



# Nordic Food Markets

- a taste for competition -



norden

Nordisk Ministerråd

Unammilleqatigiinnermut Ataatsimiititaliaq



SAMKEPPNISEFTIRLITID



# **Nordic Food Markets**

## **- a taste for competition**

**November 2005**



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## Preface

Food prices tend to be higher in the Nordic countries compared to other European countries. At the same time the supply of food articles in the Nordic supermarkets appear to exhibit a narrower range of products than in other European countries. Against this background, it was decided at the Nordic meeting of Competition Authorities in September 2004 to look closer at the conditions on the Nordic food markets.

A Working Group was formed to identify, analyse and propose solutions to the competition problems in the Nordic food markets. This report presents the results and provides recommendations on how to promote and ensure a competitive Nordic food market. Agricultural, fishery and regional policy considerations have not been included in the investigations. The Danish Competition Authority has been the executive committee, and has written the report with contributions from the other Nordic Competition Authorities.

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The conclusions and the recommendations in the report are based on interviews with the market players, data from national statistics authorities, special studies conducted by AC-Nielsen, Eurostat and Hornstrup and Hornstrup. The project gratefully acknowledges financial support from the Nordic Council of Ministers. The Working Group wishes to use this opportunity to thank the Nordic Council of Ministers for their help and support.



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## Executive Summary and Conclusions

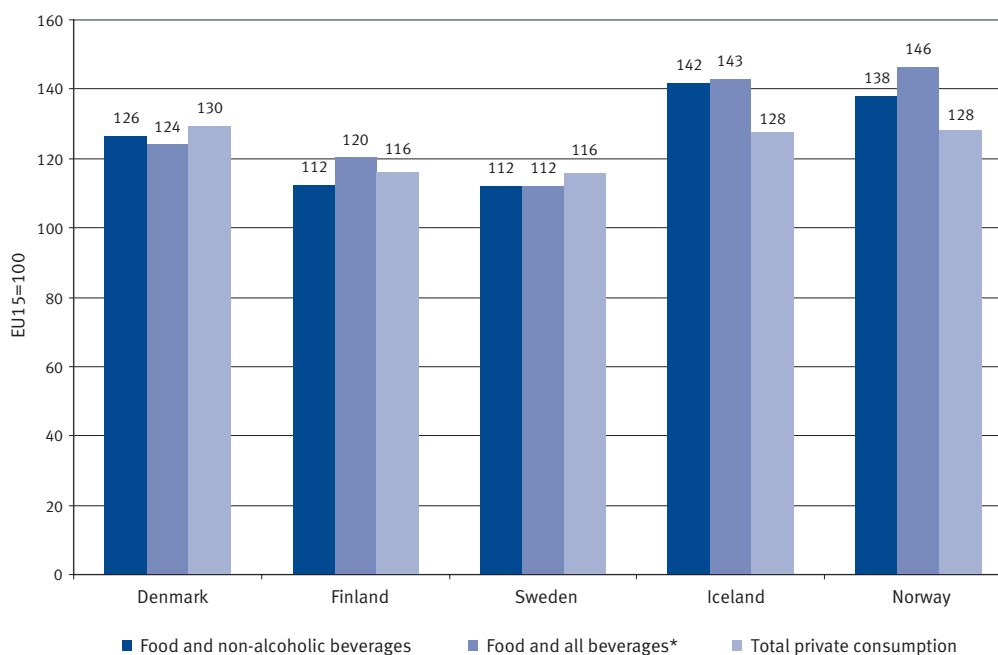
The Working Group has examined the food markets in the Nordic region. The background is that for some years Nordic food prices have been higher than the European average (EU15, i.e. EU minus the new Eastern European member states). Moreover, the assortment of food in Nordic supermarkets appear to be smaller than in other European countries.

High prices in a country means that consumers pay more for goods and services compared to other countries. This can be due to lower productivity or because the costs, such as wage level or profits are higher than elsewhere. A more restricted number of food products compared to other countries imply that consumers have less choice, that the producers' products are less likely to reach supermarket shelves, and that markets tend to be less dynamic. On that account, there have been good reasons for a closer look at how competition works in the Nordic food industry and the retail sector and at the state of market integration in the Nordic region.

### Nordic food prices

According to Eurostat figures for 2004, the average prices paid by consumers for food and beverages (soft drinks and beer) bought in supermarkets in the Nordic region were between 12 per cent and 46 per cent higher than the European average, cf. fig. 1.

**Figure 1. Gross food and beverages prices, 2004**



Source: Eurostat and the Working Group's own calculations

Note \*: Beverages, i.e. soft drinks and beer

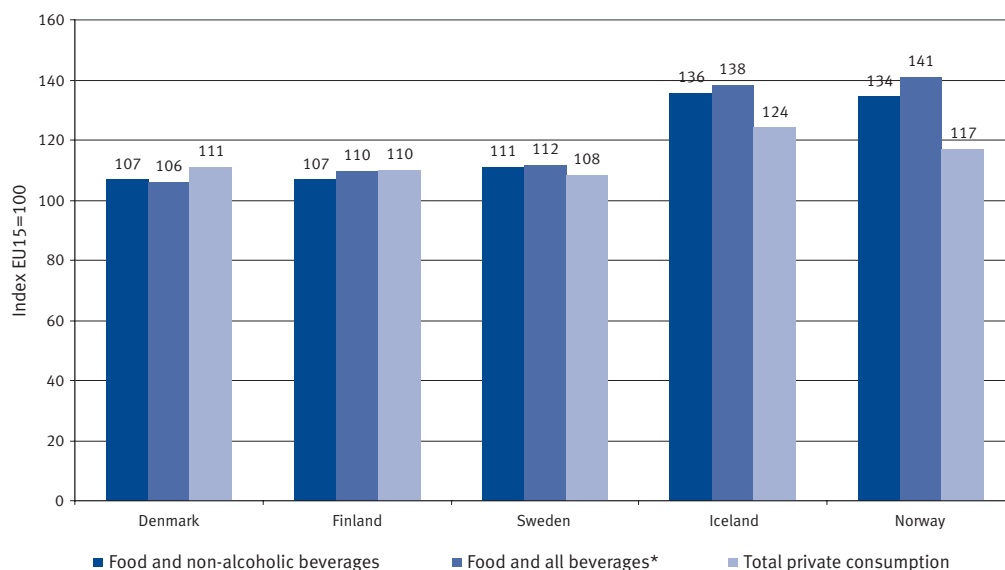


For food and beverages exclusive alcoholic beverages the price gap is smaller, between 12 per cent and 42 per cent. In Finland, Iceland, Norway and Sweden the sales of alcoholic beverages in the supermarkets only contains beer up to 2.25 per cent alc. (Iceland), 3.5 per cent alc. (Sweden), 4.5 per cent alc. (Norway) and 4.7 per cent alc. (Finland). In these countries, the sales of alcoholic beverages are restricted, and prices on alcoholic beverages are therefore not the result of the competitive process in the food sector.

One reason for the price gap between the Nordic countries and the European average is differences in the level of taxes on the production and sale of food. VAT and excise duties on food products (for example beverages) are higher in the Nordic countries, especially in Denmark and Finland, than in the other countries in the EU. Another factor to be taken into consideration is campaigns with temporary price cuts. Short-term price campaigns are used more extensively by supermarkets in the Nordic countries, and especially in Denmark than in for example Germany and France. Short-term price cuts (a week or less) are generally not fully included in Eurostat's collection of prices.

If VAT, taxes and price campaigns<sup>1</sup> are deducted from the consumer prices in fig. 1, the net price differences on food and beverages are reduced to 6-12 per cent (7-11 per cent exclusive alcoholic beverages) between Denmark, Finland and Sweden (2004) and the EU15 average. Average prices in Norway and Iceland are still 38-41 per cent (34-36 per cent exclusive alcoholic beverages) higher than the European average, cf. fig. 2. There are no comparable databases of prices in Greenland or the Faroe Islands.

**Figure 2. Net food and beverages prices (excl. taxes), 2004**



Source: Eurostat and the Working Group's own calculations

Note \*: Beverages, i.e. soft drinks and beer

Norway and Iceland are not members of the EU and maintain tariffs and tariff-free quotas on the import of agricultural products that are also produced domestically<sup>2</sup>. The systems are not identical, but their effect in practice is much the same, i.e. to keep imports low in order to ensure the sale of domestic production of agricultural products which are considered of strategic importance, for example meat and milk<sup>3</sup>. This regulation seems to be a

1 The deduction of price campaigns is only done for Denmark, see chapter 2.3.

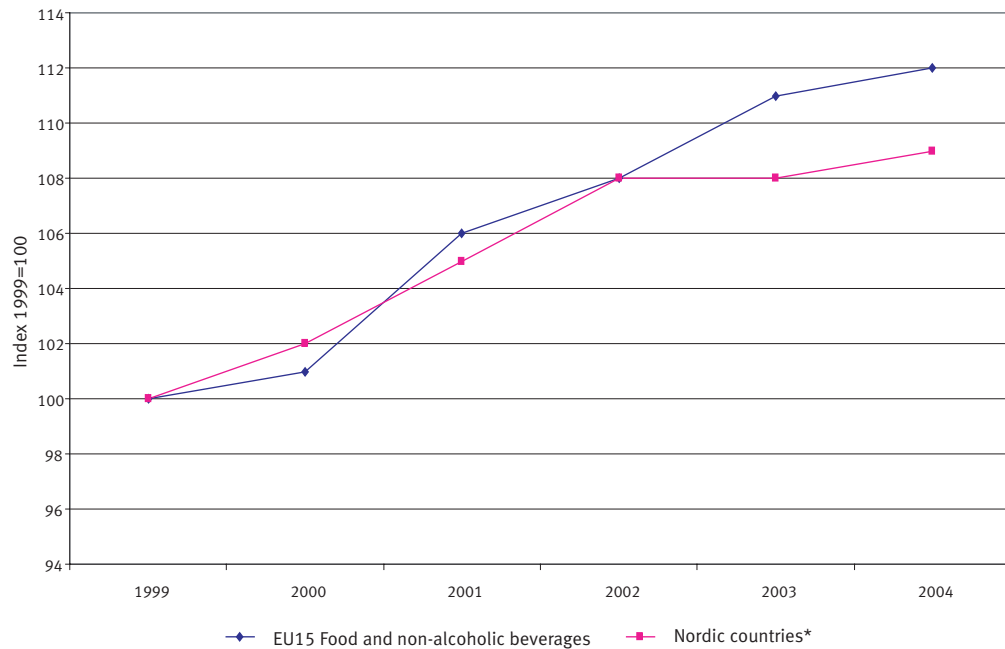
2 There are, however, small but growing quotas for import without tariffs.

3 Still, there are no restrictions on the import of processed agricultural foodstuffs and products that are not produced domestically. Hence, the national import regimes explain the high prices on products subject to import restrictions, but not on all products.

main reason why the food price levels in these two countries are much higher than in the rest of the Nordic region and in Europe.

However, food and beverages (non-alcoholic) prices in the Nordic region have increased at a slower rate than in EU15<sup>4</sup> in the past years, cf. fig. 3. From 1999 to 2004 food prices in the Nordic markets increased by 9 per cent points, compared to an increase of 12 per cent points in EU15. Thus, the gap between the food prices in the Nordic countries and the rest of Europe has been reduced. This may indicate that competition in the food markets has improved.

**Figure 3. European and Nordic food and beverages (non-alcoholic) price development**



Source: Eurostat

Note\*: Denmark, Finland, Iceland, Norway and Sweden

### Food assortment

A diverse food assortment is important to consumers and a wide range of different products in grocery stores makes it easier for new and small producers to gain access to supermarket shelves. Therefore, a wide selection may make markets more dynamic and give the consumers better opportunities for trying new products.<sup>5</sup>

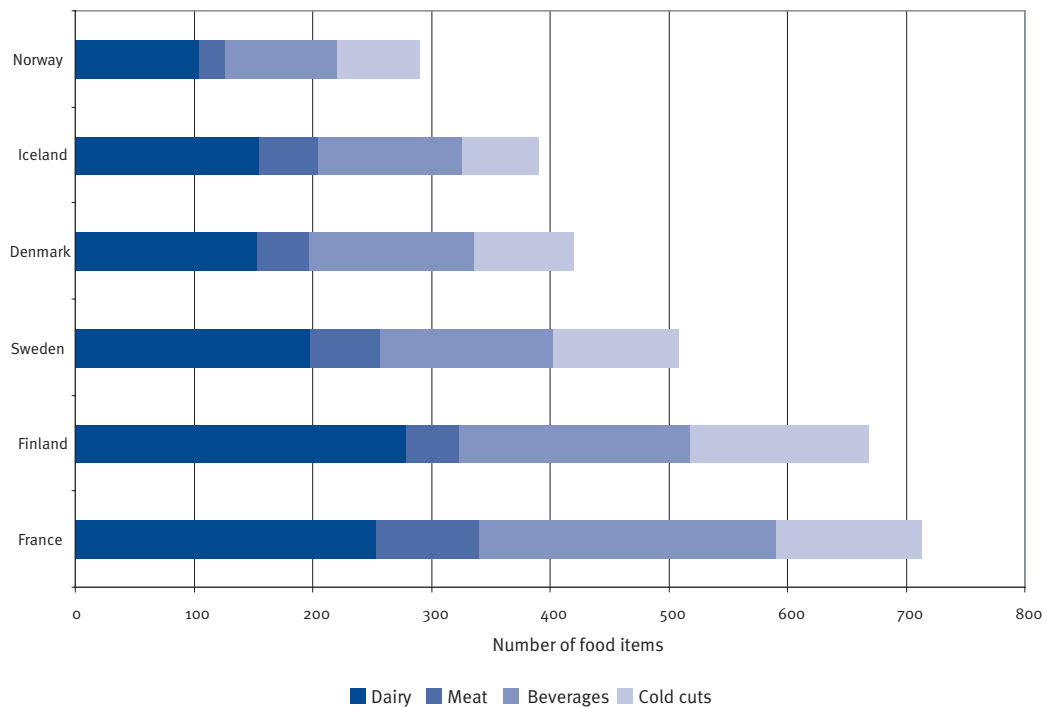
There hardly exist any comprehensive studies comparing the food assortments in supermarkets across the EU. The only exception known to the Working Group is a study by the Federation of Norwegian Agricultural Cooperation in 2005. The Working Group has therefore initiated an investigation of the ranges of food products in a sample of supermarkets in Denmark, Finland, Iceland, Norway, Sweden and France<sup>6</sup>. This investigation shows significant differences; consumers in Denmark, Finland, Iceland, Norway and Sweden have a much narrower choice of food than consumers in France, cf. fig. 4.

4 Price developments in Denmark, Finland and Sweden have been close to the Nordic average, whereas the rate of price increases has been somewhat faster in Iceland and slower in Norway.

5 See chapter 2.4.

6 See chapter 2.4.

**Figure 4. Number of food items in an artificial average supermarket, 2005**



Source: Hornstrup and Hornstrup, 2005

Figure 4 compares the product ranges in “an artificial average supermarket”<sup>7</sup> in each of the countries within 4 important product groups: dairy products, beverages<sup>8</sup>, meat and cold cuts. The results within each of these product groups differ somewhat, but overall the investigation shows a wider selection of products in France than in any of the Nordic countries.

Two explanations are likely for these differences. First, the retail structure is different in France than in the Nordic countries. Since larger stores have more products the differences are, in part, explained by differences in retail structure. Second, the evidence suggests that a food store in France in general has more choice to offer consumers compared to a similar food store in any of the Nordic countries.

The investigation on the range of food products is based on a limited sample of supermarkets and the results are thus somewhat uncertain. However, the investigation indicates that Iceland and Norway seem to have, in addition with comparably high price levels, a narrower assortment of food compared to France. The same holds for the Nordic EU members Denmark, Finland and Sweden although the differences are smaller. The results regarding assortment from a recent Norwegian study<sup>9</sup> show a somewhat different picture.

### The retail sector

During the past 10-20 years the supermarket sector<sup>10</sup> has expanded and integrated horizontally and vertically. Today, supermarkets account for 80-90 per cent of retail sales of food in all the Nordic countries and the EU. At the same time the shops have grown - the

7 In the present investigation “an artificial average supermarket” is calculated for each country as an average of the results from the supermarkets, hypermarkets and discount markets in the country in question weighted with their national market shares.

8 Non alcoholic and alcoholic beverages where alcoholic beverages include beverages with up to 2.25 % alc. (Iceland), 3.5 % alc. (Sweden), 4.5 % alc. (Norway) and 4.7 % alc. (Finland).

9 Study conducted by the Federation of Norwegian Agricultural Cooperation, 2005, cf. chapter 2.4.

10 All kinds of stores – exclusive kiosks, gas stations and speciality shops - where a household can buy all kinds of food and non food articles.

total shop space within the supermarket sector has increased in all the Nordic countries between 1995 and 2003, most in Finland (20 per cent) and least in Norway (4 per cent).

Each of the Nordic countries has more shops per 10,000 inhabitants than, for example, Germany, the UK or the Netherlands. At the same time the population density (cap/km<sup>2</sup>) is sparse compared to the other European countries, except in Denmark, but as most households live in urban areas where supermarkets are located, this does not change the fact that most Nordic consumers have, in international comparison, good access to retail stops.

Today, nearly all supermarkets are organised in different chains or groups where all the stores in the same chain appear alike. Customers can to a high degree find similar ranges of products in all shops belonging to the same chain and at the same (maximum) prices. However, within some chains the range of products can - to a limited degree - fluctuate from shop to shop, e.g. with products from local suppliers.

Each chain tries to build up a special profile, distinct from the competitors. Some chains are local or regional, but most chains are nationwide and cover all parts of a country and some have entered neighbouring countries.

Within the supermarket sector especially the discount supermarkets have expanded and increased their market shares. The success of the discount markets is due to their policy of low prices. Their product range is limited. Some of them offer as little as 600-1500 different grocery items, most of which is food and many articles are branded with the chain's own label.

In 2003 discount markets had reached a market share of 38 per cent and 51 per cent in Iceland and Norway, respectively, cf. table 1. In Sweden and Finland their market shares were considerably lower, 14 per cent and 12 per cent, respectively, but they were growing fast. Among the discount markets, the international chains, such as Aldi and Lidl, are often characterised as hard discounters due to their concept of small assortment, extremely low costs and limited services, and therefore low prices. In 2003 there were no hard discounters in Norway and Iceland. Aldi entered the Danish market in 1977, and since 2002 Lidl has opened a number of shops in Finland, Sweden, Norway (2004) and Denmark (2005).

**Table 1. Market shares of discount supermarkets (2003) and hypermarkets in the Nordic countries (2002)<sup>1</sup>**

	DK	SF	IS	N	S
Discount markets	26	13	38	51	11
- of this hard discount	4	3	0	0	0,5
Hypermarkets	18	30	2	6	21

Source: Chapter 4

Note 1. The characteristics of discount supermarkets, hard discount and hypermarkets are described in box 4.2.

While the Nordic countries are well represented in international comparisons as far as the total number of discounters is concerned, they still lag behind other European countries as regards hard discounters. In Germany, hard discounters account for 26 per cent of the market, in Belgium 14 per cent, 10 per cent in the Netherlands and France.

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There are also significant differences in the market shares of hypermarkets<sup>11</sup>. They try to gain market shares by selling a large selection of attractive products including non-food and by offering occasional price cuts on a small range of products. The share of turnover of hypermarkets in Iceland and Norway is 2-5 per cent (2002) and 20-30 per cent in Sweden and Finland. France has one of the largest hypermarket sectors in Europe accounting for approximately 50 per cent<sup>12</sup>.

The increasing number of discount markets and hypermarkets is part of the ongoing restructuring and consolidation of the grocery trade in all countries. As a result marketing chains have grown larger and larger; some have reached 300-400 shops covering a whole country.

Moreover, the retail chains have concentrated their purchasing within a few organisations, often covering several chains. Today, 4-6 organisations negotiate agreements with the suppliers and make decisions on what to buy and what to put on the shelves in the supermarkets of the different chains in each of the Nordic countries. In order to achieve further volume and advantages in negotiations, some of the Nordic purchasing organisations are also part of international buying groups or organisations (for example Spar or Lidl).

Thus, today the concentration is stronger in the Nordic retail sector than in other European countries, cf. table 2.

