD), the second largest conventional dairy company, began processing in 1992. Factor conditions were no longer basic but were becoming more advanced as investment from processors increased.



The conventional dairies paid a 30% premium for organic milk compared to only a 15% premium by specialised organic dairies.

Economic analysis showed organic dairy farms can outperform conventional farms due to price premiums and the subsidy support. Estimates for organic crop and pig farms suggest a similar situation.

Demand conditions

In 1998, 80% of Danes bought organic products and over 10% of households spend more than 10% of their food budget on organic products. The most frequent purchasers of organic food were families with children living in larger towns. The profile of consumers of organic food has changed over the years. In the early 1980's, organic consumers were generally 'yuppie' consumers, in the late eighties they were more ecologically aware consumers but since 1995 all types of consumers purchase organic food. Currently, Danish consumers are buying organic food for many reasons, including environmental and health reasons, quality, consumer curiosity and a desire to be fashionable.

There are a wide variety of organic dairy products now available in Denmark – four types of liquid milk, chocolate milk, yoghurt, butter, ice cream, sour cream, fresh cream and cheese. The organic milk market is the most developed organic sector in Denmark. Figure 2 details the market shares of four products.

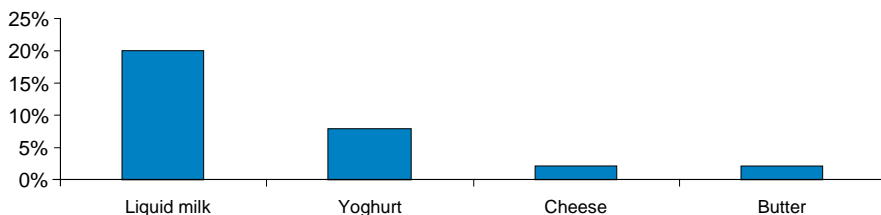


Figure 2: Retail market shares for organic dairy products in Denmark in 1998



Organic liquid milk had the highest market share at 20%, followed by yoghurt at 8%. The organic cheese and butter market, having been developed more recently, are still in the early stages of development. Consumer interest is continuing to increase (latest figures show the liquid organic milk market at 28% market share) and products are becoming more widely available. The fact that the products are more expensive makes customers expect a high quality product.

Related and supporting industries

The organic milk market in Denmark has been very successful but the other organic food markets have also helped the market to grow. All organic sectors are growing, especially the fruit and vegetable market and the bakery market. Each of these is giving support to the others. Market shares are high: for flour, 11%; grain products, 22%; and for some vegetables, for example, carrots 11%. Consumers satisfied with one type of organic product are more likely to purchase other organic food products.

Firm strategy, structure and rivalry

Two companies, the retailer, FDB and the dairy processor, MD Foods, played a major role in the development of the Danish organic milk market in recent years. Both companies used their power and marketing expertise to develop the market.

Initially, firms targeted the 'green' consumers who were interested in an alternative to conventional milk. Niche strategies were used to focus on specific targets, emphasising product differentiation. The product went through a niche life cycle but quickly became a mainstream product and segmentation strategies were developed to target specific groups of consumers.

In the early nineties, farmer representatives approached FDB to persuade them to stock organic milk products. In October 1993, FDB dropped organic prices from 40% to 20% above conventional prices and increased advertising and in-store promotions, including tasting trials to promote organic foods. This resulted in a significant increase in organic milk sales.

This strategy was successful and demand exceeded supply. Today, some of FDB's stores such as Kvickly and Irma specialise in organic foods. As the



market began to stabilise strategies were changed and focused on specific market segments, e.g. women with children, who were frequent purchasers of organic products. When milk sales increased significantly and FDB were satisfied that consumers were loyal purchasers, they encouraged processing firms to develop the market further. The major processors, MD Foods and Klover Maelk, now develop advertising campaigns promoting organic milk as a natural but premium product.

In 1996, MD Foods launched the 'Harmonie' brand to build consumer loyalty. 'Harmonie' became the main brand in organic milk products in Denmark. They focused on consumer perception of the healthiness of organic foods and that they were better for the environment. They pursued segmentation strategies, targeting heavy users of organic products. Market share grew very quickly and MD Foods soon controlled over 80% of the market. They also began creating organic versions of their mainstream brands.