This concentration has significantly strengthened the purchasing groups' bargaining position vis-à-vis the suppliers, leading to lower purchasing prices. Moreover, the internationalisation of retailers has led to better knowledge of foreign markets and improved possibilities for exploiting differences in national price levels and for introducing new food products at home.

The rationalisation and concentration have properly increased efficiency within retail groups. Wage costs in the Nordic countries are higher than the European average, and wages account for a significant share of total retailing costs.<sup>13</sup> However, the supermarket chains that have expanded the most, especially the hard discounters, have significantly lower wage costs than the traditional retailers. The increasing market shares of the hard discounters are a manifestation of enhanced competition on the Nordic food markets which probably have contributed – and will contribute - to a narrowing of the difference between the Nordic price level and the European average in the near future.

This process has also contributed to make the selection of food in each chain concept more uniform than before<sup>14</sup>. Discount markets offer low prices and limited choice, supplemented by a growing share of non-food products, often on sale only for a limited period of time. The wide selection of food products is found in hypermarkets and supermarkets. The existence of different kinds of shops – to some degree - provide consumers with as well low prices as a rich supply of different food products.

Fewer competing chains normally mean weak competition unless markets are open without barriers to entry for new retailers, new shop concepts, etc.<sup>15</sup> Thus, the opportunities of chains with different ideas for entering the market are important. Entry of new chains requires access to suitable sites for new supermarkets, and access to supplies. New supermarkets can either be supplied from one of the existing wholesalers which runs a number

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11 In this report hypermarkets are defined as supermarkets with a sales area of more than 2,500 m<sup>2</sup>.

12 See chapter 4.

13 Chapter 4, table 4.6.

14 In capital chains (see box 4.1) the chain decide which products to buy for all members of the chain. In voluntary chains each member of the chain has some degree of freedom to choose from the assortment decided on by the chain.

15 It should be noted that the condition for market integration in between the Nordic countries differ widely.

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of warehouses and distributions networks or they must be able to set up their own supply system with their own warehouses and logistics. As the number of wholesalers is declining, the latter approach is becoming more important. From the outset entrants are required to have the capacities to build up a whole network of stores, warehouses and their own logistics.

Also, all supermarkets belonging to the same marketing chain offer nearly the same range of products. This might be reinforced if the different chains buy from the same group of suppliers. As the supply side of the Nordic food sector is very concentrated, this is a likely to happen.

On the other hand, retailers' use of own (private) labels is on the increase<sup>16</sup>. However, the market shares of private labels in the Nordic countries are still low compared to, for example, Germany, France or the UK. Private labels can be regarded as an alternative to the manufacturers' own brands. Private labels are only profitable given large enough volumes. The international discount chains Aldi and Lidl have a very high share of private labels on their shelves and the increased use in the Nordic countries is partly attributable to the progress of these chains – although also other supermarket chains are making increased use of private labels, for example Coop.

Products with private labels do frequently replace manufacturers' brands. However, it is not clear whether overall choice for consumers is affected negatively. Private labels are typically cheaper than the manufacturers' brands. At the same time it is more difficult for consumers to compare the prices of private labels than the prices of manufacturers' own brands bearing in mind that private labels are only found in one chain. Greater transparency and thus improved opportunities for making comparisons can be achieved through consumer information about e.g. unit prices.

### **Food industry**

On average the food industry (excl. agriculture) accounts for 14 per cent of total industry output in EU25. In Norway, Iceland and Denmark the share is significantly higher, 24-53 per cent<sup>17</sup> of industry output, whereas it is somewhat lower in Sweden and Finland, 8-10 per cent.

Like the retail companies, the food industry has been through a period of consolidation and rationalisation. In order to achieve volume and reach large-scale efficiencies food companies have expanded their production facilities and entered into new alliances or merged<sup>18</sup>.

Thus, concentration on all the Nordic markets in the food and beverages industry has increased. Calculated on a national basis, today the leading supplier on all the main product markets holds a market share (CR1) of 50 per cent or more with a few exceptions. Concentration on the Nordic food markets is thus significantly higher than in Germany and the UK, for example, cf. table 2<sup>19</sup>.

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16 See chapter 5.

17 Fishing industry included.

18 See chapter 6.

19 In the individual cases it is necessary to make a specific partitioning of markets, which can differ from case to case. Investigations of individual cases from the food markets have shown that today some geographical markets are larger than the national territories. As an example, in 1999 the European Commission reached the conclusion that production and sale of beef in Denmark was part of a market which was larger than the Danish territory. Where this is the case, the market shares in table 2 do not provide an accurate picture of the companies' market position on all market segments (see also chapter 6).

**Table 2. Concentration in selected food industries and in retailing 2002/03**

	DK	SF	N	S	IS	D	UK
Sale of CR1 <sup>1</sup>							
Pig meat (%)	70	40	60 <sup>2</sup>	60	na	<10	20
Liquid milk (%)	85	80	95	60	42*	<5	30
Bread (%)	55	30	30	35	na	<5	-
Bereriages (%)	65	45	55	45	40	<10	<25
Retail							
CR1 (%)	35	35	35	45	45	25	25
CR3 <sup>1</sup> (%)	90	80	80	90	82	60	60
HHI <sup>1</sup>	0.28	0.26	0.26	0.32	0.28	0.16	0.15

Source: The Nordic Competition Authorities

Note 1. CR1 = market share of the leading market player; CR3 = market share of the three largest market players  
HHI = Sum of the squared market shares divided by 10000.

Note 2. Includes beef and mutton.

Note \*. In April 2005 the two biggest dairies merged. Their combined market share is now 65 per cent.

### Competition for shelf space

The increased concentration on both the supply and the retail side has had an impact on competition. It has made it possible to obtain large-scale efficiencies at each stage of the supply chain while at the same time changing the conditions for getting access to the supermarket shelves. Especially, the growing power of the large retail groups has influenced bargaining between producers and retailers.

The supermarkets try to exploit their power to their advantage. The Working Group has found<sup>20</sup> that this leads to lower prices from the suppliers, support for marketing, allowances to cover costs in the shop, better quality and service, joint marketing, slotting allowances, etc. In this bargaining process minor suppliers may be at a disadvantage compared to large producers with market power.

Retailers put pressure on suppliers for lower purchasing prices. They also try to utilise the knowledge they obtain from consumers' purchasing habits through a systematic mapping of sales. This means that the impact of marketing plays an increasing role in the negotiations with suppliers. As a consequence, negotiations become more complex and include new areas like joint marketing, payment for access to the shelves etc. Suppliers must be willing and able to participate in in-store activities.

This may prove difficult for minor suppliers. They can participate in the retailers' call for tenders for the production of for example private labels and they can submit tenders on equal terms with the large suppliers. Competition in such tenders may be fierce, and winning a contract provides no guarantee of continued presence on the market. An extensive use of calls for tenders by retailers may favour larger suppliers. On the other side, tenders may give small producers opportunity to get a foothold in the market. There are examples where such contracts last for more than five years.

<sup>20</sup> Cf. chapter 5.

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## Market integration

Historically food markets have been national, or even local, owing to among other things transportation costs, tariffs, consumer preferences for national products, different national regulations related to health and food safety issues etc. Some of these barriers to entry have been reduced or even eliminated. The progressing implementation of EU's Single Market and modern logistics have facilitated import from EU/EEA countries, and from visits abroad consumers have become more familiar with foreign food.

It has become easier for the grocery sector's purchasing managers to find a competitive supplier abroad. Transport costs are important in regard to products of large volume and with low value per volume, but for more expensive products the large-scale economies in production can make transport of large volumes over long distances profitable. Long distances are for example no serious trade barrier in regard to cheese while it may be a serious disadvantage with regard to fresh milk.

For a long time the food industry's volume of exports in Denmark, Finland and Sweden has been considerable. At the same time the position of companies on the home market has been challenged by competitors from abroad which have lower costs, including lower wage costs. In order to stay in business, they have been forced to rationalise their production or reorganise. In the same manner as retailers have introduced new structures with low costs, suppliers have also changed their organisation by outsourcing parts of the production process, moving into new niches with better opportunities, or merging.

Since 1999 imports into the Nordic countries have increased considerably. Over 4 years (1999-2003) food imports into the Nordic countries grew by more than 20 per cent, and food trade between the 3 EU members (Denmark, Finland and Sweden) increased considerably more, corresponding to 43 per cent. This indicates that Nordic suppliers have experienced increased competition from abroad, to the benefit of consumers.

Nevertheless, food imports, notably of beer, soft drinks, fresh milk and bread, remain at a modest level compared to consumption. This area, too, has seen some increase in trade across borders. Retailers in Denmark and Sweden have, for example, started to import milk from Germany.

However, although markets have become more integrated and cross-border barriers have been reduced, overall the food markets in the Nordic countries remain national with respect to the way in which they operate.

Consumers traditionally prefer food from their own country. This is not only so in the Nordic countries but throughout most of the EU. Although consumers are prepared to try new products, habits only change slowly. Therefore, most of the food found in supermarkets today is still of national origin. Less than 5 per cent of the branded packages of food are found on the shelves of supermarkets in all the Nordic countries<sup>21</sup>. Retailers that operate the same shop types in more than one of the Nordic countries, such as Coop Norden, Rema1000 and Netto, offer different food assortments in each country; only 10-20 per cent of the products in the shops are the same.

Retail marketing, too, is organised nationally. Marketing both creates and reflects consumer preferences which are clearly national. Moreover, there are differences due to national regulations of, for example, opening hours, advertising, sale of alcoholic products, location of shops, etc. The national character of marketing is illustrated by the fact that all chains, even international chains such as Aldi, Lidl, Netto and Rema1000, plan their food marketing on a national scale.

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21 Interviews with large Danish retailers and own estimations.



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An increasing number of consumers take an interest in food which is produced and marketed in accordance with certain ethical values, for example animal welfare or organic farming. Such special products are more expensive to produce and can have difficulties in getting established in the market and reaching a wider circle of consumers, including consumers in other countries.

Public regulation of the food trade has been increasing as the interest in food safety and health has grown. Such regulations influence trade significantly as they may lead to extra costs for companies which plan to export or import products from abroad. Historically, such regulation and supervision have been national affairs, but the WTO and the European Commission have taken a number of initiatives in order to ensure that they do not constitute unnecessary trade barriers.

The implementation of EU's Single Market has been going on for some time, and inside the EU/EEA many national systems for food safety have today been harmonised, although all the new regulations have not been fully implemented in practice (for instance regulations on additives and zoonosis). Moreover, negotiations are ongoing to establish common rules on the use of pesticides which is an important remaining unregulated area in the EU. The Danish Veterinary and Food Administration estimates that 95 per cent of food regulations within the EU/EEA will have been harmonised when negotiations on the use of pesticides are closed.

A major exception to the harmonised rules is the safeguards against salmonella which are different in the Nordic countries. The reason is that Sweden, Finland and Norway have little or no salmonella, whereas other European countries has a considerable salmonella problem. When the problems with salmonella infections in pig meat, poultry and eggs started to increase, the countries with little or no salmonella tried to keep their country clean and set up heavy control regulation on import of meat, poultry and eggs. On their entry into the EU, Sweden and Finland negotiated their own rules on salmonella control. Norway subsequently obtained the same system as far as imports from EU countries are concerned. Thus, health considerations have resulted in an extra set of controls and made access to these markets more difficult for foreign exporters. Another example is the special Danish ban on certain additives (nitrate, nitrite and sulphite which in some countries are used in, for example, sausages and marmalade) which was accepted by the European Court of Justice.

Such special national regulations may reduce imports and thereby affect the price levels.

Even a total harmonisation of national regulations on food products approval, however, would not mean that the costs of public control of food products would be the same in all Nordic countries. There would still be national differences in for instance the number of veterinarians needed to ensure the necessary degree of food safety and in how they are paid. Such differences are important to the companies' cost level, but in a competitive environment they do not affect access to the market from other EU/EEA countries or the price level. Such costs of supervision and ensuring the required quality will be carried back to the producers and will not be borne by the consumers.

Food safety, healthy food and food with low fat content create a demand for transparency and thereby good labelling. The same applies to food produced to meet certain standards of soft values e.g. concerning animal welfare, the origin of food and organic farming. Such labelling systems need to follow EU/EEA standards in order to ensure market integration.

EU/EEA has introduced harmonised rules for displaying unit prices – for example prices per litre or kilo – of food. A rigorous enforcement of these rules may contribute to further increasing competition since it allows the consumer to compare the prices of different products in retailing shops.

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Much attention has been paid to regulating waste packing for beer and soft drinks. All Nordic countries have developed national systems to ensure a high level of recycling of beer/soft drink cans and bottles for both refillable containers and non-refillable ones. These national systems are not harmonised, and this is a problem to market integration. The main problem is not with the breweries as long as they only have to register the packing with the national recycling company in one country and pay its fees. The problem to market integration rests with the recycling companies and with the consumers because of differences in clearing systems among countries.

## **Conclusions**

International price comparisons are loaded with empirical difficulties. However, the Working Group concludes that the prices consumers in the Nordic countries pay for food and beverages are higher than the European average. One reason for this is a higher level of taxes (VAT and excise duties) on the production and sale of food and beverages (soft drinks and beer) than in the rest of the EU. But even without taxes food and beverages prices in Denmark, Finland and Sweden still remain 6-12 per cent (7-11 per cent exclusive alcoholic beverages) higher than EU15 (2004). Iceland and Norway are not members of the EU and maintain tariffs on their import of agricultural products. This seems to be a major reason why food and beverages prices in Iceland and Norway are much higher – 42-47 per cent (34-36 per cent exclusive alcoholic beverages).

Nevertheless, the price gap between the Nordic countries and EU15 has narrowed in recent years. Since 1999 consumer prices in the Nordic countries have on the average grown 3 per cent less than EU15.

The Working Group concludes this development is evidence of enhanced competition on Nordic food markets. Nevertheless, the remaining price level differences suggest that there is still considerable room for improvement.

Next, the study conducted by the Working Group suggests that the assortments of food products available in supermarkets in the Nordic region are a great deal smaller than in the south of Europe (i.e. France in the present study). This is partly due to smaller average sizes of food stores in the Nordic countries and also that retail outlets of comparable size offer the consumers a more limited choice in the Nordic countries. A study initiated by the Norwegian Agricultural Cooperation from 2005 shows results which are somewhat different. Both studies are based on limited samples of supermarkets, 4 supermarkets in the Norwegian study and 36 in the study initiated by the Working Group.

Higher prices may indicate that competition in the Nordic countries is less fierce than in the rest of the EU so that production, distribution and sale of food products in the Nordic countries demand more resources, higher wages or other costs, profits (or, most likely, a combination hereof). The smaller assortment of products means that consumers are offered less diversity and variety of food products and that there are fewer opportunities for suppliers to get their products on the shelves in the supermarkets.

Several Nordic food companies do well on the international markets and have built up large export volumes. Part of this success has been achieved through locating the manufacturing of products where costs are low. In this way they have been able to compensate for the high cost level in the Nordic countries.

One reason behind the high food prices and the narrower food supply seems to be the high concentration on both supply and retail level in the Nordic region. The market shares of the leading suppliers in some of the largest food categories are higher in the Nordic countries than in, for example, Germany, France or the UK. The strength of the suppliers has, however, to a large extent been counterbalanced by the growing power of the large retailing groups. Today, concentration at the retail level in the Nordic countries belongs to the top end compared to other European countries.

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Large companies on the supply side and among the retailers makes it possible to obtain low costs as they realise large-scale efficiencies. However, in order to ensure that such advantages benefit the consumers through lower prices and development of new products, it is essential to have a competitive environment.

To achieve this, access to the market must be ensured at all levels, including access for new shops and new supermarket chains. The most successful chains in recent years have been discount markets and hypermarkets. The first have a profile of low prices, but a very limited food assortment. The latter try to attract customers through their large selection of products, incl. food, and price reductions on selected products. Thus, the Working Group concludes that the existence of different shop types may ensure low food prices as well as a wide and attractive range of products.

Next, it is not possible to ensure access to the shop shelves for all producers of food products. However, the Working Group concludes that it is important to ensure that dominant suppliers and retailers do not restrict entry to the supermarket shelves for smaller suppliers.

Consumers in all countries have traditionally been slow to change their food habits. However, an increasing number of consumers take an interest in products that meet certain high standards of ethical values (animal welfare, organic breeding, etc.). In order to get access to the market for products with such qualifications the Working Group concludes that it is important to have a system with objective labelling for such values which the consumers have confidence in. Moreover, consumers' access to objective and comparable information on food and food prices is important to ensure progress towards the best food competition standards in Europe.

Access to the market also extends to entry of food products from abroad. Food production and sale are heavily regulated to protect consumers' health and welfare, and specific regulations in each country mean extra costs on imports from abroad.

The sale of food is also regulated to protect the environment and such regulation has implication for the market access too. Each of the Nordic countries has established its own separate deposit and return system for the collection of empty bottles and cans for beverages which the suppliers must adapt to when exporting beverages to neighbouring countries. None of these systems, however, ensure the collection of empty containers imported from abroad by the consumers. For a fully integrated market the Working Group, therefore, concludes that initiatives allowing the exchange of deposits for cans and bottles among the countries are necessary.

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## Recommendations

The following recommendations are developed with a Nordic perspective. Since the structural as well as regulatory circumstances differ the recommendations have different impact and importance in individual countries. The recommendations are aimed at both participants in the market, authorities and legislators.

- **Retailers' access to new shop sites**

The composition of shops in the retail sector has changed towards more discount shops and hypermarkets. Access to buildings or building sites is essential for new retailers. Therefore, planning authorities should acknowledge the value of competition for consumers and only limit entry of new retailers where there are objective reasons for it. Application procedures should be transparent and applicants should be ensured possibility to appeal.

- **Producers' access to the shelves**

Agreements between suppliers and retail chains have become more complex. Certain arrangements in such agreements may have foreclosing and other anticompetitive effects. The agreements may include discounts, loyalty bonuses, slotting payments, marketing support, gifts and similar favours, and the competition authorities will include all these factors in their assessments. Market participants should be aware that agreements or practices which can be shown to limit competition can constitute a breach of competition rules. Central to the assessment are the effects of the practice, not the label or form it takes.

- **Mergers**

The Nordic food markets are concentrated, both at the retail and at the industry level, and there are examples of barriers to entry at both levels. Such structural conditions can lead to weak competition. The competition authorities will, therefore, consider mergers and take-overs carefully and act where these might result in a substantial weakening of competition

- **Better consumer information**

The Nordic consumer ministers have pointed to the need for better, clearer and more understandable consumer information. Besides helping consumers, this would also level the playing field for more competition. EU/EEA rules for displaying unit prices should be vigorously enforced. National consumer agencies should facilitate better consumer information, including findings on quality and safety.

- **Common food regulation**

Production and sale of food is – and should be – regulated in order to protect consumers' health and welfare. Country-specific food regulation may hinder trade between countries and limit competition. It is, therefore, important that the gains of such regulation are balanced against the loss for consumers in terms of higher prices and a more limited choice. As much regulation as possible should be common EU/EEA regulation.

- **Cans and bottles**

All Nordic countries have established well-functioning systems covering both refillable and non-refillable containers. However, a large part of cans and bottles bought in one country and consumed in another is wasted. The Nordic governments and/or responsible agencies should therefore, as a first step, consider agreements on exchange of deposits for non-refillable containers (which are not normally transported back to the producer). The best long-term solution would be common recycling systems covering a larger group of countries.

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## 1. Introduction

The Nordic food markets have undergone significant changes during recent years. Enterprises have grown, specialised and merged – both at the manufacturing level and at the retail stage. New players have entered the market and a number of new products and brands have been introduced. Lately, international discount chains have entered the Nordic food markets, at times provoking dramatic counter-measures by already established retailers.

Retail chains have integrated vertically, taking over activities formerly performed by wholesalers and have formed buyer groups across borders to increase purchasing power. Producers experience that retailers have become stronger, seriously affecting vertical relationships.

Are these developments only to the benefit of consumers?

Not necessarily so. Whereas large corporate structures may be better able to enhance productivity, they also hold a strong position on the market. As profit-maximisers, consumers' share of the benefits depends on the existence of sound competition on the market.

In any case and despite the changes, Nordic food prices appear to remain higher than in comparable European countries. Moreover, complaints are often raised about the variety and diversity of the food products available to consumers.

To a certain extent, international differences in prices, quality and choice are natural and affected by factors such as climate, transport costs, wages, national preferences, retail structure and regulation. However, as the integration process of markets continues, these factors are expected to play a smaller role. Hence, we would expect to find Nordic and European food prices and product variety to converge over time.

Is this the case? Whereas there are a number of sources for comparing food prices, there are virtually no studies on the differences of consumers' choice in the stores. In addition, food price comparisons between countries are intrinsically hard to interpret given the differences in taste and preferences, costs, exchange rates and retail structure.

Some time ago the Nordic Competition Authorities identified a number of problems distorting competition in the food markets. The markets are fairly concentrated, entry barriers are substantial, markets are local meaning that consumers have few alternatives within reasonable distance, producers only distribution channels to the market are the retail chains, and so on.

In the light of these developments, the Nordic Competition Authorities have performed a joint study with the purpose of identifying, analysing and proposing solutions to competition problems on Nordic food markets. Better competition will reduce food prices and

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widen the range of products available to consumers. In addition, it may stimulate the development of better products in the future.

The study involved an examination of available evidence on consumer food prices and supply in the Nordic food markets in comparison with other European countries. Differences in demographic factors, as well as store structure and national preferences are examined. The regulatory framework is scrutinised, among other things the rules that affect opening hours, access to premises, food safety standards, deposit systems and so on. Further, the structure of the food industry is described, with the focus on the changing relations to retailers, including payments for preferential exposure and other marketing contributions.

The report does not consider agricultural, fishery or regional policy areas.

The results of the report are based on published sources, interviews with the players in the market, consultancy studies and in-house analyses. Parties which have provided substantial input have been invited to comment on draft versions of the report. The recommendations are developed with a Nordic perspective. Since the structural as well as the regulatory environment in the Nordic countries exhibit fundamental differences in some respects, it may be warranted to adjust the recommendations further in order to accommodate specific national conditions.

The report is outlined as follows. Food price level and supply differences are presented in chapter 2. The chapter is based on published material as well as two new consultancy studies on promotional pricing and product choice. Chapter 3 describes the Nordic consumer with a European perspective. The following three chapters describe the competitive process in retailing (chapter 4), for the shelves (chapter 5) and in the food industry (chapter 6). Conclusions and recommendations are found in the beginning of the report.

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## 2. Prices and choice

One claim frequently met is that Nordic food prices are higher and the supply of food products narrower in the Nordic countries than in other European countries.

Whereas there are a number of studies on price differences, there are very few investigations on international differences on food assortments in the stores.

This chapter examines the available evidence and presents some new studies conducted by the Competition Authorities.

### 2.1 Nordic food prices

#### 2.1.1 Introduction

There are several studies of international price comparisons. Some studies compare the purchasing power in different countries by analysing the development of prices over a period. Other studies compare purchasing power by looking at a comparable basket of consumption goods at a given point in time and some studies compare price changes<sup>22</sup>.

The price indices most commonly used for studies of price comparisons and price changes are:

- The Consumer Price Index (CPI);
- The Harmonised Consumer Price Index (HICP);
- Eurostat Price Index (PPP);
- DG-Markets Price Index.

It is important to note that international price comparisons are complicated. First, the retail structure, the consumption pattern, and consumers' habits differ. Second, it is difficult to find goods which are fully comparable across all countries, and furthermore, differences in consumption patterns may cause an imbalance between the countries as some goods, which may have great influence in a few countries but not in others, might not be included.

#### 2.1.2 Nordic food price comparison based on Eurostat prices

The comparison of the Nordic food prices in this chapter is based on Eurostat data. Eurostat conducts regular price level measurements for consumption goods in all the EU countries plus Iceland, Norway, Switzerland and the candidate countries. These studies provide estimates of international price level differences, but are not comparable over time.

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<sup>22</sup> Appendix 1 goes into more details about these studies.



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Detailed guidelines concerning data collection and analysis have been prepared by Eurostat in order to ensure comparability<sup>23</sup>.

In accordance with these guidelines the composition of the consumer budgets is analysed every third year in all the investigated countries and a comparison of the prices of food is carried out. The price level indices are averages of the consumption and should be representative of the retail structure in the country. Thus, the price indices are more accurate, the more similar the countries are.

Moreover, large parts of the food market are characterised by the absence of strong international branded products (milk, vegetables, fruit, meat and bread) and packaging sizes may differ. Therefore, Eurostat's data collection includes generic goods and an extra large sample of different food items in order to ensure comparability.

According to the Eurostat guidelines, the prices in national currency are converted into a common currency, Purchasing Power Parities (PPP), where only differences in purchasing power are included (and the influence of the currency markets is excluded). With the introduction of the euro some of the problems concerning the measuring of prices in different currencies have been avoided. However, all Nordic countries but Finland still have national currencies.

The prices measured represent what the consumer actually pays in the store, including taxes, price discounts<sup>24</sup> and so on.

Eurostat advises against a strict ranking of countries according to their price level index since a difference of a few percentage points may be due to a measurement error.

The Working Group has included the 15 EU countries, listed in table 2.1, as the reference group for the price comparison.

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<sup>23</sup> "Guidelines for conducting price surveys relating to private household consumption". Source: Eurostat.

<sup>24</sup> Price discounts are included in accordance with the guidelines of Eurostat, cf. section 2.3.

**Table 2.1. International economic data for EU15-countries plus Norway and Iceland, 2003**

	GDP per capita in PPP <sup>1</sup>	Average gross <sup>1</sup> annual earnings in industry and services (ECU/EUR)	Labour productivity per hour worked <sup>1</sup>	Food consumption <sup>3</sup> as % of income	Gross food prices 2004 <sup>5</sup>
EU15	100	25,527	100	13.1 <sup>4</sup>	100
Denmark	112	40,962	101.5	12.5	126
Finland	101	27,398	95.6	12.8	112
Germany	99	37,253	103.3	12.2	96
Sweden	104	31,621	97.6	12.3	112
The Netherlands	109	31,901	110.7	11.1	92
France	104	26,521	118.8	14.4	103
Italy	98	-	108.4	14.7	105
Belgium	106	31,644	121.9	12.6	98
UK	109	37,677	90.7	9.3	97
Ireland	-	-	106.8	8.8	114
Austria	111	-	103.7	11.1	101
Greece	73	14,721	67.1	15.4	83
Spain	87	17,432	83.9	15.3	78
Luxembourg	190	35,910	140.2	9.8	107
Portugal	69	12,620	59.3	18.2	86
Norway	135	37,638	145.2	14.4 <sup>1</sup>	138
Iceland	107	38,604 <sup>2</sup>	85.8	14.3	142

Source: Eurostat, Yearbook 2004

Note 1. Year 2002

Note 2. Year 2001

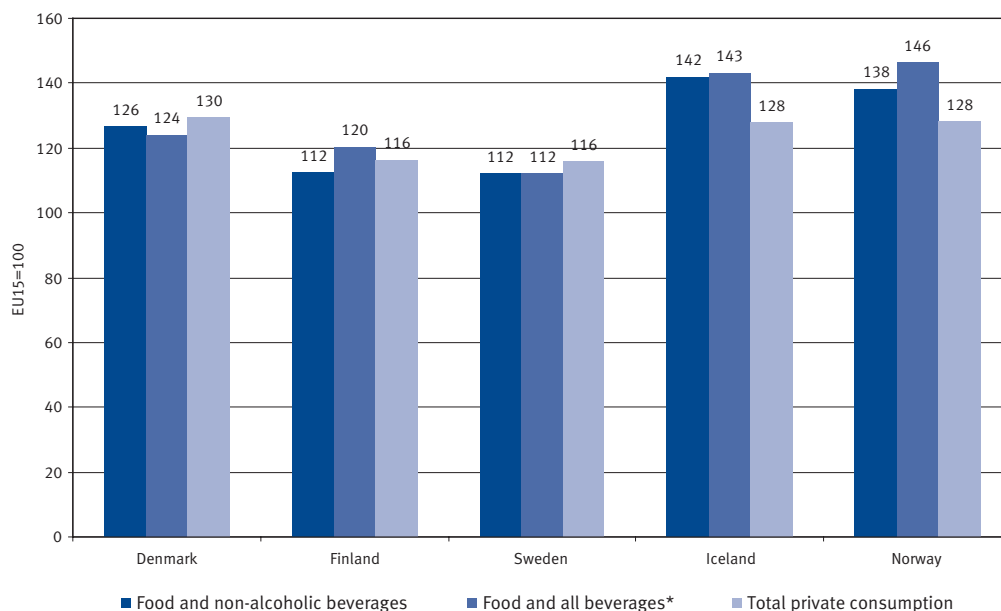
Note 3. 2003

Note 4. EU25

Note 5. Gross food and non-alcoholic prices

The Eurostat figures confirm the belief that consumers in the Nordic countries pay more for food compared to the average of the fifteen EU Member States. The gap is smallest compared to Sweden and largest compared to Norway and Iceland, cf. fig. 2.1. Only in Ireland are prices at the same level or higher than in the Nordic countries.

**Figure 2.1. Gross food and beverages prices<sup>1</sup>, 2004**



Source: Eurostat and own calculations.

Note 1. The data in fig. 2.1 are calculated from Eurostat's price indices for 2003 which have been extrapolated to 2004 by the general price development and the development in exchange rates in each country.

Note \*. Beverages, i.e. soft drinks and beer

According to these figures, Swedish, Finnish and Danish consumers pay 12-24 per cent more for food and beverages (soft drinks and beer) than an average EU15 consumer. Thus, Swedish, Finnish and Danish consumers pay 112 € to 124 € for food - each time an European consumer on average pays 100 €.

In Norway and Iceland food prices are still higher. In these countries consumers pay 43-46 per cent more than the average European consumer, or 143-146 € each time the European consumer pays 100 €.

In Finland, Iceland, Norway and Sweden, the sales of alcoholic beverages in supermarkets are restricted. Therefore, prices on alcoholic beverages in these countries are not the result of the competitive process in the food sector. The food prices exclusive alcoholic beverages are thus between 12 per cent and 42 per cent higher than the European average.

Greenland and the Faroe Islands are not included in the Eurostat study as there are no comparable data for these countries.

The Eurostat figures confirm other studies, such as Statistics Norway 2001/20: *Prisnivå på matvarer i de nordiske land, Tyskland og EU*; and ACNielsen, 2005<sup>25</sup>. Nordic countries have a higher price level than the rest of Europe.

The price gap is larger for food products than for total final consumption except in Sweden and Denmark. The tax structure and the differentiated VAT rates on food, which are common in the EU, influence this result, see section 2.2.

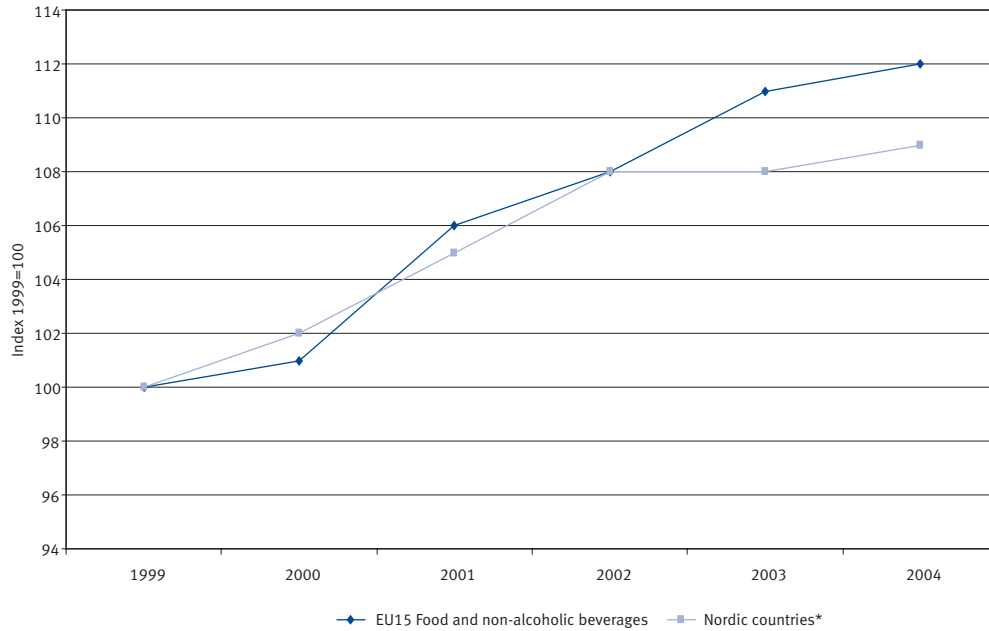
Although the price levels in the Nordic countries are higher than in EU15, the gap seems to have narrowed in recent years. This is illustrated in figure 2.2 which presents the development of the harmonised consumer price index (HICP<sup>26</sup>) for the years 1999 – 2004. Food

<sup>25</sup> The ACNielsen study concerns consumer prices in general, and not only food prices.

<sup>26</sup> HICP is the EU harmonised consumer price index. HICP is based on the consumer price index (CPI), subject to which the method for estimating CPI is harmonised between the countries.

prices have increased less in the Nordic region (9 per cent) than in EU15 (12 per cent). Changes in tax levels can influence the result, but not very much.

**Figure 2.2. The food and non-alcoholic beverages price development in the 15 EU and the Nordic countries**



Source: Eurostat, HICP figures.

Note\* Denmark, Finland, Iceland, Norway and Sweden

## 2.2 VAT and taxes

As mentioned earlier, the price level comparison in the tables and figures above includes direct consumption taxes. Hence, international price level differences also reflect international differences in consumption taxes. The tax level is generally higher in the Nordic countries than in most other European countries.

The most important tax is the Value Added Tax (VAT). This is a general tax levied on the value added to goods and services at each stage of the production and distribution chain. The basic rules for charging VAT in the EU are harmonised. Each country fixes its own rates. Many countries, including Finland, Iceland, Norway and Sweden, use a system of differentiated rates, usually high rates for ordinary and luxury goods and lower rates for goods – such as food - which are considered essential to ordinary consumers. Denmark and the Faroe Islands do not differentiate VAT rates. Greenland does not levy VAT at all.

Other taxes on food and beverages are excise duties on sugar, cocoa, chocolate, sweets, beer and carbonated soft drinks. In many countries these taxes, like VAT, are levied at differentiated rates, as e.g. in Denmark. There are also different systems for levying packaging taxes on consumer goods. However, in all cases these taxes are imposed on the production and sale of the goods. All sold goods are taxed whether they are imported or not.

**Table 2.2. Vat and taxes (%) and gross price correction factor, 2004**

	VAT (%)		Taxes <sup>1</sup> (%)		Gross price correction factor <sup>2</sup>	
	Total consumption	Food <sup>3</sup>	Total consumption	Food <sup>3</sup>	Total consumption	Food <sup>3</sup>
Denmark	25	25	12.2	4,9	0.686	0.751
Faroe Islands	25	25	n.a.	n.a.	n.a.	n.a.
Norway	25	11	9.6	5.5	0.727	0.838
Sweden	25	12	7.3	1.7	0.745	0.870
Iceland	24.5	14	5.3	2.5	0.773	0.840
Finland	22	17	9.2	5.7	0.753	0.793
Belgium	21	6	4.3	1.9	0.827	0.911
Ireland	21	1.3	8.5	9.5	0.764	0.808
Austria	20	10	4.9	1.5	0.806	0.880
France	19.6	5.5	5.2	1.1	0.823	0.935
Netherlands	19.0	6	7.1	2.8	0.780	0.911
UK	17.5	0	5.7	4.5	0.842	0.865
Germany	16.0	7	5.6	1.4	0.833	0.877
Greenland	0	0	n.a.	n.a.	n.a.	n.a.
Spain	10.7	5.2	4.5	0.3	0.860	0.953
Portugal	14.6	8.8	6.7	3.7	0.810	0.924
Italy	11.5	8.1	4.1	0.2	0.858	0.927
Luxembourg	17.1	6.9	12.8	2.5	0.740	0.918
Greece	12.3	9.0	4.8	14.7	0.845	0.770

Source: Deloitte and Landbrugsraadet, 2005, OECD's "Revenue Statistics" and own calculations

Note 1. Taxes include excise duties on sugar, cocoa, chocolate, sweets, beer and carbonated soft drinks and packaging taxes. Taxes are calculated as the tax provenue (or expenditures) divided by the total expenditures. We regard these taxes on food and beverages as ad valorem, i.e. they are calculated as a percentage of the consumer prices.

Note 2. Correction factor =  $1/(1+\text{vat}) - (1-(1/(1+\text{taxes})))$ . The gross price index (2003) is multiplied by this correction factor which gives a net index, i.e. excl. VAT and taxes. These gross and net prices are subsequently extrapolated to 2004 using a HICP-based factor. Thereafter gross and net EU15=100 price indices are calculated using a geometric average of the 2004 gross and net prices of the EU15.

Note 3. Food includes food and beverages (soft drinks and beer).

In order to be able to compare prices without taxes (and thus the influence of differences in the fiscal regimes between the countries) VAT and excise duties can be deducted using correction factors such as those presented in table 2.2.

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## 2.3 Promotion activity

### 2.3.1 Introduction

Besides taxes, temporary price reductions and other promotional activities can affect the accuracy of price level comparisons between countries. In the instructions from Eurostat to the national statistical bureaus, price discounts and bonuses should be included in the survey provided that:

- the price discount has a duration of more than four weeks, or
- a substantial share of sales is on price discount (typically if more than 50 per cent of the total sales are discounted sales), or when
- the price discount is available throughout most of the year.

The guiding principle is to collect the prices that the consumer actually pays. Nevertheless, the survey may still be biased if the frequency of rebates and short term price reductions, which are not captured by the survey, differ between countries.

When focusing on food, the different patterns in promotion activity between countries become of particular relevance since food products are among the most promoted products in the supermarkets and price cuts are in general used to promote food products. Moreover, price discounts, short-term or long-term, are part of the competition process as short-term price cuts may influence trade patterns.

For this reason, the Working Group has conducted an international comparison on promotion activity in the Nordic countries, Germany and France.

### 2.3.2 Method

The study is based on data collected by ACNielsen and includes all in-store promotions.

The variable definitions are:

a) *Promotion sales* which are the total sales of the product in the stores/weeks while the product was under promotion, b) *Promoted average price* which is the promoted value sales divided by promoted volume sales, c) *Non-promotion sales* which are the total sales of the product in the stores/week when the product was not under promotion, and d) *Non-promoted average price* which is the non-promoted value sales divided by non-promoted volume sales.

The data include checkout (by the counter) prices of all sales in the supermarkets within five important food categories: beer, butter/margarines, carbonated soft drinks, milk (fresh) and cold cuts. The survey includes prices for year 2004 for the whole category, i.e. of all items in the specific category, and not only of specified brands, products or segments. The categories which have been picked out represent some of the most promoted food product groups.

The promotion data are collected in seven different countries; Denmark, Norway, Sweden, Finland, Iceland, France and Germany in grocery stores that have sales areas that are larger than 100 sqm (in France stores smaller than 400 sqm were excluded). France and Germany have been picked out for the comparison because they represent large economies with very different retail structures.

The survey may be subject to measurement errors. First, as markets (countries) vary in types and amounts and level of promotions, ACNielsen strives for common definitions, but not necessarily for common implementation of promotional data types. As the importance of different promotions differs by country (e.g. due to legislation), the ACNielsen definitions can differ by country too.

Second, the way of grouping promoted and non-promoted products, which differ in price and quality, means that the price of certain promoted products may be higher even after the price reduction than the price of non-promoted products in the same food category (see figure 2.3). In the category of butter, for example, the price of organic butter sold on promotion, could still be higher than the non-promoted price on e.g. margarine. Thus, by looking at the total category of products, the actual price reduction in a country might be underestimated.

Third, with respect to multi-buy promotions (“Buy X, pay Y”), ACNielsen strives to collect the net price per unit sold from the retailers. However, for some articles this has not been possible, and the promoted price is therefore applied to all sales in case the type of promotion has a big impact on the sales level. This might overestimate the actual price reduction.

The uncertainties connected with these deviations in the observations are almost the same in all the countries and it is, therefore, likely that they are more or less evened out when the countries are compared.

### 2.3.3 Scale of promotion activity

The survey shows that the promotion pattern and the promotion extent vary considerably across the Nordic countries and in comparison with the rest of Europe, cf. table 2.3. Generally, promotion activity is higher in the Nordic countries than in other European countries (Germany and France).