The government

In 1987 the Danish government introduced legislation to govern the organic industry. In 1995 the Ministry of Agriculture devised an Action Plan which set objectives for development including strengthening R&D, increasing the market within the public sector and making conversion more attractive. This action plan is now complete and the government developed a new plan in 1999.

The government also introduced the Ø label, the national organic certification mark. They promoted organic food and created awareness of this brand. The label is more than a certification of organic production; Danes see it as a mark of quality. There is a very high recognition of the Ø label in Denmark.

Organic production is subsidised in Denmark. Policy debate suggests that taxation of polluting inputs should be part of the policy approach to reduce pollution and create environmental benefits by encouraging a move to organic production.

Chance

The initial development of the organic milk market in Denmark was related to environmental issues and the solution was an emphasis on organic food production. A strong element of chance was present in the situation because many other solutions could have been chosen.



THE AUSTRIAN ORGANIC MILK MARKET

Factor Conditions

Much of the interest in organic farming in Austria came from the fear that, after joining the EU, Austrian agricultural products would not be as competitive as those from other EU countries. In 1991, the Austrian government started a subsidies scheme to organic farmers. In 1995 Austria joined the EU, and this allowed the government to make payments to organic farmers under Regulation 2078/92. Farms are not very large, with most farmers in the country having less than fifty cows.

The average size of an organic farm in Austria is fourteen hectares. In 1993 there were seven thousand organic farms in Austria and by 1999 this had grown to twenty thousand organic farms, over half of which had a dairy quota.

Many organic farmers in Austria are members of organic farming associations. These associations have even stricter guidelines than EC 2092/91 or the Codex Alimentarius Austriacus. Being part of an association gives the farmers the right to use that association's label for marketing the product. More than half of the organic farmers are part of the ERNTE organisation that negotiates prices on their behalf. The ERNTE label is displayed on products sold by member farmers. In 1995 the organisation negotiated contracts with Billa, a major retailer, to guarantee farmers a market for five years.

Demand

While there was a strong consumer demand for organic products in Austria, large promotional campaigns undertaken by retailers has driven market growth. The main reasons for buying organic food are that consumers perceive it to be healthier and more environmentally friendly, due to a reduction in the use of artificial fertilisers, pesticides and herbicides. Other reasons include taste, concern for animal welfare and knowing where the product came from.

Supermarkets are the main outlets for organic sales, having 87% of organic sales in 1999. The main retailers in Austria are Billa and Spar, controlling over 50% of the market between them.

In Austria, organic natural yoghurt has the highest market share, closely



followed by organic liquid milk. The cheese and butter markets are still very small. Figure 4 shows the market shares. The price premium for organic liquid milk fell from 30% to about 18% above conventional prices. The higher price premium has been a factor deterring consumers from changing to organic milk consumption. It is believed that the premium may fall a little lower in coming years due to oversupply. However, domestic demand for organic milk in Austria is quite high and it is still continuing to increase.

Related and supporting industries

Organic milk has been assisted by growth in other organic food markets. In Austria, three segments have high market penetration, bakery and cereal, dairy products, and fruit and vegetables, though all segments have similar growth rates. In 1999 market penetration of organic foods was 10% overall, but it was 13% for dairy products.

The conventional dairy industry is also strongly related to the organic industry. Organic milk products have become a part of the established dairy market and not a substitute product.