The differences may be due, in part, to legislation. In some countries, for example, products cannot be marketed below certain low prices, in other countries there are restrictions on television advertising. Alcohol advertising is subject to restrictions (e.g. in Norway and Iceland). The differences may also be due, in part, to different retail structures (discount markets prefer every day low prices whereas hypermarkets offer a lot of special short-term price cuts) and, finally, differences in the competition culture in the countries may play a role.

**Table 2.3. Share of turnover sold on promotion (%), 2004**

	DK	SF	N	S	IS <sup>1</sup>	F	D
Beer	49	40	n.a	31	n.a <sup>2</sup>	23	17
Butter	31	10	6	16	18	8	10
Soft drinks	44	31	34	37	30	24	21
Cold cuts	23	n.a	8	13	20	20	7
Milk	11	n.a	n.a	1	n.a <sup>2</sup>	10	4

Source: ACNielsen Scantrack

Note 1. The Icelandic figures are based on interviews with Icelandic retail chains

Note 2. Beer is never sold on promotion and milk rarely in the Icelandic retailsector.

Promotion is used extensively to sell beer and soft drinks, cf. table 2.3. This is naturally connected to the ability of these products to attract customers – to “create traffic” in the store, i.e. to tempt consumers into the store in the hope they will also buy other products. In Denmark, almost half of the beer sold in supermarkets is sold on promotion whereas the percentage for milk is only 11 per cent of the turnover. In France, and especially Germany, promotion activities are less intense than in the Nordic countries. Germany is the country with the lowest promotion activity. Germany is also the country with the largest discount sector. Discount markets’ use of temporary price cuts is limited. Prices are kept low for longer periods.

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Among the Nordic countries Denmark is singled out as one of the countries where retailers apply the greatest campaign pressure in their marketing. This is mainly achieved by way of weekly promotional brochures. Within the past 20 years the number of promotional brochures received by households in Denmark has increased six-fold and households receive approximately 1,200<sup>27</sup> promotional catalogues each year (23 per week). In addition, these promotional catalogues are on average more voluminous than in other countries.<sup>28</sup> The conclusions to the survey in Denmark are confirmed by interviews with retailers. They explain that campaign pressure and how marketing strategies are implemented vary from country to country. In Denmark, coupons are not used in the retail market.

Consequently, the promotion pattern in Danish supermarkets translates into many price adjustments (i.e. elevator prices) and a relatively large share of promotion sales, cf. figure 2.3.

In Finland the media is the most important marketing channel. Retail chains' own labels occupy a central position in the campaigns. In Sweden coupons are common<sup>29</sup>. Supermarkets in Sweden and Finland are not allowed to sell beer and alcoholic products of more than 3.5 per cent vol. and 4.7 per cent vol., respectively.

In Norway, only alcoholic beverages of a maximum of 4.5 per cent vol. are allowed to be sold in food retail shops and only to people over the age of 18. Advertisements of alcohol are not allowed, and consequently, the promotion of beer in shops is the main marketing activity. In Norway, coupons are not used in the retail market.

In Iceland, only alcoholic beverages with maximum of 2.25 per cent alc. are sold in food retail stores. Alcoholic beverages above that limit are only sold in the State Monopoly. It is forbidden to advertise alcoholic beverages. Light beer, i.e. below 2.25 per cent alc. is often sold on promotion.

Figure 2.3 (butter and margarine) shows - as examples - the movement of average promotional prices on a week-by-week basis through a period of three months compared to non-promotional prices within the same group. The average non-promotional price is indexed to 100 for the entire period.

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27 Source: Jyllandsposten October 11, 2005. Tranberg Marketing.

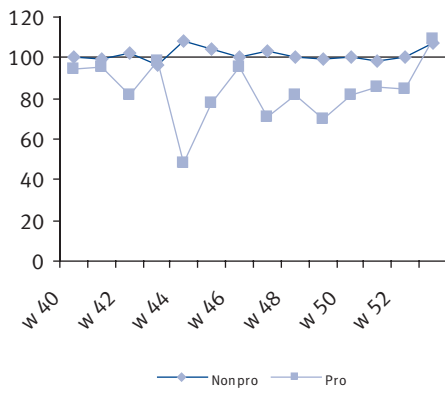
28 Coop's promotional brochures, for example, consist of more than double the number of pages in Denmark than in Sweden.

29 From 2005 "Prisinformationslagen" regulates the display of prices. Konsumentverket decides the exact requirements.

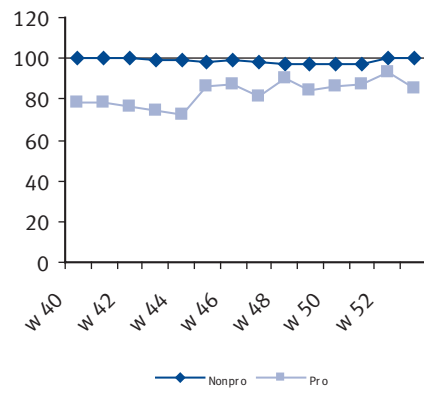


**Figure 2.3. Average promotional prices for butter and margarine**

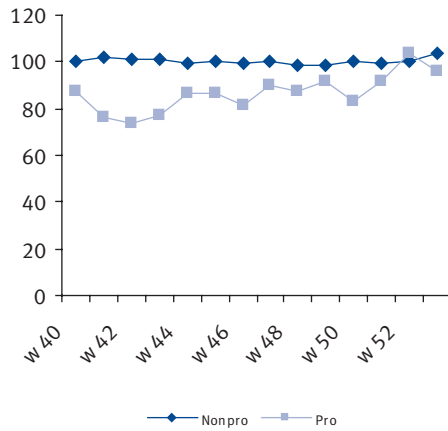
Denmark



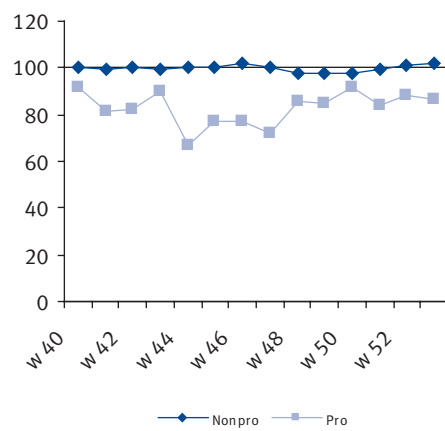
Finland



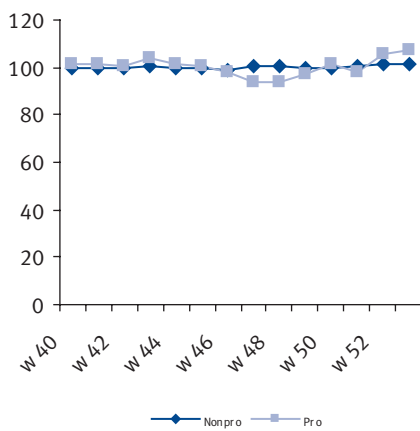
Sweden



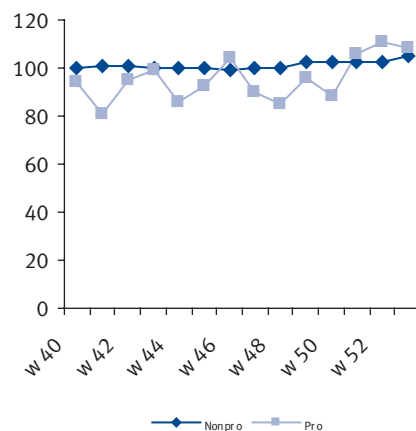
Norway



France



Germany



Source: ACNielsen Scantrack

The biggest difference in average promotional prices and ordinary prices is the prices of beer and soft drinks cf. table 2.4.

**Table 2.4. The average price reduction from normal prices (%), 2004**

	DK	SF	N	S	IS <sup>1</sup>	F	D
Beer	21.1	25.2	n.a	23.3	n.a	18.6	n.a
Butter/Margarine	16.6	21.4	15.0	18.2	22	2.5	7.1
Carbonated soft drinks	22.8	39.6	39.7	14.0	35	12.4	n.a
Cold Cuts	n.a	n.a	21.9	5.1	35	10.6	15.2
Milk	9.5	n.a	n.a	2.7	n.a	n.a	8.1

Source: ACNielsen Scantrack.

Note 1. Figures for Iceland are based on information from retailers.

The ratio of the average promotional price divided by the non-promotional average price gives an indication of the mix of discount and more expensive products that are on promotion, and how large possible price reductions might be. For example in Finland, 40 per cent of beer sales are on promotion and the average promotional price for this part of the retail sale is 74.8 per cent of the normal price. The same applies to soft drinks in Finland where the average promotional price is 60.4 per cent of the non-promotional price.

These price indices are not comparable over time since the weights in the baskets correspond to the sales in every period. Hence, we do not know whether the prices of individual products have changed during the promotion. The risk is that the general price development of the promoted products is faster than that of the non-promoted products.

However, in Germany and France, it is obvious that the average prices of products sold under promotion do not differ significantly from normal prices. This could be due to only limited promotional price reductions. It could also be due to promotional activities focusing on more expensive products.

### 2.3.4 Impact of promotion activity on prices

As mentioned above, the Eurostat price level surveys may be subject to measurement error if the frequency of rebates and temporary price reductions - not captured by the Eurostat survey - differ between countries.

Deviations from Eurostat price indices can occur where there are many price cuts of very short duration, or where Eurostat's price comparisons do not include the items which are most often used for price campaigns. The present investigation shows that prices in Finland, Iceland and Sweden are collected in such a way that temporary price reduction in practice are captured by the Eurostat procedure. For Denmark the collection of actual prices overestimate the actual price level of the products mentioned. This is due to the fact that Danish supermarkets use short-term (weekly) price cuts much more than supermarkets elsewhere.

Moreover, the collection of prices in Denmark does not include beer and soft drinks in crates of 24 or 30 which is the most sold package and the package most heavily promoted.

The Danish Competition Authority has estimated that the Eurostat price index for Denmark is overestimated by one percentage point vis-à-vis the other Nordic countries and EU15. Therefore, the Eurostat figures for Denmark in this report have been adjusted with 1 pro-

cent point. This estimate considers special Danish circumstances, and is outlined in detail in Appendix 3.

This figure confirms another Danish study (cf. Competition Report 2005 – chapter 2. Danish Competition Authority) based on another approach showing the impact on prices of short-term discount (one week).

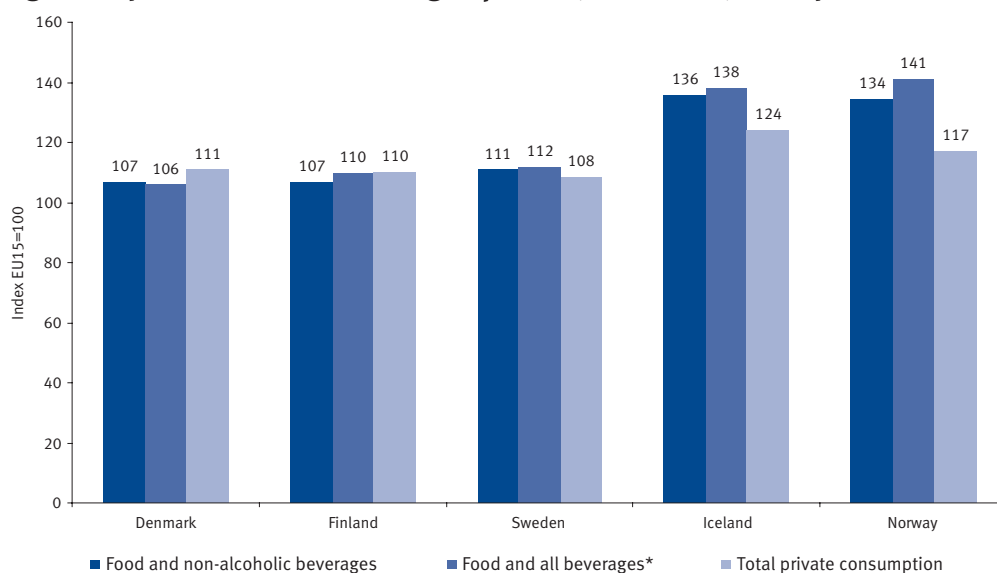
It is, however, important to note that correction of Eurostat’s prices for the effects of short-term price cuts is complicated and the results should be interpreted with caution. As mentioned above, consumption patterns and habits differ from country to country which makes it difficult to compare food items in supermarkets in different countries. In addition, a lot of the price cuts are already captured by the procedure defined by Eurostat.

## 2.4 Net prices

To supplement the presentation of international relative price differences above, figure 2.4 presents the results after deduction of VAT, other value-added taxes and the special correction for Denmark from the Eurostat price indices.

The results of this correction are that Danish, Finnish and Swedish food prices are closer to the European prices, resulting in a price gap of 6-12 per cent (7-11 per cent exclusive alcoholic beverages), cf. fig. 2.4. The price gap is smaller for food and beverage products than for total private consumption in Denmark and Finland (food and non-alcoholic beverages). The significant reduction in the price differences is explained by the fact that especially Denmark and Finland apply higher taxes on food than the rest of Europe. Norway and Iceland are still much more expensive although the price gap has been somewhat reduced too.

**Figure 2.4. Net food and beverages prices (excl. taxes), 2004**



Source: Eurostat and Working Group’s own calculations, cf table 2.2.

Note \*: Beverages, i.e. soft drinks and beer

We can therefore conclude that, even though VAT, taxes and differences in promotional pricing are taken into consideration, the Nordic countries still exhibit significantly higher food and beverages (soft drinks and beer) prices compared to most other European countries.

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Also, the resulting “net” prices assume a full pass-through of taxes on prices<sup>30</sup>. This is not always the case. It depends on supply and demand conditions on the particular market. For example, a reduction in VAT on food from 25 to 0 per cent would not, at least in the short run, lead to an equivalent price reduction. Therefore, some caution is warranted when considering the price level differences between countries net of taxes.

## 2.5 Food supply

### 2.5.1 Introduction

It is a common experience that the assortment of food in supermarkets in a number of countries in Southern and Central Europe is larger, more diversified and more attractive than in the Nordic countries. Also, there is more service; the staff weighs the vegetables and packs at the counter.

Diversity and variety of food products on the shelves are a central element of competition in retail. The more choice for consumers in the stores, the better the stores satisfy the demands. When consumers can choose from a large variety, there is more pressure on the suppliers to increase their efforts to offer all the products the consumers prefer.

There are hardly any empirical studies on international differences in the variety available to consumers in the food retail sector.

The only exception known is a study by the Federation of Norwegian Agricultural Cooperation which in 2005 published a (quantitative) comparison of the number of selected food items (yoghurt, various kinds of bread, cold cuts, sausages, chicken and cheese) in shops in Oslo, Brussels, Madrid and Stockholm. The study has been conducted in one supermarket in each city. This investigation shows that for 4 of the food categories the range of food products in the Nordic capitals are narrower than in Madrid, while in Brussels the product range is narrower than in Oslo and Stockholm. For two of the food categories (bread and cold cuts) Oslo has the widest product range. Thus, the investigation does not show that the product range is narrower in the Nordic countries.

However, the study pin point that the low variety in Brussels supermarkets most likely is caused by the more widespread bakeries and butcher’s shops in Belgium than in the Nordic countries. Moreover, the collecting of data in Brussels took place at 6.00 pm where the food supply normally is more limited than in the morning, which also can explain the low food supply. This is illustrative of some of the methodical problems such investigations involve.

Hornstrup and Hornstrup has conducted by the initiative of the Working Group a quantitative analysis of the food supply. The food supply in the Nordic countries was investigated and compared to France by including a number of supermarkets belonging to different retail chains located close to large cities and capitals: Oslo, Reykjavik, Stockholm, Copenhagen, Helsinki and Lyon. France was picked out as the benchmark country since French consumer food prices correspond closely to the average for EU15. The investigation includes different categories of products.

The result should be interpreted with caution given the methodological difficulties. First, food habits are fairly different between the Nordic countries and France, especially when it comes to bread and cold cuts. Second, the comparison of the food supply relies on a limited number of shops at a certain time of year.

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30 Studies of the Danish Ministry of Taxation’s calculation on the effect of changes in the tax rates ([www.skm.dk](http://www.skm.dk)) and Bryggeriforeningen ([www.bryggeriforeningen.dk](http://www.bryggeriforeningen.dk)) show that the pass-through effect of taxes on consumer prices of beer and carbonated soft drinks is high in Denmark, even though the prices of these products are very well-known to the consumers.

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### 2.5.2 Method

The survey is based on data collection in 36 shops which are member of different retail chains and located close to the capitals in five Nordic countries and close to Lyon<sup>31</sup> in France. There are no data for Greenland and the Faroe Islands.

The survey includes all products in five important categories: dairy, bread, meat, beer and soft drinks. Dairy products include milk, butter, hard cheese and soured milk products. Bread products include fresh and frozen, light and dark bread and crispbread. Meat products include fresh and frozen meat, canned goods and cold sliced meat. Beer and soft drinks products include alcoholic and non-alcoholic beverages and soft drinks with and without carbon dioxide. Both the number of branded goods, the number of articles within each branded goods, and private labels are counted.

Products available through the serviced in-shop delicatessens are included in the figures, but only those that are marketed, i.e. displayed and ready for sale. Special cuts that can be purchased on request are not included. Delicatessens are common features of hypermarkets in all countries and also of many supermarkets.

The data collection gives a snapshot picture of the variety in the EAN-code number (i.e. number of different articles) in the different product categories. The frequency with which and the policy for filling supermarket shelves may affect the results. However, in all countries the investigations were carried out from the morning when the cold counter and the products on the shelves give the best picture of the food supply in the supermarkets.

The investigation does not provide a picture of the seasonally adjusted assortment. However, a comparison of the different countries at the same time of year, reveal no big differences between the countries.

It should be held in mind that the number of hypermarkets is higher in Sweden and Finland than in Denmark, Norway and Iceland – but lower than in France. The survey was conducted in discount shops, supermarkets and hypermarkets. The results are weighted by the market shares (cf. chapter 4) of the types of supermarket in question (discount shops, supermarkets and hypermarkets, respectively) in order to obtain figures which are representative of the retail structure in each country (i.e. figures which state the food supply in an average supermarket in the country in question).

### 2.5.3 Size of the food supply

The survey indicates that the Nordic food supply is narrower than the food supply in France. In important product categories such as beer, soft drinks, dairy products and meat, the food supply is much more diversified in France than in any of the Nordic countries. Finland comes close to the level of France with respect to dairy products (and cold cuts). In all other food categories, the diversity and variety of the food supply in Finland is narrower than in France.

These differences are partly due to different cultural circumstances (consumer preferences and shopping patterns) and to national legislation (e.g. the highly regulated alcoholic markets in some countries) and partly due to the differences in the competition conditions in the countries.

Two explanations are likely for these differences. First, the retail structure is different in France than in the Nordic countries. Since larger stores have more products the differences are, in part, explained by differences in retail structure. Second, the evidence suggests that a food store in France in general has more choice to offer consumers compared to a similar food store in any of the Nordic countries.

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31 Lyon is a big French city with almost the same number of inhabitants as the Nordic capitals.

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### **Dairy products**

The number of different variants of butter is 3-6 times higher in France than in the Nordic countries. The high number of butter products includes different butter brands and different variants of butter like butter with garlic, butter with herbs etc.

When it comes to soured milk products, the range of different products is broader in the French supermarkets than in the Nordic countries except Finland. In Finland, there is a tradition for eating soured milk products. The soured milk products are marketed in a considerable number and with various flavours, coffee flavour, vanilla flavour, etc. In Finland a large share of the soured milk products are sold as private labels.

However, when it comes to fresh milk and pre-packed hard cheese, the product portfolio is wider in the Nordic countries. In Denmark and Finland there are three times as many fresh milk products to choose from than in France. In Denmark, the dairies compete on producing and marketing milk as fresh as possible.

With regard to pre-packed hard cheese, the French do not have the same tradition for eating hard cheese, especially not for breakfast, as the Nordic countries. The French eat cheese for dessert and often prefer soft cheese<sup>32</sup>. The French buy hard cheese from the delicatessen store in the supermarket (shop-in-shop) where they can pick their own choice. If soft cheeses were included in the analysis, the differences in the food supply would be even larger.

**Table 2.5. Number of dairy products, 2005**

	<b>DK</b>	<b>N</b>	<b>S</b>	<b>IS</b>	<b>SF</b>	<b>F</b>
Butter, etc.	10	6	12	15	7	38
Soured milk products	54	49	100	89	151	163
Fresh milk	29	11	17	18	30	8
Hard cheese, pre-packed	48	38	63	32	84	26
Hard cheese own deli	12	1	6	1	7	19
Total	153	105	198	155	279	254

### **Meat**

The tradition for buying meat for dinner in supermarkets is very pronounced in the Nordic countries compared to France where there is a larger market for independent butchers. This is also a sign of a different retail structure and shows a different shopping pattern compared to the Nordic countries, see chapters 3 and 4. In the Nordic countries, consumers do not spend as much time shopping as consumers in Southern Europe. Therefore, the portfolio of pre-packed fresh meat in the supermarkets is large in the Nordic countries.

Among the Nordic countries Denmark has a long tradition for deli butcher shops in the supermarkets, i.e. shop in shop. Therefore, the number of food products in the fresh pre-packed category is quite low in Denmark, whereas it is high in the own butcher's category and vice versa in the other countries.

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<sup>32</sup> It may have an impact that sales of soft cheese are not included in the survey. Presumably the selection of soft cheese, such as brie and camembert, is wider in France than in the Nordic countries.

In each category frozen products are more represented in Iceland than in other Nordic countries.

**Table 2.6. Number of meat products, 2005**

	DK	N	S	IS	SF	F
Fresh prepacked	10	7	34	30	27	7
Frozen	6	12	6	15	1	2
Own butcher	28	2	19	4	16	77
Total	44	21	59	49	44	86

### ***Beverages***

In Norway, Sweden and Finland the sale and marketing of alcoholic beverages (incl. beer) is regulated. It is forbidden to sell strong beer in supermarkets. Therefore, the number of different beer products in the supermarkets is probably smaller than in countries without this regulations.

Beer consumption in France is lower per capita than in any of the Nordic countries - 36 litres against 96 litres in Denmark, 80 litres in Finland, 50 litres in Norway and 55 litres in Sweden. However, there are quite a few breweries and a wide selection of beers to choose from in the French supermarkets.

Looking at the category “cider”, Finland, in particular, has a large variety. In Finland cider has a higher alcohol percentage than in any of the other countries.

The variety of water products, like spring water, is broad in France. This might be expected considering the French preferences for branded water from well-known sources.

The variety of carbonated soft drinks is broad in Sweden, Iceland, Finland and France compared to Denmark and Norway. For Norway the explanation might be the high market share of discount shops. For the other countries there seems to be no obvious explanation for this.

**Table 2.7. Number of beverage products, 2005**

	DK	N	S	IS	SF	F
Beer <sup>1</sup>	65	32	34	13	68	90
Cider	2	4	15	3	36	13
Water - non soda	4	3	4	5	2	41
Water – soda	69	55	93	101	89	106
Total	140	94	146	122	195	250

Note 1. Beer in Finland, Norway, Sweden, and Iceland only contains beer below 4.7% alc., 4.5% alc., 3.5% alc. and 2.25% alc., respectively.

### ***Cold Cuts***

Cold cuts, which include all cold cuts of meat, but pâté and slices of bacon, show more or less the same picture as above. Delicatessen (shop-in-shop) play a role particularly in France, somewhat less in Sweden and Finland.

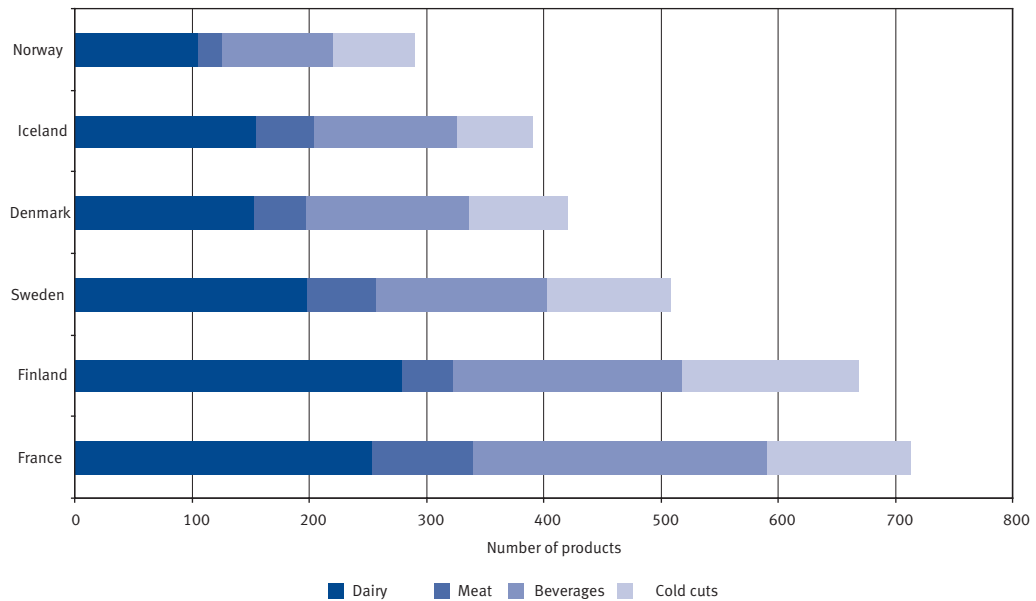
**Table 2.8. Number of cold cuts, 2005**

	DK	N	S	IS	SF	F
Prepacked	79	69	91	64	138	101
Own deli	4	1	14	0	13	22
Total	83	70	105	64	151	123

### 2.5.4 Food supply

Figure 2.6 sums up the figures set out above. For each country the number of products within the four groups has been added giving a picture of rather large variations between the ranges of food products in an average supermarket in each country. The number of products in France is obviously significantly larger than in any of the Nordic countries.

**Figure 2.6. The food supply in an average supermarket, 2005**



One reason for the large differences is the difference in retail structure in France compared to the Nordic countries. However, the Working Group concludes that French retailers value a wide selection to a greater extent compared to their northern colleagues. The French hypermarkets that took part in the survey have an average sales area of 3,100 square metres which is slightly less than hypermarkets surveyed in the Nordic countries.

Moreover, also the number of items belonging to most of the mentioned food categories is larger in supermarkets and hypermarkets in France, cf. table 2.9. The existence of shop-in-shop concepts is also at least as common in France as in the large supermarkets in the North.

Thus, when looking at the range of products available in specific supermarkets in different countries, the differences are significant in supermarkets and hypermarkets, cf. table 2.9.



**Table 2.9. Relative number of food products in supermarkets and hypermarkets. (Average number for 6 countries = 100)**

	Beverages		Dairy		Meat	
	<i>Superm.</i>	<i>Hyperm.</i>	<i>Superm.</i>	<i>Hyperm.</i>	<i>Superm.</i>	<i>Hyperm.</i>
Denmark	120	97	99	89	85	122
Finland	111	118	125	151	75	81
France	142	143	114	127	152	131
Iceland	57	44	95	66	117	103
Norway	71	95	49	62	52	69
Sweden	101	102	116	104	123	92
Average	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Source: Hornstrup investigation, see section 2.4 about investigation method.

### **Bread**

Bread and bread products have not been included in the previous presentations. The picture for bread is somewhat different, first of all owing to the very different consumer habits, see chapter 3 for more information.

The supply in the supermarkets is quite different. Sweden has a very large range of different bread products. So has Finland, although not quite as large as in Sweden. The large number and the great variety are found among the pre-packed bread products. As to fresh bread, there is no great difference from one country to another. The supply of fresh (pre-packed) bread in French supermarkets is very limited, and there are no registrations for frozen bread. The French are more in the habit of going to the baker for fresh bread.

**Table 2.10. Number of bread products, 2005**

	Denmark	Norway	Sweden	Iceland	Finland	France
Frozen	15	7	8	20	0	0
Pre-packed	75	55	181	79	117	51
Own bakery	8	4	16	0	6	6
Total	99	66	205	100	123	57

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## 2.6 Conclusions

The Working Group has examined the claim that the Nordic food prices are higher and the food supply narrower compared to other European countries. Such studies are loaded with empirical difficulties.

However, the available evidence, including the original empirical studies commissioned by the Working Group, supports the conclusion that Nordic food prices are higher than the European average. According to Eurostat figures, the price gap is 12-24 per cent (12-26 per cent exclusive alcoholic beverages) for Denmark, Finland and Sweden, and 43-46 per cent (38-42 per cent exclusive alcoholic beverages) in the non-EU member countries, Norway and Iceland. However, the price gap has decreased during the last 5-10 years. In general, Nordic food prices increase at a slower rate than food prices elsewhere.

Various taxes, in particular VAT, account for much of the differences in price levels. Also the fact that promotion activity is more widespread in the Nordic countries may have some impact on the results. Once these effects are eliminated, food prices in the Nordic countries are closer to the European average, corresponding to 6-12 per cent (7-11 per cent exclusive alcoholic beverages) in Denmark, Finland and Sweden, and 38-41 per cent (34-36 per cent exclusive alcoholic beverages) in Norway and Iceland.

Irrespective of whether taxes are included or not, the conclusion is that food prices in the Nordic countries are significantly higher than those of most other European nations, including the EU15 average.

The survey of the food supply also supports the claim that the food supply is narrower in the Nordic countries than in France. Somewhat different result was found in a Norwegian study from 2005. Both studies are based on limited samples, 4 supermarkets in the Norwegian study and 36 in the study initiated by the Working Group. The conclusions are therefore somewhat uncertain.



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## **3. The Consumer**

### **3.1 Introduction**

Consumers' income, taste and shopping habits play an important role for the prices and the product range marketed by the supermarkets in a country. Differences in consumers' preferences and habits, as well as climate, urbanization and logistics will be reflected in the different price levels and the product portfolios between countries.

The Working Group has therefore looked closer into the consumer habits and the preferences, income levels, demography etc. in the Nordic countries.

Differences in traditions, buying habits and the pattern of settlement vary from one country to another make it more difficult to compare business conditions across the countries. The differences in consumer preferences can also influence further Nordic integration, especially as they only change very slowly.

Mobility has gradually increased following longer distances between home and work. Also, private cross border trade has increased, especially for such articles as beer and soft drinks. Moreover increasing spare time has been accompanied by consumers travelling more and more. This includes travelling abroad, acquiring foreign food habits and trying foreign products. Such travelling and acquaintances with other living patterns make it easier for retailers to stock and sell foreign products, which their customers already have experienced.

Nordic integration, however, does not mean that consumers in each of the Nordic countries shall buy exactly the same goods or eat the same food. Diversity and variation in the food assortment are important elements, so further integration must take account of the cultural differences but at the same time ensure, that technical elements, demand from authorities or competition restrictions do not built up barriers to integration.

### **3.2 Population conditions**

#### **3.2.1 Income and consumption rates**

Income is an important factor in explaining differences and developing of consumption levels and patterns. Gross domestic product (GDP) can be considered as an indicator of the aggregated income level. In table 3.1, GDP per inhabitant in purchasing power standards has been compared for different countries.

**Table 3.1. Gross domestic product in € per inhabitant in fixed prices (1995 prices and exchange rates)**

Country	1993	2003	Change in %
EU 15	16,900	20,500	21
Norway	23,900	30,800	29
Denmark	24,500	29,900	22
Germany	22,700	26,200	15
Sweden	20,100	26,000	29
Finland	18,200	25,500	40
US	20,400	25,000	23
Iceland	18,900	24,200	28
Belgium	19,800	24,000	21
Netherlands	19,600	23,800	21
France	19,500	23,300	19
UK	14,000	18,300	31
Italy	14,000	16,400	17
Spain	10,900	14,100	29
Greece	8,300	11,000	33
Portugal	7,900	9,700	23

Source: Eurostat

In 2003 GDP per capita was high in the Nordic countries compared to the European average. Moreover, income levels in the Nordic countries are close to each other and have grown more or less at the same rate during recent years. Finland has started from the lowest level, but is among the countries with the strongest relative growth during the last 10 years.

A higher income does not necessarily lead to a corresponding increase in food consumption. Consumers require more or less the same amount of food no matter how much money they earn. Rich people buy more expensive food, food of better quality and food which does not require a lot of time to prepare. However, food expenditure's share of total expenditure does not remain at the same level, when income starts to increase. Rather statistics show a small but steady decline in food expenditures share when income grows, cf. table 3.2.

Thus there is a clear tendency for the richest countries to spend a smaller share of total expenditures on food and more on travels, housing and amusements, although there is no fixed relationship. Over time there has been a change in the ratio between these factors and decrease in share used on food in all the European countries and the US. Food expenditure in the US is only 7.1 per cent of the total expenditure, while European countries on average use 12.8 per cent.

**Table 3.2. Consumption of food and non alcoholic beverages (% of household expenditures) 1993- 2003**

Country	1993	1998	2003	Change 1993-2003 in %
EU 15	14.8	13.2	12.8	-2
Norway <sup>1</sup>	16.7	15.4	14.4 <sup>2</sup>	-2.3
Denmark	14.0	13.1	12.5	-1.5
Germany	13.1	12.1	12.2	-0.9
Sweden	14.6	12.8	12.3	-2.3
Finland	17.3	13.2	12.8	-4.5
US	8.2	7.3	7.1 <sup>3</sup>	-1.1
Iceland <sup>4</sup>	19.2	16.2	14.3	-4.9
Belgium	-	13.7	13.7	-
Netherlands	13.6	12.0	11.2	-2.4
France	15.4	14.7	14.4	-1,0
UK	11.8	10.3	9.3	-2.5
Italy	18.1	15.3	14.6	-3.5
Spain	na	15.9	16.0	-
Greece	18.4	16.8	15.4	-3.0
Portugal	21.5	23.0	19.4	-2.1

Source: Eurostat

Note 1. According to SSB in Norway the food consumption rate for 2004 is 11-12%.

Note 2. Year 2002

Note 3. Year 2000

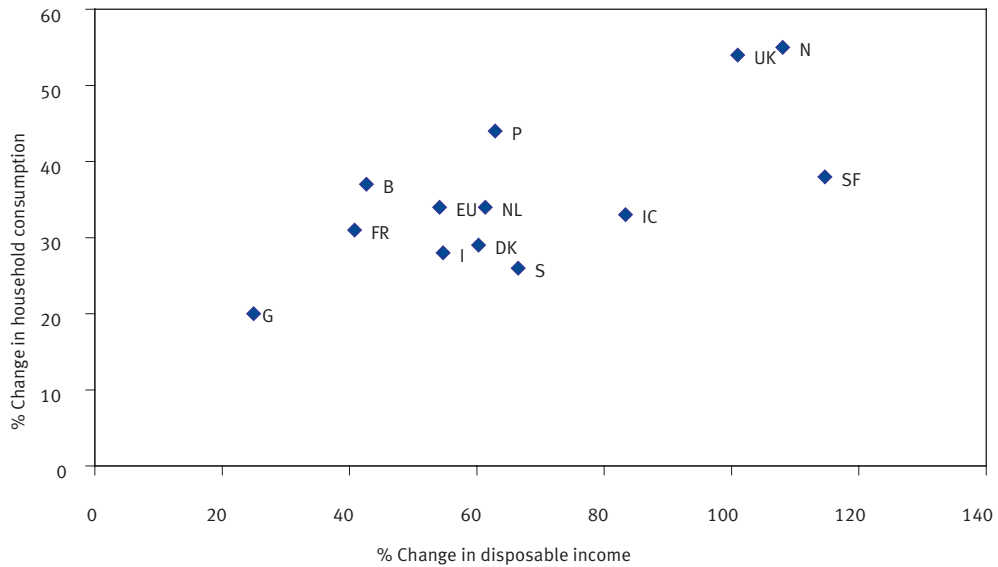
Note 4. Source: Statistic Iceland and the Icelandic Competition Authority

From this it appears that there are only small differences among the Nordic countries regarding to food expenditure rate. When nations have higher food expenditure than the average this may be interpreted either as an indication of higher prices for food, better quality or that they consume more expensive food (e.g. meat) than others – or a combination of the three.

High income makes it possible to use money on more and better food or on other non-food items, and even though higher income results in a decrease in the food expenditure's share as a percentage of total consumption the connection is clearly illustrated in figure 3.1. This shows the relation between change in income and change in food expenditure.

But also price level plays a role, c.f. the observations from chapter 2. This is illustrated when you look at Finland, who experienced a period of falling prices on food just when joining the EU in 1995 Finland stands out as a country with a low increase in food expenditure in this period compared to income growth. Sweden too has lower growth than other countries with a comparable development in income.

**Figure 3.1. Change in disposable income and expenditures on food and beverages, 1993-2003**



Source: Eurostat, SSB, Statistic Iceland.

The figures confirm the close relation between income<sup>33</sup> and food expenditure, but they also reveal that income is not the only factor. Among other things that may influence – beside income – can be mentioned age spread, size and composition of households, urbanisation, women’s employment patterns, etc.

### 3.2.2 Demography

People buy different kinds of food as they grow older. Young people buy more fast food and are keener on trying new products. However figures on age spread in the Nordic countries only differentiate a little from the rest of Europe and therefore age cannot be considered a significant element.

Next, the number of households in the Nordic countries shows a minor increase due to a change to more single households. The average household is smaller in Northern Europe but the differences are of minor importance.

A third factor which may influence shopping pattern and habits is the proportion of people working. All over Europe there has been a significant change in the proportion of women working, but still Nordic women have a significant higher employment rate than the European average with Iceland in top with nearly 80 per cent. This leads to a higher total income and may affect shopping patterns, for example through an increasing demand for easier food solutions as fast food etc.

Also location of the families influences shopping patterns. The distance to shopping opportunities affects consumer’s choice and the competition. Therefore, it may influence competition conditions that the population density (capita pr. km<sup>2</sup>) is significantly higher in Central and Southern Europe than in the North, cf table 3.3. This implies that the consumers may have longer transportation distances to their favourite supermarkets.

<sup>33</sup> Disposable income is in current prices.

**Table 3.3. Population density and urbanisation, 2002**

Country	Inhabitants per km <sup>2</sup>	Urban population (% of total population)
Iceland	3	93
Finland	14	59
Norway	14	75
Sweden	20	83
France	106	76
Denmark	125	85
Italy	196	67
Germany	229	88
Netherlands	365	90

Source: World Bank statistics.

However, except from in Finland, a high percentage of the Nordic people live concentrated in urban environments very much the same way as they do in countries like France and Germany. As the shops are generally situated where their costumers are, either in the cities or close to the main roads leading to and from the cities, it seems fair to conclude, that differences in the settlement pattern do not contribute significantly to explain the high prices and the limited supply.

### 3.2.3 Shopping habits and choice of grocery store

Shopping habits change over time and shopping habits in the Nordic countries have in many ways changed in the same way due to the similar development in living conditions.

A general trend is that consumers do not plan their shopping as much as earlier but act more on impulse. It is estimated that 75 per cent of total purchases in the Nordic food shops are decided after the arrival to the shop<sup>34</sup>.

Location, price, products assortment, quality and service are usually the most important elements when the consumers decide where to shop. The shopping pattern is essential local, as a great majority of consumers travel no more than 10 minutes in car to the supermarket in urban areas. But shopping is more and more divided into the daily shopping and weekend shopping. In the last situation, time and price are not as important as assortment and service.

A large amount of consumers – in Denmark more than 90 per cent - read the weekly promotional brochures and get inspiration from these to decide where to shop<sup>35</sup>.

There is focus on price, which makes discount shops the daily choice, but at the same time consumers are seeking diversity in their shopping. Focus on price and quality at the same time have made consumers more value-orientated. Value for money is not necessarily equivalent to the lowest price but express a demand for best product to lowest possible price.

<sup>34</sup> Source: Retail Institute of Scandinavia: Skandinavisk dagligvarehandel 2003-2008.

<sup>35</sup> Source: Jyllandsposten, 11. October 2005.



Scandinavian consumers have a very high frequency of visits to groceries compared with other Europeans<sup>36</sup>. There are some differences among Nordic consumers related to accessibility. The buying culture in Denmark is characterized by a high accessibility to shops due to the large number of shops, which result in smaller purchases each time. Consumers in Sweden, Norway and Finland have longer distances, which results in a greater average purchase. 45 per cent of the Danish consumers visit a grocery store more than 4 times a week, while the Swedes are the least frequent shoppers, cf. table 3.4.