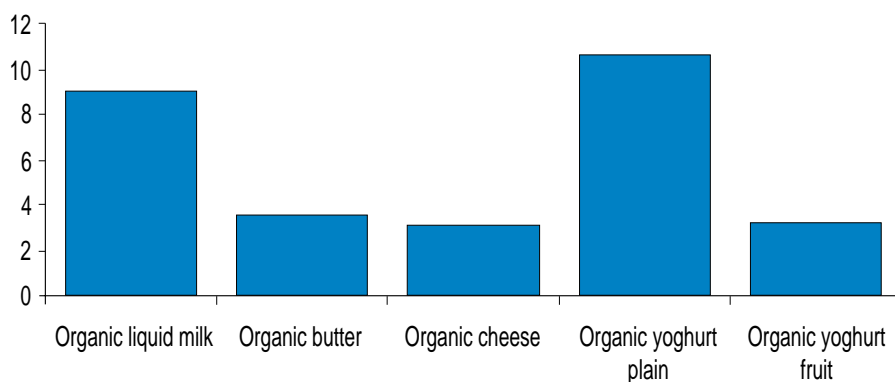


Figure 4: Retail market shares (%) for organic dairy products in Austria in 1999



Firm strategy, structure and rivalry

The main influence on the development of the organic milk market in Austria came from Billa, the largest retailer in the market. In 1994, Billa management recognised that consumers were becoming more concerned about health and environmental issues. They approached the farmers and offered an outlet for their organic products. They worked with ERNTE to negotiate milk prices. In 1994 Billa commenced with organic liquid milk and, in 1995, arranged five-year contracts with the organic dairy farmers. Consumption levels were predicted and market segments were evaluated. They set a target of achieving a retail market share of 10% for their liquid milk products by the year 2000.

Billa used a differentiation strategy, focusing on high quality as well as the organic attributes of the milk. They ensured that a correct understanding of the word organic was conveyed to consumers. Advertising was introduced in the stores to promote organic milk. Organic milk products achieved high growth in a short space of time and the product developed a niche in the market. Billa introduced the 'Ja! Natürlich' brand to promote organic products. The retailer hoped that an identifiable brand could increase awareness of products and increase growth in the market. The product line expanded into yoghurts, butters, and cheeses.

After only five years, the products have progressed from the launch stage to an established stage and have now become 'common' products. Organic liquid milk is no longer a niche product. Within the Billa stores, the products are sold beside their conventional counterparts. They currently target a market of health conscious people, mainly women with children. The products are sold at premium prices, which is part of the differentiation strategy for organic milk. Organic liquid milk has about a 20% share of all milk sales in Billa's stores.

Billa are the market leaders in organic food sales and due to this competitive advantage, others have found it difficult to capture market share. Firm rivalry is now increasing as the market expands. Although the other main supermarket, Spar, developed an organic brand 'Naturpur', it has not been as successful as Billa's 'Ja! Natürlich' organic label.



Government

The Austrian government was the first in the world to fix guidelines for organic farming. In 1983, the Federal Ministry for Health and Environmental Protection introduced organic rules. In 1989, official guidelines for organic farming were introduced into the Austrian Food Codex. In 1991, Austria outlined the first regulations for organic production of animal derived products. Since joining the European Union in 1995, Council Regulation 2092/91 has also applied to Austria.

In 1995 the government set up Agrarmarkt Austria, an organisation to promote Austrian food. A subsidiary group of AMA, Agrarmarkt Austria Marketing, ensures that farmers comply with food regulations. AMA Marketing also introduced a national organic label and deals with subsidy payments for organic production.

There are two variations of the AMA organic label, one with indication of origin and one without. One label guarantees that the raw materials of the product originated in Austria. If this is not possible, imported raw materials can only be one third of the product. The other label, without indication of origin, certifies that a product is organic though it may not have been grown in Austria. The national label for organic food has been another positive influence on the growth in the market.

Chance

Two chance factors were very influential in the organic milk market in Austria. Firstly, entry to the EU meant farmers had to find a more profitable means of farming and organic farming was chosen as an option. The second was the entry to the market of the retailer Billa, who were interested in developing a separate niche, and chose organic food to do so.



THE IRISH ORGANIC MILK MARKET

Factor Conditions

The basic factors of production in this industry are the organic farmers and their land and resources. In Ireland there were about one thousand organic farmers in 2000. This includes those already converted and those in the process of conversion. The organic farms are generally smaller than conventional farms. Almost 70% of organic farms are smaller than forty hectares, mainly producing vegetables and beef. Organic milk volumes are very low, with production less than 0.01% of conventional milk production, from about 25 farmers including conversion farmers.

There is only one processor of organic liquid milk in the country, Glenisk Dairies in Tullamore, Co. Offaly. They also process organic yoghurt. Donegal Creameries process organic UHT milk. Other small companies make some butter and cheese. For logistical reasons, all of the milk is not used in the organic processing system. The remaining organic farmers generally have their milk sold to conventional processors. The farmers receive a higher price for their organic milk than they would receive for conventional milk. Even so, farmers are slow to convert due to increased labour and higher farm costs. There are more summer milk producers than winter milk producers because conventional winter milk prices are attractive to farmers. This causes problems for the processor who needs a stable supply to maintain shelf space in the retail outlets.