**Table 3.4. Number of visits to grocery stores per week 2004**

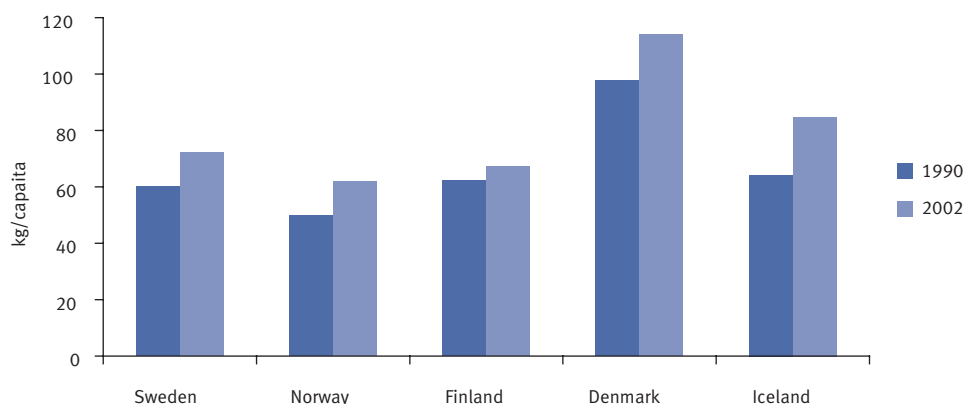
%	>4 times	4 times	3 times	2 times	1 time	0	Total
Denmark	45	16	15	12	7	5	100
Norway	31	17	20	17	10	5	100
Sweden	20	15	21	22	15	7	100
Finland	31	17	20	17	10	5	100

Source: ACNielsen Nordic Market Monitor 2004

### 3.3 Consumer's habits, traditions and preferences

Consumption of various kinds of food shows very large differences between the Nordic countries. Since 1990 the consumption of meat has increased considerably in all countries. Meat is expensive food and the increased consumption is probably a result of the growth in income. Denmark is the country among the Nordic countries with the highest meat consumption. There is tradition for eating meat in Denmark due to a large and well developed agricultural sector. Each Dane eats 114 kg meat per year, cf. figure 3.2.

**Figure 3.2. Consumption of meat in the Nordic countries 1990-2002**



Source: FAO Statistic 2005

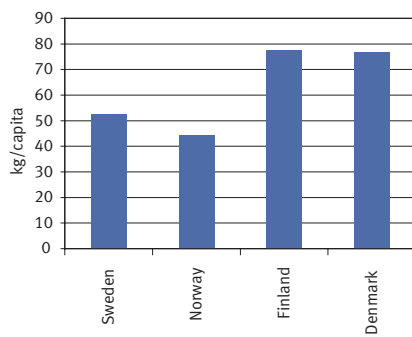
In the same way, there are large variations in the consumption of fish, bread, milk and beer, cf. fig 3.3. National consumption preferences seem to some extent to follow the national productions pattern. E.g. consumption of fish is high in Norway and Iceland. As to consumption of beer, it is worthy of note that there are quite heavy taxes on beer in Norway plus restrictions on sale of beer in supermarkets in Sweden, Norway, Finland and Iceland. This probably influences the consumption in these countries.

36 Source: ACNielsen

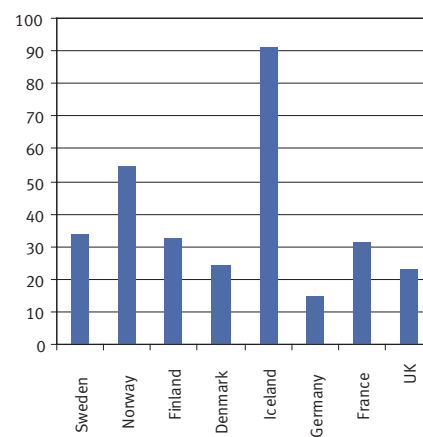
In all Nordic countries consumers mainly prefer products from their own domestic suppliers. Sometimes local producers, such as the local brewery or abattoir, are the preferred choice. In other cases consumers are accustomed to certain types of food almost exclusively produced within a certain country or region. Such habits of taste takes a long time to change even though consumers to some extent are getting more international in their choice of food and more interested in foreign food. Also cross border trade of food are considerable. Still cross border trade of beer and soft drinks mostly are motivated by tax conditions. These differences are also reflected in differences in the range of food products in the separate countries. Rema 1000 and Netto can be mentioned as an example; they are represented in more than one Nordic country but both have adjusted their range of food to the local taste.

**Figure 3.3. Consumption in Nordic and other countries, 2002**

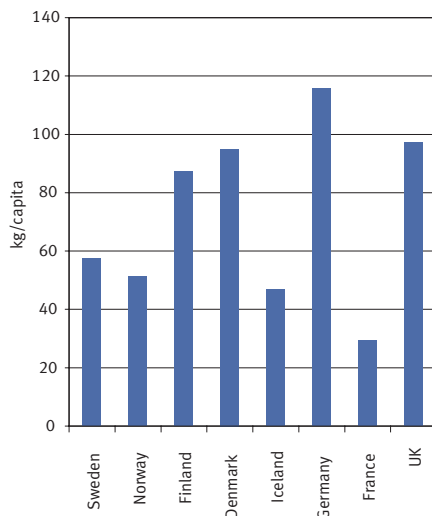
Consumption of bread, 2002



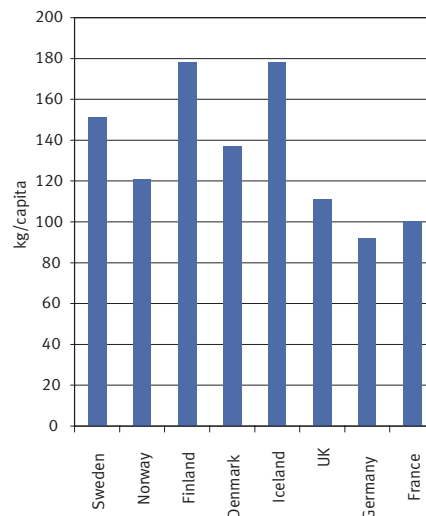
Consumption of fish, 2002



Consumption of beer, 2002



Consumption of milk, 2002



Source: FAO Stat 2005, Danish Dairy Board, Danish Brewery Board, Statistic Iceland

Consumers also have a tendency to remain loyal to well-known brands and products, and once customers in one country have become accustomed to a certain type of food, there

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are several examples where they largely stick to that type. Sales of cheese clearly show that there exist different preferences throughout the Nordic countries, and these are, in comparison with other European countries, difficult to change. The cheese eaten by Swedes is distinctly harder than the variety favoured by Danes, and Norwegians prefer their own whey cheese and goat cheese. Unlike in the Nordic countries where cheese is eaten for breakfast, cheese is mainly eaten as a last course in Southern Europe. Another example is sales of bread. Traditionally, Danes buy a lot of dark bread, whereas Swedes prefer sweet-sour bolted rye bread, crisp bread or crisp rolls.

Also the individual product varies with taste preferences. The type of ketchup preferred in Denmark is sweeter than in other countries, whereas less and less sugar is added to a product such as yoghurt in the more northerly countries. In France and Germany yoghurt is sweeter than in the Nordic countries where yoghurt is eaten for breakfast, whereas further south, yoghurt is eaten for a dessert.

Demands of freshness are a factor too. If consumers prefer that the products are fresh, transport across long distances is a limited option. In Denmark this is the case with milk, for example. Milk is marketed according to whether it has been drawn from the cow within the past 24 hours. Freshness and domestic preferences are also essential to the demand for fruit and vegetables as domestic products in season can be sold at higher prices than imports.

Also eating-habits differ. Cold breakfast is common in all Nordic countries, the preferred food being bread, yoghurt and coffee. However, Swedes eat more yoghurt and they use crisp bread, whereas Danes eat rolls. Danes and Norwegians traditionally take a cold meal at lunch, while the Swedes and the Finns more often take a hot meal both at lunch time and at dinner. Danes have a lot of open sandwiches (which influences bread consumption). Lunch in Sweden and Finland are often served in a staffed restaurant or at an ordinary restaurant. Eating coupons is common as part of the wage. Moreover, coffee-breaks during the day including a small meal is quite normal in Sweden too.

The differences between the countries are even greater as far as our drinking habits are concerned. Many Finns drink milk at their main meal (30 per cent), in Sweden and Denmark the corresponding numbers are around 17 per cent, while only 14 per cent of the British drink milk. There are also major differences concerning alcoholic beverages. In Denmark more than 20 per cent drinks beer or wine to dinner, in Sweden, Norway and Finland this figure does not exceed five per cent and in Sweden it is low-alcoholic beer. To a large extent, the Norwegians drink juice and cordial<sup>37</sup> to dinner (17 per cent). The corresponding figure in Sweden is 10 per cent, in Denmark (13 per cent), followed by Finland (10 per cent).

As to eating habits most Danes prefer to eat dinner at home (83 per cent) followed by Norway (79 per cent). In Sweden and Finland every fifth inhabitant does not eat dinner at all. Home cooked meals are most popular in all countries. 70-80 per cent of the population eat a home-made dinner. Finns are a little more fond of take-away meals than the rest of the Nordic population. On the average 7 per cent enjoy a take-away meal. This is close to the situation in UK where some 10 per cent eat take-away meals for dinner<sup>38</sup>.

Great differences in eating habits occur especially at the main festivals. At Christmas a majority of the Danes eat roasted pork or roasted duck, Swedes eat Christmas ham (special salted pork) and Norwegians enjoy rack of lamb ribs, breast of pork or cured cod "lutefish" specially prepared for several days and very much an acquired taste.

Thus, the eating habits are very national, but probably not more national than you see all over Europe.

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<sup>37</sup> Sweet non-alcoholic drink made from fruit juice

<sup>38</sup> Source: [www.tetrapak.com](http://www.tetrapak.com) (major similarities at the dinner table 2003).

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### 3.4 Common trends

Although there are differences in the consumption patterns in the Nordic countries owing to traditions and habits, there are many general tendencies which are common as well, even though they may not have the same impact everywhere.

International fashion, trends and reactions to animal diseases have an impact on consumption in most countries. Diet-conscious consumers demand new low-calorie products and products with lower levels of fats, sugar and salt. Other major drivers for food innovation are convenience and ethics.

As consumers have become more wealthy, their demand for adequate variety, quantity and safety has increased, including aesthetic attributes to concerns about how food is made, and the impact that food production techniques have on the environment and on animal welfare.

Consumers are willing to pay for more variety when they make their choice of food products. A recent survey in Denmark about the demand for milk products showed that consumers are interested in high quality and a broad range of different products also when they are planning their shopping of standard products such as liquid milk.<sup>39</sup>

The increasing focus on “soft values” has led to demand for ensuring consumers access to information about these values among this ethical labelling (environment, animal-welfare, human rights etc.) as well as labels with information on additives such as contents of sugar, salt etc.

Through objective labelling it is possible to provide consumers correct information on how the food has been produced according to stated production methods. At the same time it is necessary with an efficient control system to ensure that consumers get value for money. Most products with special labels are more expensive than conventional product.

Different standards on “soft values” and control systems can, however, create problems for cross-border travel.

Some international labelling is already well known in several countries. Examples are the Nordic Swan, introduced by the Nordic Council of Ministers in 1989, and the EU Flower – both labels guarantee a high environmental standard. Another example is Max Havelaar – the fair trade label.

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<sup>39</sup> Source: Royal Veterinary University, Denmark – Milk test 2005.



## The Swan

Swan's criteria vary between the different products.

Criteria common to all product groups are:

- Attention to the product's impact on the environment from the raw material to waste – i.e. throughout the product's lifecycle.
- Standards with regard to quality and performance. The product must be at least as good as similar products on the market.
- Criteria are raised repeatedly to ensure that a product carrying the Swan label is always at the cutting edge of environmentalism

Companies applying for a licence to use the Swan label must provide results from independent testing to prove that the criteria have been met.

Controlled by the secretariat of "Miljømerkningssekretariatet".

Most initiatives to promote soft values, however, have been national.

An area where labels have importance is organic food. The overriding ideological objectives for organic agriculture are to create a sustainable production which, according to Codex Alimentarius<sup>40</sup>, shall promote and enhance the health of the agro-ecosystem, including biodiversity, the biological cycles and the biological activity of the soil<sup>41</sup>.

EU has its own logo to be put on organic products if they live up to the specified standard - though there is a transitional period until August 2005 where conventional feed may be used within a set limit. However, national and private organic logos may still be used. This means that consumers may come across a number of different national and private organic labels not known outside the particular country but with high national marketing value. In Denmark the Ø label is used, in Finland Luomu, in Norway Debio and in Sweden KRAV.

Food safety is another important issue for consumers. Food safety has implied lasting changes in consumers' perceptions and purchasing patterns and governments' regulation. There are analogous issues about labelling etc here.

EU/EEA has a set of some common rules e.g. on control, inspections and labelling for each part of the entire food chain. Some countries have implemented further initiatives to ensure food safety. For instance, Danish legislation has established a systematic supervision of all food enterprises (supermarkets, bakeries, restaurants, etc.) ending up with "Smiley" labels, which is made public to customers at the entrance, giving information about the hygienic condition. A similar model is under discussion in Sweden.



The inspector had no remarks



Certain rules must be obeyed



An injunction or prohibitory order has been given to the enterprise



The enterprise has received an administrative fine, been reported to the police or approval has been withdrawn

<sup>40</sup> Codex Alimentarius is an independent commission under FAO and WHO, created to develop food standards and guidelines.

<sup>41</sup> Source: Nordic Council: Ethical Labelling of Food - 2004

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### ***Organic food consumption***

The growing interest in animal welfare and food made without the use of fertilizers, pesticides and animal medicines has gained a foothold all over the western world, though not to the same extent in all countries. This interest has especially had an impact on consumption of organic food products.

Organic foods are distinguished from non-organic foods by the methods used in their production and processing. The sector has been regulated by EU since 1991, but EU regulation covering animal management first came into power from 2000. Organic rules prohibit use of synthetic fertilizers, pesticides, growth regulators, livestock feed additives and require long-term soil management, emphasis on animal welfare and extensive record keeping and planning. Certain activities such as use of genetically modified stock and food irradiation are prohibited.

Consumption of organic food is to some degree related to socio-demographic factors. Most studies characterize organic consumers as affluent, well-educated and with high purchasing power. They are concerned about health and product quality. The propensity to purchase organic food is higher in urban areas than in rural areas, particularly in and around metropolitan areas.

Reasons for purchasing organics are similar across countries. In Europe and the US, taste, freshness and quality rank among the top reasons for organic purchases. Most regular consumers favour locally grown organic products, when available, in an effort to support local farmers and ensure freshness.

World wide markets for organic food are expanding, with annual growth rates of 15 to 30 per cent in Europe, the US and Japan for the last 5 years, but there are no official foreign trade statistic, which makes it possible to give a comprehensive picture of international trade in organic food products. According to estimates by International Trade centre UNCTAD/WTO the world retail market for organic food and beverages increased from US dollars 10 billion in 1997 to US dollars 17.5 billion in 2000. However, some markets e.g. Germany and the Netherlands have grown slowly (probably by less than 10 per cent), while others e.g. Denmark and Switzerland, at least until recently, have grown much more rapidly (up to 40 per cent annually or more in some years)<sup>42</sup>.

World wide estimates (by country) for 2000 are given in table 3.5. Though total sales figures are impressive, organic sales as “per cent of total sales” are still quite small (1-6 per cent).

The highest organic market shares are estimated for Denmark, Sweden, Austria and Switzerland, and it seems as if organic food keeps the highest market share in countries with small populations.

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<sup>42</sup> Source: Organic Agriculture Worldwide 2002.

**Table 3.5. The International Market for Organic Products – estimates for 2000 (ITC 2001)**

Country	Retail sales in USD million	% of total food sales
Germany	2,200-2,400	1.25-1.5
UK	1,000-1,050	1.0
Italy	1,000-1,050	1.0
France	800-850	1.0
Switzerland	460-470	2.0-2.5
Denmark	350-375	5.5
Austria	250-275	2.0
Netherlands	225-250	0.75-1.0
Sweden	200-300 <sup>1</sup>	2.0-2.5 <sup>2</sup>
Finland	100-125 <sup>1</sup>	1-1.5 <sup>2</sup>
Norway	40-60 <sup>1</sup>	<1 <sup>2</sup>

Source: [www.intracen.org](http://www.intracen.org)

Note 1. Source: Nordisk Ministerråd. Development in the Nordic Baltic Market for Organic Food.

Note 2. Source: Raadsnyt Landbrugsraadet: Økologi i Nordisk dagligvarehandel 4. juni 2004

There is substantial variation in market shares across product categories. Cereals and baked goods, fresh products, especially vegetables and dairy products, hold the largest organic market shares.

An important factor in the development of organic markets seems to be the fact that the retail sector in some Nordic countries uses organic products in an increasingly aggressive and targeted marketing and promotion. A similar effect is likely to result from the fact that major food manufacturers are developing organic food lines. In addition there are scale advantages, which means a tendency to reduced price premiums for organic food when this is produced and marketed in a larger scale.

Thus, investigations has documented that consumer price premiums are lowest in countries with large organic market shares and a high percentage of distribution through supermarkets. The combination of market size and supermarket involvement is thought to reduce distribution costs and exert downward pressure on consumer price premiums. Due to their large customer base, supermarkets can generate turnover more quickly, thus saving money and maintaining product appearance and quality.

Consumer price observations in 14 groceries in Europe have documented price premiums for organic food averaging +35 per cent in Denmark, +43 per cent in Austria, +53 per cent in France, +54 per cent in the UK and +67 per cent in Germany.

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## 3.5 Conclusions

Four main conclusions can be drawn regarding the attributes of the Nordic food consumer.

First, there are significant differences in what we eat, where we do our shopping, how often we visit the shops and what we consider important for our choice of grocery store. Hence, the Nordic countries do not by themselves represent a homogenous kind of food demand.

Second, in spite of these dissimilarities, the Nordic consumers are relatively similar in terms of demographic characteristics. Compared with other major European countries, the income levels, age distributions, household sizes, localisation patterns, etc. are close to each other and seem not in any significant way to explain the differences.

Third, although the interest and demand for exotic and foreign food stuffs has grown, most Nordic consumers are fairly traditional in their choices. National dishes still dominate the kitchen table for dinner.

Fourth, along with a slowly rising interest for foreign food, other aspects are becoming more important. There are tendencies that, at least for certain groups of consumers, demand for quality grows stronger. Also, ethical values have spurred an increase in the consumption of organic products and food processing that fulfils certain solidarity objectives.





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## 4. Competition in retailing

### 4.1. Introduction

Competition in the retail sector may be considered national, regional or local. Consumers do most of their shopping near to home or place to work, this indicates local or regional markets. However, the marketing chains, which for a large part are national wide, set maximum prices, decide profile, strategy and to a large degree the assortment available to the shops. This indicates national relevant markets. Different conditions for competition in the national or regional markets could therefore explain some of the differences in prices pointed out in the previous chapters.

Surveys indicate that the structural change in the retail sector in the Nordic countries have many features in common with other countries.

The number of food retail shops has declined over the past decade all over Europe, which are connected with the growth of supermarkets. Particularly in the Northern Europe food retail has concentrated with the supermarkets<sup>43</sup>, whereas food retailing around the Mediterranean to a greater extent still is composed of a large number of small family-owned specialty shops.

The number of supermarkets per capita is high in the Nordic countries – however, the population density in most Nordic countries is low.

The concentration of food retailing in the supermarket sector is coinciding with a more distinctly split into different kinds of shop types. In particular, discount shops and hypermarkets have had a significant rise in market shares. Discount shops have low prices and a narrow portfolio while hypermarkets have a broad portfolio and high focus on promotion sale to be able to match the discount sectors.

The retail sector has become more concentrated, especially in the Nordic countries where only 4-6 retailing groups are left in each country. The concentration has strengthened the groups' position and buying power when negotiating with the suppliers significantly. This might lead to lower prices to the benefit of the consumers, provided that there is sufficient competition between the retail chains. But fewer companies also means less competition if the markets have barriers to entry.

Internationalisation has increased in the Nordic countries with a number of new cross-border partnerships and mergers between Nordic retailers and companies in other countries. This has influenced the competition conditions in several ways. Internationalisation widens the markets and leads to an increasing import which can prevent local monopolisation.