Demand Conditions

The Irish organic market is in the early stages of development, yet in the last couple of years there has been an increase in consumer interest in organic products. This growth in interest has been associated with health and also the taste of organic food.

Irish consumers of organic food are more likely to be in the ABC1 socio-economic group, female, married, from a small to medium sized household and more likely to live in urban areas.

Organic milk is 20-30% more expensive than conventional milk. The price premium for organic yoghurt is much lower. Organic cheese and butter



premiums are generally a little higher than those of yoghurt or milk.

Bord Bia (Irish Food Board) found nearly 85% of Irish consumers did not recognise any of the main organic certification symbols and only 17% of consumers knew what any of the symbols meant. The main outlet for organic purchases is supermarkets, followed by health stores and specialist shops. Supermarkets control two-thirds of the market and most of these purchases are in the urban stores. The demand for organic milk and milk products is still quite small but increasing over time.

Related and supporting industries

The Irish organic food market, worth about €25 million, is in the early stages of development. In the last couple of years there has been an increase in interest generally in organic products. Fruit and vegetables is the most important market. The organic meat market is the next largest, followed by the dairy market. As yet, there is no evidence that other organic sectors have helped growth in organic dairy product markets.

The Irish dairy industry is a strongly competitive industry. Growth rates, productivity and investment in dairy products have been one of the highest in Europe. Lack of market entry by the major processors has hindered market development of organic milk products.

Firm strategy, structure and rivalry

The largest dairy processor, Glanbia Foods, control almost 70% of the liquid milk market but has no organic products. The only major player to have entered the organic dairy market is Golden Vale, with an organic cheese. Thus, the two main rivals in the Irish market are the Tullamore based Glenisk Dairies and Yeo Valley, an English based company. Both companies are concentrating on organic yoghurt, which has the largest market share of all the organic milk products. It is estimated that organic yoghurt has 5% market share with a market value of about €1.7m.

The other principal firms in the organic dairy market in Ireland are the multiples. The multiples control almost half of the grocery market and supermarkets are gradually stocking more organic food. All the stores appear



to have a positive attitude towards organic products. Organic products are usually placed beside the conventional equivalents. However, some stores are operating strategies where the organic dairy products are separated from the conventional products and given a special section. The range of products is limited and many stores in rural areas do not stock any organic dairy products.

Firms in the Irish organic milk industry have not been aggressive in developing the market and many of the firms are recent entrants. As yet the market has not been developed beyond a small niche market.

Government

In 1990 the Department of Agriculture and Food set up an Organic Farming Unit to develop organic farming in Ireland. The Department authorised private inspection bodies to carry out inspection and certification. There are three certification bodies in Ireland and discussions are ongoing on future certification in the context of new EU regulation. In Ireland, the following two support schemes are operated by the Department of Agriculture, Food and Rural Development:

- Supplementary Measure 6 of the Rural Environment Protection Scheme (REPS). The financial assistance offered to organic producers is mandatory EU support.
- Scheme of Grant Aid for the Development of Organic Farming under the National Development Plan 2000-2006, which offers financial assistance to farmers, groups, companies or co-operatives for grading, packing, storing and distributing organic products. This is the first major indication of a more active role being taken by the government in the sector.

Chance

To date the most significant chance events have been the BSE and the 'Foot and Mouth' situations. It is too early to conclude definitely how, if at all, they have impacted the Irish organic milk market.



DELPHI FORECASTING

The Delphi Technique was used to determine market shares for organic dairy products in Ireland.

Table 3: Prediction of future market shares in Ireland for four organic dairy products by a panel of 12 industry experts.