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<sup>43</sup> Supermarkets here includes all shops with a complete assortment of food.

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Costs are high in the Nordic region; among this labour costs and wages represent a significant share of total cost in the retail sector. Thus, labour costs is one of the possible explanations of the high prices on food, however differences in labour productivity must be taken into account, too.

## **4.2 Structure and structural changes**

### **4.2.1 Structural changes**

Over the past 10-20 years, the food retail trade in Europe has experienced a steady decline in the number of shops, for the most part small shops and primarily specialty food shops. Among other significant trends are an enlargement of the big supermarkets and ever increasing concentration of retailers in purchasing groups and chains.

Supermarkets, i.e. shops where a household can buy all kinds of goods (incl. food) to satisfy their ordinary demand, account for approximately 80-90 per cent of retail sales of food products in the Nordic countries and in the EU, and it is therefore this sector of the retail trade which is the focus of comparisons among these countries. The number of specialty shops is largest in Southern Europe, but sales per shop are considerably below those of supermarkets.

There are several reasons for the progress of the supermarket in the retail sector. Low prices and a relatively – compared to kiosks and specialty shops - large assortment of goods inclusive non-food are among the most important. The service level is lower than in specialty shops. Self-service makes it possible to gain savings on wages for sales assistants. It becomes commercially viable to serve a larger crowd per store with many more products. Economies of scale can thus be achieved in retailing. Larger stores provide the basis for a wider product range that may attract customers. Furthermore, this make it possible to benefit from large-scale distribution, administration and marketing as well as advantageous bulk purchasing from suppliers.

### **4.2.2 Size and density of shops**

The structural changes in the Nordic countries have been more or less parallel. In all the Nordic countries the number of shops has decreased considerably in the period since 1990 and although it has not happened to the same extent as during the previous 15-20 years, there has nevertheless been a decrease of 30-40 per cent in the number of shops in all the countries.

Whereas overall changes by and large have been the same, the picture is somewhat different when it comes to today's number of shops. Measured against population figures, i.e. the number of consumers, the density of shops throughout the Nordic countries is relatively high, with Norway at the top. In comparison with other countries, such as Germany, the Netherlands, France and the UK, the figures in the Nordic countries are high, in particular compared with the Netherlands and the UK where shop density is as low as two to three shops per 10,000 inhabitants. This is less than half the number in the Nordic countries. With the relatively few shops per 10,000 inhabitants, average sales per shop are likely to be higher in these countries.

**Table 4.1. Number of shops and population figures, 2002**

	Number of shops <sup>1</sup>	Million inhabitants	Number of shops / 10,000 inhabitants
Norway	4,022	4.6	8.7
Finland <sup>2</sup>	3,395	5.2	6.5
Iceland	190	0.29	6.6
Denmark	3,310	5.4	6.1
Sweden	4,693	9.0	5.3
Germany	29,600	82.5	3.6
Netherlands	3,930	16.1	2.4
UK	14,445	59.0	2.4
France	14,335	61.4	2.3

Source: The statistics authorities of selected countries, European Retail Handbook 2003/04 and own estimates.

Note 1. This number includes shops that belong to chains in the respective countries, i.e. it is exclusive of specialised food shops and kiosks.

Note 2. Includes small shops.

Fewer shops per 10,000 inhabitants in turn means that consumers may have to travel longer distances depending on the density of the population and where people choose to live. It appears from chapter 3 that the population density of all the Nordic countries, except Denmark, is 20 or less inhabitants per square kilometre whereas the inhabitant/square kilometre ratio in Germany, the UK and the Netherlands is well above 200. In Denmark and France the figures are between these extremes with 110-130 inhabitants per square kilometre which indicate that consumers may have longer distances to their shops.

It may be argued that table 4.1 does not take proper account of the settlement pattern. Households are not distributed equally across the country. A relatively high percentage of the population lives in cities and more urban areas, and the supermarkets are located fairly close to their customers.

The accessibility to supermarkets in the Nordic countries compared with a few selected countries in Europe is shown in table 4.2.

Four of the Nordic countries – Iceland, Sweden, Finland and Norway – trail in comparisons of number of shops measured against area, whereas Denmark is close to the Netherlands and Germany with the most supermarkets per square kilometre.

**Table 4.2. Shop accessibility and urbanisation, 2002**

	Number of shops	Area km <sup>2</sup>	Shops/1.000km <sup>2</sup>	Urbanisation (%)
Norway	4,022	324,220	12	75
Sweden	4,693	449,964	10	83
Finland	3,395	337,030	10	59
Denmark	3,310	43,080	77	85
Iceland	190	103,000	2	93
Germany	29,600	357,000	83	88
Netherlands	3,930	41,526	95	90
UK	14,445	243,305	59	90
France	14,335	543,963	26	76

Source: The statistics authorities of selected countries, European Retail Handbook 2003/04 and own estimates.

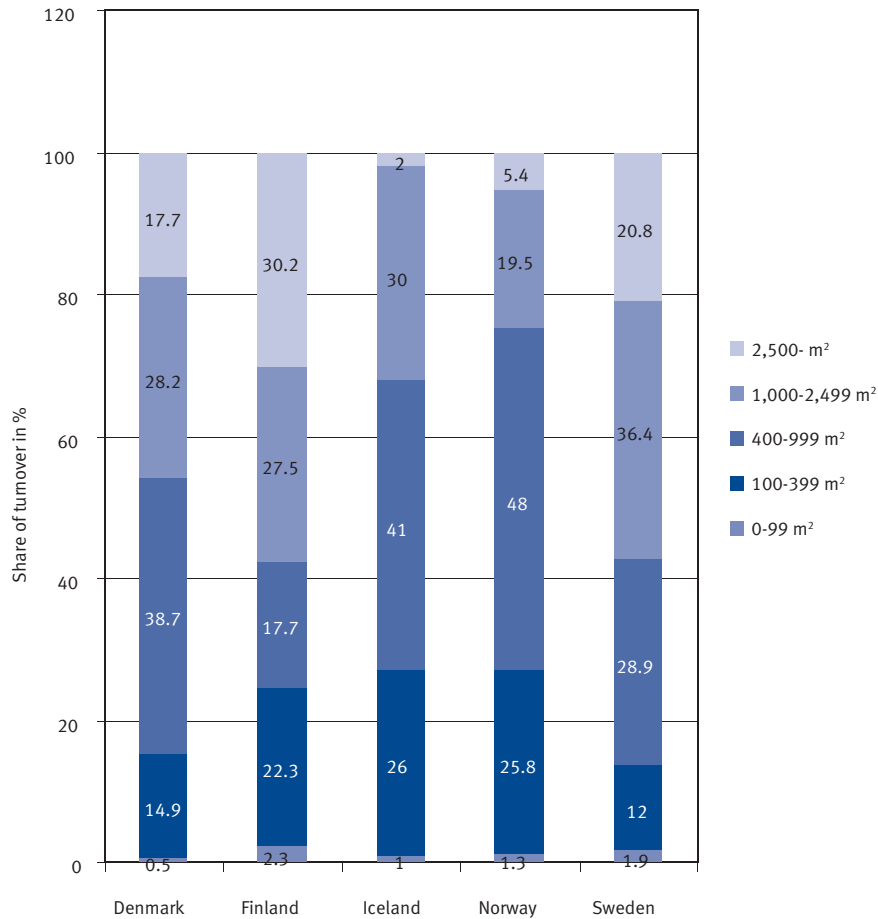
The degree of urbanisation varies somewhat among the countries and the difference is largest among the Nordic countries. In Iceland, 93 per cent of the population lives in urban areas, whereas in Finland it is only 59 per cent.

In the valuation of this settlement pattern it is worth noting land-use-planning legislation and regulation of opening hours in the individual countries (cf. also section 4.5). For example has the aim of Dutch zoning legislation for years been to curtail car driving. This has been essential to the survival of many small shops as an alternative to the relocation of big hypermarkets. In Germany it has been said that price pressure by consumers, restrictive zoning laws and one of the strictest sets of rules on opening hours in Europe have meant that developments in the retail sector have been aimed at launching discount concepts with low prices and a limited product range rather than at investing in shop design, marketing and IT. Countries such as France and the UK have experienced a more diversified development of the retail sector and more resources have been allocated to innovation.<sup>44</sup>

Today, the hypermarket sector in France is one of the largest in Europe. Shopping is largely done outside of the towns and cities. There are approximately 700 shopping centres and the sector accounts for 25 per cent of total shop floor space. In addition hereto, there are many small food shops in towns. Traditionally, France has not had many discount stores, but this sector is growing.

44 Source: European Retail Handbook 2002/03

**Figure 4.1. Distribution of shop floor space in the Nordic countries- 2002 – Share of sales**



Source: AC Nielsen: Nordic Grocery Insight – 2004, and own estimates for Iceland.

Also among the Nordic countries, the types of shops vary. By far most big stores – so-called hypermarkets with sales areas of more than 2,500 square metres – are found in Finland whereas relatively small shops, defined by sales area per shop, predominate in Norway and Iceland. Shop types in Sweden and Denmark are fairly similar, although Swedish shops in general are bigger than Danish shops.

Over the last 10 years, the share of total sales deriving from hypermarkets has grown noticeably in Finland and Sweden, while growth in Denmark and Norway has been negligible. In Denmark and Norway the most significant increase has been in the turnover from shops in the 400-999 square metre categories, due in part to the rise in the number of soft discount stores in these two countries.

Thus, total shop floor space has increased in all the countries, but most in Finland where shop floor space from 1995 to 2003 increased by 20 per cent (12 per cent in Sweden, 8 per cent in Denmark and 4 per cent in Norway<sup>45</sup>). Taking into account that there has been a decline in the number of shops, it is evident that the sales area of individual shops has been extended significantly<sup>46</sup>.

45 Norway excl. kiosks.

46 Source: National Statistic and ACNielsen.

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### 4.2.3 Ownership and chains

Ownership of supermarkets has become more concentrated either through mergers or through growing market shares.<sup>47</sup> This is due to a number of factors.

First, it has become increasingly common that a number of supermarkets are owned by the same company or group – often designated capital chains. There has always been profitable supermarkets which have expanded by establishing new stores in different areas and acquiring new outlets possibly following a change of ownership. In so doing, chains of stores have been created and it has been possible to take advantage of the experience of successful organisation of purchasing and sale, common management, economies of scale in purchasing, etc. As a result, the most profitable chains today comprise several hundred stores – and some chains have expanded internationally.

In other cases, independent retailers have agreed to cooperate in certain areas, such as purchasing and marketing. This cooperation can take a variety of forms and bind the members to a lesser or greater extent. However, the more binding forms of cooperation, in areas such as shop layout, marketing, including highest recommended prices, IT systems and product range, seem to be gaining ground. This type of cooperation is not by way of a capital chain, but instead in the nature of a voluntary chain. The owners of the individual shop may leave the chain and perhaps join another organisation.

#### Box 4.1. Different types of chains

*A capital chain* (sometimes called a *genuine chain*) is a chain of stores operated under one ownership. Aldi, Lidl, Netto are examples of capital chains.

*A voluntary chain* is a cooperation of independent stores in areas such as purchasing, concept, marketing, etc. ICA and Spar are examples of voluntary chains.

Members of voluntary chains often pay a joining fee and a monthly marketing fee. This allows the individual member to use the chain facilities such as logo and shop density, marketing, training, know-how and business development.

Some chains of independent stores are managed vertically, for example wholesaler-managed chains and *franchise chains*. In these chains the cooperation agreement is concluded between the individual chain participant and the wholesaler or the owner of the business concept (franchisor). The franchisee pays for the right to use the business concept. Often the franchisor itself owns some of the concept stores. Rema 1000 in Denmark, Kiwi and Rimii are examples of franchise chains.

*Hybrids* are chains of both voluntary chains/franchise chains and capital chains. Coop Norden, Norgesgruppen and SuperBest are examples of hybrids.

Second, there is a pronounced trend towards vertical integration of retailers and wholesalers both among supermarkets owned by the same group and among independent retailers. The scale of integration varies.

The strongest form is where the wholesaler and the supermarket are fully integrated, i.e. owned by the same group such as it is the case with Føtex in Denmark and Baugur in Iceland. Another example of integration is retailers' holdings of shares or other participating interests in the wholesale company, for example ICA in Sweden and the independent cooperative stores of Coop Norden.

Finally, there are still several supermarkets/chains which are not connected to a wholesaler through ownership, but merely through cooperation agreements. These are among others Spar.

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<sup>47</sup> Several mergers have been investigated carefully by the national Competition Authorities. The Finnish merger between SOK and Spar Finland has been released and will be investigated.

The trends towards integration are thus horizontal as well as vertical. In the Nordic countries these days there are hardly any supermarkets that are not parties to some form of marketing and purchasing cooperation. New supermarkets are usually established within the framework of a large system, for example by joining one of the existing voluntary chains or as additions to capital chains. Fully vertically integrated systems are, to our knowledge, only aimed at supplying own stores and there are no examples of new supermarket entrants having been supplied from any of these suppliers.

However, because of the advantages achievable from vertical integration, today there are only a handful of grocery wholesalers competing to offer their products to supermarkets on the most favourable terms, cf. box 4.2.

Officially, Coop Norden acts as a wholesaler to the retail trade, but in practice it only supplies independent stores, which are members of the cooperation.

Below, the (not –integrated) wholesalers are highlighted in grey in the chart - except Coop Norden.

#### Box 4.2. Purchaser to supermarkets/wholesalers in the Nordic countries

Denmark	Sweden	Norway	Finland	Iceland	Faroe Islands	Greenland
Coop	ICA Ahold	Norgesgruppen	K-group	Baugur	Super-gros (DK)	Super-gros (DK)
Dansk Super-Marked	Coop	Coop	Inex Partners (S Group/Tradeka)	Kaupás	Coop	Coop
Super-Gros	Axfood	ICA Norge	Tuko Logistics (Spar/Wihuri/Stockmann/Heinon Tukku)	Samkaup	Poul Hansen PF	
Edeka	Bergen Dahls	Rema 1000			Poul Michelsen PF	
Aldi	Dansk Super-marked/ICA Ahold					
Lidl	Lidl	Lidl	Lidl			

Such level of concentration may raise the question of market access for new supermarkets. If the vertically integrated chains continue to gain market shares and crowd out traditional grocery wholesalers, there will be even fewer opportunities for an independent retailer to get established on the market with a few shops, as it will be impossible to find a wholesaler that will supply on competitive terms.



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Moreover, there are examples where control with shop-property is regarded as very important. Some retail groups stake a lot on control with property and tenancy agreements, e.g. Axfood in Sweden owns the shops and rents these out to other chains.

#### **4.2.4. Shop types and profiles**

Concurrently with the enhanced horizontal and vertical integration, shop types and profiles have become more clear-cut and uniform. Today, all supermarkets are associated with a marketing chain to which it is essential that all stores appear alike. Consumers should be able to find (a number of) the same products on the shelves and at the same (maximum) prices. Furthermore, chain stores use the same design and layout modules (same colours, facades, flooring, wall covering, checkout counters and shelving). This creates an impression of unity designed to distinguish the chain from its competitors and help develop a preference for the chain and not only the individual store.

It also means that the selection of products does not change much from one store to another, especially in the discount chains with their narrow assortments. Large supermarkets and hypermarkets offer a more varied product range within the framework of the chains assortment.

A contributing factor to this trend towards more clear-cut and uniform profiles is modern IT systems which enable the registration and processing of large amounts of data. Data which are capable of showing the elements and relations of a given business system that are most efficient in terms of sale and which may increase the amounts the individual stores contribute to the total earnings of the chain. The chain management will seek to apply this knowledge systematically to increase efficiency, and with that earnings. As a consequence, the individual store's scope for initiative is curtailed and stores become largely more uniform.

While this situation may result in a uniform appearance in the competitive environment, it also raises consumers' awareness of new initiatives, and the effect of even small changes in important areas may be significant.

The division of the supermarket sector into shop types varies slightly from country to country. Normally the supermarket sector is divided into discount markets, ordinary supermarkets (possibly divided into large and small supermarkets) and hypermarkets. Mini markets border on the supermarket sector, but usually do not carry the full range of products, such as fresh meat, and thus belong to the kiosk sector. Box 4.3 provides an outline in schematic form of the differences between the various shop types; reality, however, may deviate somewhat from the outline. In the Nordic countries, hypermarkets are usually defined in accordance with the standard of 2,500 square metres set by the consultancy firm ACNielsen in its surveys. This includes extraordinarily large hypermarkets of well above 10,000 square metres concentrating on a wide product range, many bargains and a sizeable non-food section.

### Box 4.3. Characteristics of different types of shops

	Hyper-market	Supermarket		Discount market	Mini market
		Large super-market	Super-market		
<b>Sales</b>	>30m €	7-30m €	2-7m €	2-6m €	1-2 m €
<b>Area</b>	Approx. 10,000 m <sup>2</sup>	Approx. 2,200 m <sup>2</sup>	Approx. 1,000 m <sup>2</sup>	Approx. 500 m <sup>2</sup>	Approx. 250 m <sup>2</sup>
<b>Average amount of purchase</b>	>30 €	> 20 €	> 15 €	> 10 €	> 5 €
<b>Assortment</b>	Wide and deep	Wide and deep	Wide	Narrow	Narrow
<b>Location</b>	Out of town/ shopping centres	Out of town/ shopping centres	Out of town/ in towns	In towns	Out of town/in towns
<b>Price strategy</b>	Low prices/ campaign	Medium prices/ campaign	Medium prices/ campaign	Low prices	Medium prices/ service
<b>Profile</b>	Fresh products, non-food, shop-in-shop	Fresh products, non-food, shop-in-shop	Fresh products, non-food, promotions	Prices/ non- food promotions	Vicinity
<b>Non-food share</b>	>40%	20-40%	15-25%	10-20%	-
<b>Consumers' demand</b>	All in one place/heavy shopping	All in one place, fresh products	Most in one place, fine selection of fruit and vegetables and butchery	Good prices of primary groceries	Offers the essentials
<b>Product portfolio</b>	Approx. 60,000	Approx. 10,000	Approx. 6,000	Approx. 600-1,500	Approx. 5-600

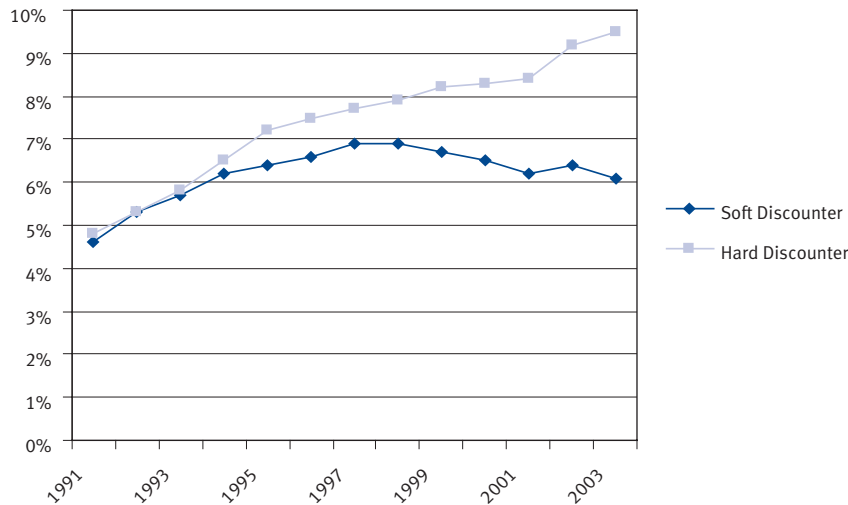
Source: Dlf - Conference 2005 (Contribution by Peter Bo Rützou, Kavli )

The shop type, which has attracted most attention during the past years is the discount market. Discounters offer a limited range of products in the order of 600-1,500 items, low prices and traditionally an austere shop layout. Over the past 10-15 years discount markets have thrived in all countries, chiefly due to the low prices of primary groceries.

On an international scale, a distinction is made between hard discounters and soft discounters. There is no precise definition of hard and soft discount, but hard discounters operate with low service, high rate of turnover, lowest possible costs and pursue a policy of low prices most persistently. They carry few items, many of which are private labels. Soft discounters, on the other hand, also use other parameters in the marketing and carry a more balanced selection of brands and private labels. International hard discounters are Aldi and Lidl. Netto<sup>48</sup> and Sale are among the soft discounters in the Nordic countries.