Organic liquid milk				
Delphi round	2003 Median	IQR	2006 Median	IQR
Round 1	0.5%	0.2% - 2.1%	1%	0.5% - 3.4%
Round 2	0.5%	0.3% - 1%	1%	0.5% - 2.8%
Organic yoghurt				
Delphi round	2003 Median	IQR	2006 Median	IQR
Round 1	7%	7% - 10%	10%	10% - 12%
Round 2	7%	7% - 9.5%	11%	9.3% - 12%
Organic butter				
Delphi round	2003 Median	IQR	2006 Median	IQR
Round1	0.2%	0.1% - 1%	1%	0.3% - 1.5%
Round 2	0.2%	0.1% - 0.5%	0.7%	0.3% - 1%
Organic cheese				
Delphi round	2003 Median	IQR	2006 Median	IQR
Round1	0.4%	0.1% - 1.3%	1%	0.5% - 4.3%
Round 2	0.8%	0.2% - 1.3%	2%	0.7% - 4.3%



Twelve of the panel of independent experts responded to both rounds. The median and inter-quartile range (IQR) were calculated from the panellists' responses. The median, which is a measure of central tendency, is used as the forecasted market share for the future. The IQR gives the range of prediction for the middle 50% of respondents. Table 3 shows the results.

For three of the four categories, the predictions were broadly similar in round 1 and round 2. For cheese, the median doubled for both predictions in round 2. Market shares for all products were estimated from the median. Table 4 summarises the outcome.

Table 4: Predicted market shares (%) in Ireland for each organic product in 2003 and 2006 by a panel of 12 industry experts.

	2003	2006
Liquid milk	0.5	1
Yoghurt	7	11
Butter	0.2	0.7
Cheese	0.8	2

The final results show that yoghurt will have the largest penetration, with an estimated market share of 7% in 2003 and 11% in 2006. The organic cheese market is forecasted as the next largest with shares of 0.8% in 2003 and 2% in 2006. The liquid milk market is estimated to have market shares of 0.5% in 2003 and 1% in 2006. The butter market is predicted to be the smallest, with a market share of 0.2% in 2003 and 0.7% in 2006. Most respondents agreed that more government support would encourage dairy farmers to convert to organic practices and believed that limited supply is hindering growth. Most experts also agreed that consumers are prepared to pay a higher price for organic dairy produce and that the entry of a large processor would increase market share. The opinions about retailer support were mixed, half of the experts agreed that retailer support was strong, the rest disagreed or had no opinion.



In round 2, the panel was asked to name one development that needs to happen for the organic dairy market to achieve significant market share (i.e. 5% by 2006). The issue of price premiums was identified. If farmers received a higher price for their milk, they would be more encouraged to convert to organic production; however the price could not be too high as consumers would not be able to afford the product. The entry of a large processor was identified as a development that would have a strong effect on market growth.

IN-DEPTH INTERVIEWS

Growth

Most interviewees expect the organic milk product market to grow to become a larger market. While there is consumer interest in liquid organic milk the low production base is a problem. Current supply is meeting demand but the belief is that if more product was available, then advertising and promotion could increase awareness, leading to higher consumption. However, in the organic milk products market, yoghurt is a larger and more sustainable market than organic liquid milk. A large amount of the organic yoghurt sold is produced in Ireland but there is currently not enough organic milk supplied to develop a butter or cheese market.

Prices

The experts believe that the higher price of liquid organic milk will not deter consumers from buying it. Currently, customers who buy organic milk tend to have a higher disposable income than non-purchasers. A price premium of up to 25% would not be a problem. Consumers have a tendency to purchase milk based on a brand. All interviewees stated the importance of a brand to Irish consumers. Therefore a price premium on liquid organic milk will not be a major deterrent and a strong brand is important for the development of the market. A large processor is needed to develop a strong brand.

Promotion

The experts believed that appropriate levels of advertising would encourage consumers to buy more organic milk. Some of the major retailers have carried



out in-store promotions and reduced price to encourage trial among their customers. Some said recent health scares have increased consumer interest in health and environmental issues, which has helped the organic milk market. An opposing viewpoint was that Irish consumers are content with the conventional milk they currently purchase. Consumers do not fully understand what organic foods are and, therefore, do not see any benefit in purchasing the products.

Processor entry

For the market to grow, the experts considered the most important development would be the entry of one or more of the large processors. A large processing company would be needed to develop a new brand and a marketing strategy for the product.

Retailer interest

The experts believed that retailer interest in the market has increased in the past two years. Retailers would offer more shelf space but currently there is not enough supply to meet any extra demand.

Government

Government support is needed to develop organic farming. More research in organic farming practices is needed to advise farmers on the best farming methods. More financial assistance might also encourage farmers to convert, as it would relieve them of some of the apprehension of entering a new market.

Certification

The interviewees felt that one national umbrella organisation would be more beneficial to farmers and consumers. With one organisation, recognition of an organic label would be easier and there would be a greater understanding of its meaning.



IRELAND, DENMARK AND AUSTRIA COMPARED

Both the Austrian and Danish markets are advanced organic markets. Certain similarities present in the Austrian and Danish markets are not yet present in the Irish market. One of the dominant features of the Austrian and Danish organic milk industries is the strength of the key players in the market. Although the farmers and consumers are very important, the influence of Government and the firms in the industry has been the key success factors.

At present in Ireland the elements of the Diamond Model, i.e. factor conditions; demand conditions; firm strategy, structure and rivalry; related and supporting industries, government and chance are operating as individual factors in the industry. Due to this lack of integration, the development of the organic milk industry is restricted. The Irish market is underdeveloped. The strategies Irish firms, both processors and retailers, choose will be critical to market development.

The experts view is that growth in the organic milk market is expected to follow the European trend but at a slower rate. The experts believed that to achieve high growth, processors, retailers and the government needed to invest in the market. All of the Diamond elements are dependent on each other and the strengthening of only one of the elements will not necessarily lead to success. Production of organic milk products will not increase unless consumers, retailers, processors and government drive this development. Unless there is a constant supply of organic milk, large processors will not enter the market, retailers will be unable to stock the products and therefore unable to satisfy demand. Major expansion of the existing processor base or investment from large conventional firms will be necessary to develop brands and promote organic milk to consumers. If the organic milk market is to develop to the stage that Austria and Denmark have reached, a strong and easily recognisable brand is required, such as the 'Ja! Natürlich' or 'Harmonie' brands.

High growth requires the Diamond elements to work interdependently to achieve a sustainable competitive advantage. The current situation in Ireland lags behind much of Europe. At present, countries such as Austria and Denmark are exporting organic milk products. This could adversely affect the strong conventional export market that Ireland holds. The Irish dairy industry should consider the need to meet Irish and European consumer demand for organic dairy products to maintain its strong competitive position.



An increased role by government is a necessary but not sufficient condition for market growth. It will stimulate production factor conditions, but more interest from management in the dairy and retail industry is crucial to achieve even some of the growth of Austria and Denmark. The potential of the Irish market will ultimately depend on how the relationship between the elements in the Model develops.

CONCLUSIONS

- Some growth is predicted in the liquid milk and butter market, with more growth expected in the organic cheese market. Yoghurt is predicted to grow to a relatively large market share
- Unless similar influences to those that were present in Austria and Denmark appear in the Irish organic milk industry, it will remain a niche market, slightly larger than at present
- The growth predicted by industry experts could be even greater if certain factors occur in the industry, and drive development. The success of the organic milk market will depend on the strategies adopted by firms in the market. A major issue is lack of participation in the market by the large Irish milk processors
- A low supply of organic milk is hindering the market but farmers are slow to convert due to a fear that consumers will not buy the products.
- Organic products have been widely accepted all over Europe, particularly in Denmark and Austria and if similar elements work interdependently in Ireland, then the potential market could be realised.

RECOMMENDATIONS TO INDUSTRY

Existing liquid milk suppliers and processors need to consider this analysis and examine the technical, economic and market feasibility of market entry. In particular offering an organic alternative at the doorstep should be examined.

Guaranteed markets, such as those developed by Billa in Austria could be the push farmers need. Without constant supply, processors and retailers cannot invest in



the market and develop brands. Retailers should consider whether the organic sector might offer an opportunity to differentiate from their competitors.

Organic milk is a new product and not fully understood by the majority of Irish consumers, therefore advertising campaigns are necessary and the product and its attributes must be explained in an effective manner for product acceptance.

An organic development committee chaired by the Department of Agriculture, Food and Rural Development has developed a strategy for supporting the development of the Irish organic sector. This could also provide some of the impetus needed for interested parties to enter the market. Information about this strategy is available from the Department of Agriculture, Food and Rural Development.

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The National Food Centre

RESEARCH & TRAINING FOR THE FOOD INDUSTRY

Ashtown, Dublin 15, Ireland.

Telephone: (+353 1) 805 9500

Fax: (+353 1) 805 9550