It is mainly the hard discounters which have influenced developments and gained market shares internationally, cf. figure 4.2.

**Figure 4.2. Development in the market shares of hard and soft discounters in Europe 1991-2003**

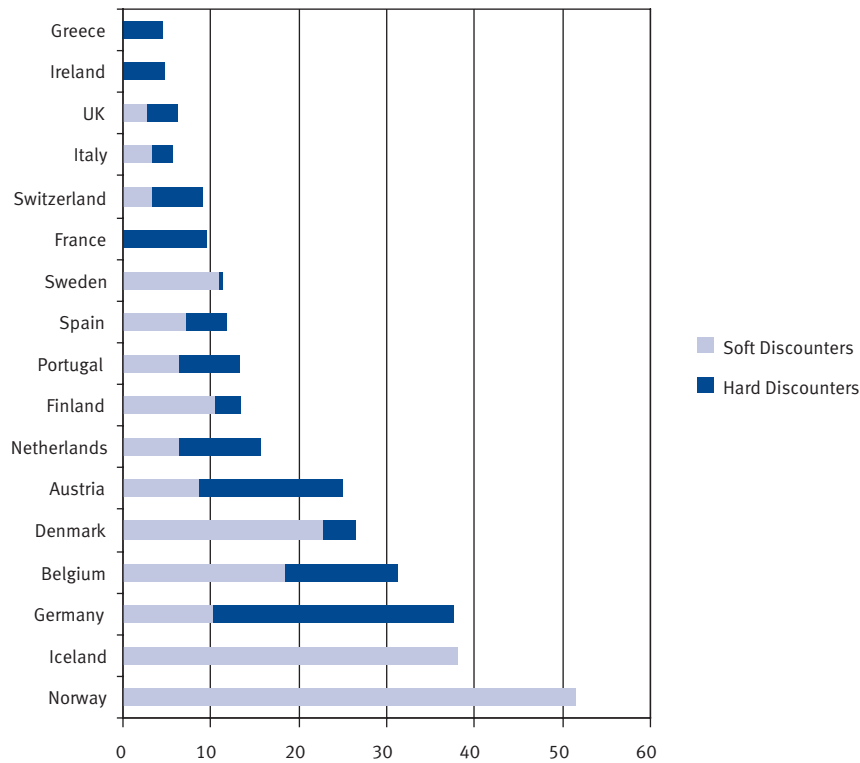


Source: ACNielsen: Development of the discount market in Europe, particularly the Nordic countries. Danish Association of Groceries Distributors. 2004

In the Nordic countries the situation is different. Until Lidl's market entry in Finland in 2002, hard discounters were only present in Denmark where the Aldi chain had set up in 1977. However, if soft discounters are taken into account, the Nordic countries are among the countries with most discount stores, cf. figure 4.3. According to the figures shown, the market share of discounters is largest in Norway with more than 51 per cent. However, these soft discounters differ from the discounters in other European countries. The product portfolio is wider, typically 2,500- 3,500. The figures are from 2003, i.e. before Lidl entered the Norwegian market. The market share of discounters is also high in Iceland (38 per cent) and Denmark (27 per cent), whereas it is considerably lower in Finland and Sweden (13 per cent and 11 per cent, respectively).

48 Netto is considered a hard discounter in Sweden

**Figure 4.3. European Discounters in 2003 – Market shares per country**



Source: ACNielsen ([www.dansk-dlf.dk](http://www.dansk-dlf.dk)) and own estimates for Iceland

Iceland, Norway and Denmark are also the countries which have seen the fastest growth in the discount sector in the period from 1998 to 2003. In Iceland the market share of discounters rose by 18 per cent, in Norway by 16 per cent and in Denmark by approximately 6 per cent. In Norway as well as in Denmark, the rise has occurred only within soft discount, whereas Sweden has seen an increase in hard discount of almost 5 per cent and Finland of almost 3 per cent. In Sweden and Finland, where Lidl made its entry into the marketing respectively in 2002 and 2003, it meant a decrease in the general price level. In Sweden surveys indicate that prices of the retailers own brands<sup>49</sup> decreased with about 2 per cent as a result of Lidl's entrance<sup>50</sup>, and in Finland the decrease on average was about 1 per cent<sup>51</sup> and besides that the large Finnish retail chains usually have lower price levels in the areas where Lidl-outlets are present.

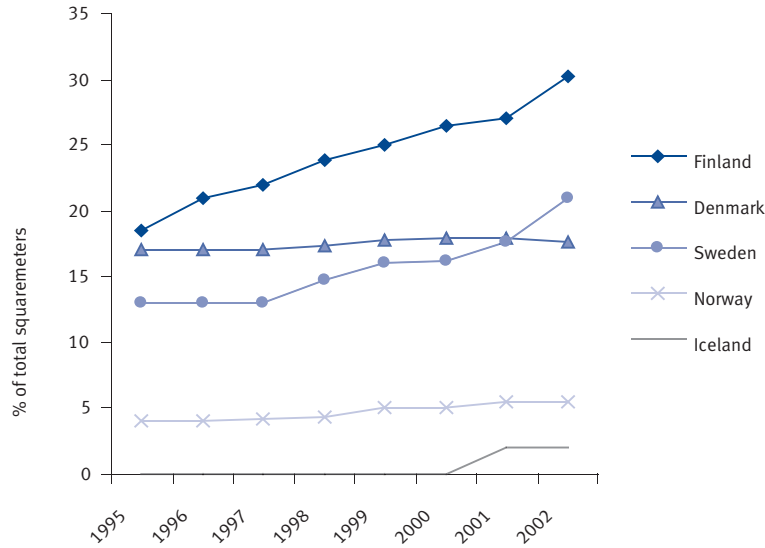
The success of hypermarkets witnessed throughout the European retail sector has, in the Nordic countries, been most pronounced in Sweden and Finland, where the share of total groceries sales attributable to hypermarkets 1995-2002 rose from 18 per cent to 30 per cent in Finland and from 13 per cent to 21 per cent in Sweden, cf. fig. 4.4. The shares in Denmark and Norway, in particular, are lower with 17 per cent and approximately 5 per cent, respectively. In countries such as France and the UK, hypermarkets are much stronger accounting for more than 50 per cent of total sales, whereas the average in Europe is around 30 per cent.

49 Change in prices on a selected basket of goods.

50 Source: Konkurrensverkets rapportserie 2004:2. Konsumenterna, matpriserna och konkurrensen.

51 Source: DLF Conference 2005 (Peter Bo Rützou, Kavli).

**Figure 4.4. Hypermarkets' share of total sales in the retail sector**



Source: ACNielsen. Conference 2004

While the hard discounters, in particular, profile themselves through their prices, many hypermarket chains take a different approach and seek to distinguish themselves by offering special quality products, foreign products, organic products or particularly healthy products. Certain small chains may target the customers within a specific region.

The size of the chains varies some in terms of numbers and sales. In Denmark and Norway there are discount chains with about 350-400 stores and the average sales<sup>52</sup> per store in the largest discount chains in Denmark, Norway and Finland is around € 4-5 million. The number of discounters in Sweden is less than in Norway and Denmark and their market share is significantly smaller. On the other hand, discounters in Sweden are relatively big as are Swedish supermarkets in general. Average sales per store of the marketing chain Willys, which is part of the Axfood group, are above € 13 million.

A number of the marketing chains are international. The scope of internationalisation may vary: Cooperation in the field of purchasing, concept development and techniques, common labels and marketing. In terms of cooperation in the field of marketing, the Spar chain is present in Denmark, Finland, Norway, Sweden and another 30 countries worldwide. Edeka stores are found in Denmark. The German discount chains Lidl and Aldi have also made their mark on the Nordic discount sector. Also chains based in the Nordic countries have ventured abroad in an attempt to gain a foothold in other countries, cf. box 4.4.

52 All sales figures are exclusive of tax.

#### Box 4.4. Internationalisation of Nordic chains

<i>Danish</i>	<i>Swedish</i>	<i>Finnish</i>	<i>Norwegian</i>	<i>Icelandic</i>
<b>Netto</b> Germany, Poland, the UK and Sweden	<b>ICA</b> Norway, Estonia, Latvia and Lithuania	<b>Kesko</b> Estonia, Latvia, Lithuania, Russia	<b>Rema 1000</b> Sweden, Denmark, Poland and Latvia	<b>Baugur</b> Faroe Islands
Coop	Coop	S-group Estonia	Coop	
		Tradeka Russia		

Although name, logo and the overall concept are the same in several of the Nordic countries, the way in which a Netto store is run in Denmark may differ considerably from the way in which it is run in Sweden. The selection of products and marketing strategies are adapted to the local market, and in particular so is the range of food products as only a small number of items will be common in both countries. The cross-border chains have stated that as much as 80-90 per cent of the food products offered in the stores in two Nordic countries may be different<sup>53</sup>. So, if we look at the Nordic market less than 5 per cent of branded packages for food products are the same. The marketing is completely separate and only aimed at the national market. To some extent, this is also the case for Aldi and Lidl. Both have a very large number of private labels – more than 80 per cent of the assortment is private label products – and the differences in their selection of products from one country to another are almost exclusively within the fresh food group.

#### 4.2.5 Cooperating in purchasing

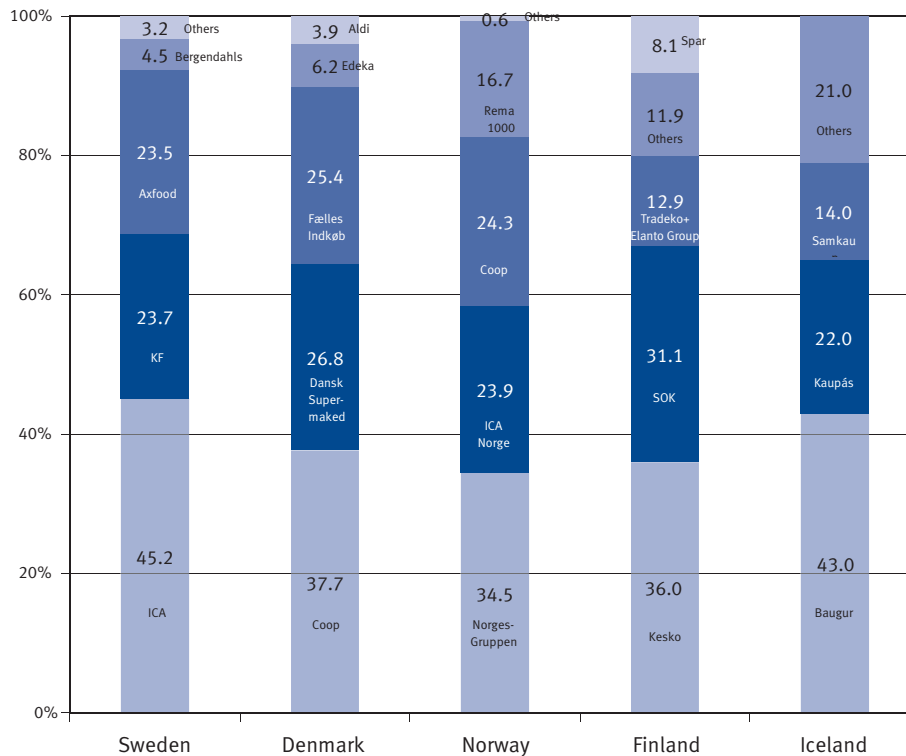
The advantages to supermarkets of cooperating in the field of purchasing are considerable. It means bulk buying and an opportunity for negotiating huge discounts with suppliers. In addition, bulk buying facilitates the purchase from distant suppliers, as transport costs per unit are reduced. Also, the handling of any public authority requirements (customs duties, taxes, contents documentation and labelling) will be less onerous.

On top, collective purchasing helps ensure uniformity of stores. The stores receive the same products packaged and labelled in the same manner. It may be a factor in reinforcing chain identity and the perception of unity, which the marketing seeks to spotlight. This is particularly useful in the chains' marketing of own brands (private labels).

Purchasing for the supermarkets in the Nordic countries is in the hands of only a few players. Chains are grouped under four to six umbrella organisations in each country, which together represent 80-90 per cent of grocery sales.

<sup>53</sup> Source: Interview with the chains.

**Figure 4.5. The largest retailer groups in the Nordic countries – market shares, 2002**



Source: ACNielsen. Nordic Grocery Insight 2004.

Under each umbrella organisation there are several marketing chains, an exception is Rema 1000 in Norway which only organize one chain. ICA Sweden, for example, is responsible for purchases for all Swedish supermarkets operating under the logos Ica Nära, Ica Supermarket, Ica Kvantum and Maxi Ica Stormarked.

To the three or four large purchasing groups should be added the international discount chains such as Aldi and Lidl whose shares in the Nordic market are not significant, but overall they possess substantial purchasing capacity. The implications are that five to six chief buyers decide which products to buy for the supermarkets in each of the Nordic countries. However within some chains it is possible to choose from the assortment decided by the single shop in the marketing chain, e.g local products.

Several of the Nordic umbrella organisations take part in more or less formalised cross-border cooperation which allows the buyers the additional advantages of purchasing for more countries. Coop Norden aims to enter into agreements covering all the cooperative members in Denmark, Norway and Sweden. Coop also cooperates with the S-Group in Finland. ICA Norge ASA is a subsidiary of the Swedish ICA AB which is 60 per cent-owned by the Dutch Royal Ahold, one of the largest retail groups worldwide. There is also cooperation in the field of purchasing with the Finnish Kesko. Norgesgruppen, Axfood, Tuko Logistics and Supergros cooperate through the purchasing organisation United Nordic Inc. AB. Edeka Danmark is partly owned by the German purchasing organisation Edeka Zentrale which is one of the largest purchasing companies in Europe.

In addition, a number of the Nordic purchasing groups are members of international groups designed to benefit from collective purchasing at an international scale. The Spar chain with stores in four Nordic countries is present in 34 countries worldwide. The chain operates a system of collective purchasing of more than 300 products. ICA, Dansk Supermarked and the Kesko-Group in Finland all participate in the AMS purchasing system.

Similar pooling of purchasing capacity is found in most other EU countries. The table below shows the percentages of the largest and the three largest (CR1 and CR3) organisation in selected countries. Concentration in the Nordic countries is greater than in any of the other countries except from the Netherlands, where one retail group (Ahold) has a market share of more than 40 per cent.

**Table 4.3. Concentration in the retail sector, 2002/03**

Country	CR1 <sup>1</sup>	CR3	HHI <sup>2</sup>
Denmark	37.7	89.9	0.28
Finland	36.0	80.0	0.26
Iceland	43.0	79.0	0.26
Norway	34.5	82.7	0.27
Sweden	45.2	92.4	0.32
France	26.0	57.4	0.16
Germany	24.7	58.4	0.16
Netherlands	47.8	76.3	0.29
UK	27.7	59.2	0.15

Source: ACNielsen and Retail Handbook.

Note 1. CR= concentration ratio

Note 2. HHI = Herfindahl-Hirschman Index is a concentration index. The HHI is defined as the sum of the squares of market shares of all the firms in the relevant market. The HHI will vary between 0 (an atomistic market) and 10 000 (monopoly) if market shares are measured in percentages, or equivalently between 0 and 1 if market shares are measured as decimals. Since the shares are squared the HHI will put more emphasis on large than small firms. For example, the HHI contribution of two firms having 20% market shares each is = 400 + 400 = 800/0.08. The contribution of one firm having 40% is = 1600/0.16.

### 4.3. The role of non-food and shop-in-shop

Chains set their prices so as to maximise earnings. High prices can lead to a decrease in sale which makes it important for the retailers to find the optimal combination between price and sale. The objective therefore is to sell as many products as possible at high prices and low costs. Price and cost for each article in the total product assortment of the supermarket must be considered carefully. Sale of food is only a proportion of supermarket sales, but it is of paramount importance to the aggregate earnings.

The range of food products offered by shops with limited floor space, for example discount markets, is narrow and not very deep (as little as 6-700 items in some cases). The number of items will increase in line with the shop space. But the number of food products will not increase at a similar pace.

First of all, the proportion of non-food products will usually increase compared to that of food products, including everyday groceries. In supermarkets overall, the share of non-food has increased and today accounts for approximately 10-15 per cent in discount stores and small supermarkets, more than 30-40 per cent in large supermarkets and up to 45-50 per cent in hypermarkets.<sup>54</sup> Discount stores have gradually increased their share of non-

<sup>54</sup> Source: Interviews with retailers.



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food. The non-food will often consist of a very narrow range of low-priced products, which change from one week to the next.

The term non-food covers a wide spectrum of products such as health and beauty products, clothes, electronics, hardware, tools, gardening implements, etc. A wider range of food products leaves the consumers with more choice of day-to-day shopping for food and drinks. A wider range of non-food products makes it possible for consumers to have all their demands – in addition to the shopping for food – satisfied in one and the same place – one-stop-shopping. On top, in retailing, gross margins on several non-food products are high compared to the margins on food which supermarkets traditionally operate with. Hence, it may prove profitable to include non-food products in the range and possibly sell them at prices which are lower than those charged by shopping goods retailers.

Some chains – mainly large supermarkets/hypermarkets – reduce prices on certain articles for short periods of time so that they act as "traffic builders" attracting customers. Certain food products are well suited for that purpose. Favourable prices on products such as beverage, coffee or in-season products may attract customers<sup>55</sup>. The loss of profits on food is offset by slightly higher prices on other articles of less importance to consumers' choice of shopping facility, but which complement the article on offer or tempt consumers as they pass by them in the supermarket – impulse buying. Where food products are used in this way, supermarkets create a system of promoting reduced prices on attractive articles that change every week while at the same time carrying a wide and deep range of other articles to complement the shopping.

Once shop sales areas become bigger, it is logical to devote more space to attractive displays inside the shops. Instead of long drab rows of products there will be more room for special arrangements, events, taste sampling and promotional initiatives. In the large supermarkets (hypermarkets in particular) shop-in-shop concepts are common. Most of them sell foods such as butchery, delicatessen and cheese and often resemble convenience stores where consumers can buy (small) ready-made dishes, lunches, coffee, meat balls, etc.

The contrast is the discount markets which aim to attract customers by always offering low prices on all groceries, including food. The ambition of discount markets is to become the preferred choice for groceries shopping throughout the week and therefore make a point of offering low prices on all primary products: milk, butter, eggs, bread, juice, etc. Promotion does not often include short term price cuts for a few days or a week, instead they react swiftly upon learning that competitors have reduced their prices of primary products.

Against this background promotional sales with price reductions could be assumed to be greatest in countries such as France, Finland and to some extent Sweden with a fairly large number of hypermarkets and relatively few discount markets. Nonetheless, surveys show a somewhat different picture. In the Nordic countries promotion sales are more important to food sales than in France and Germany. Especially in Denmark the marketing pressure is high with many campaigns and advertisements in the weekly promotion papers, while the pressure in e.g. Finland is more in form of advertising in television and newspapers. This affects price comparisons and assessment of the competitive situation, cf. chapter 2.

Another factor is the differences in the range of products available in supermarkets in different countries. The differences are not as noticeable in the discount sector, thus some differences can be observed between soft discounters in different countries, whereas especially hard discounters with many private labels offer more or less the same narrow array of products within each product group in all the selected countries. The differences are more pronounced in supermarkets and hypermarkets.

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<sup>55</sup> However, the products may not be the same in different countries. For example, Norwegian shops do not sell wine, and it is forbidden to use beer to attract customers in this way.

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## 4.4. Supermarkets' expenses and margins

The largest cost factors for supermarkets are – besides purchasing costs – labour costs and rent.

The rent depends on the location of the stores, whether they are located in town centres or out of town (perhaps in shopping centres), and whether they are found in metropolitan areas or in rural districts. Store networks are continually adjusted in line with living patterns, and according to which types of stores that prove most successful. At the same time, all countries have implemented legislation which regulates the location of shops and extensions of existing shops. This is mainly landuse- and planning regulation which lays down the framework for location of notably large shopping facilities and rules on opening hours. Rules on opening hours influence not only when customers shop, but also how.

Where shops are permitted to stay open on Sundays, households tend to do some of their shopping on that day and they become more mobile with respect to place of shopping. This benefits out-of-town centres. On the other hand, long opening hours and Sunday opening give increased labour costs.

Section 4.5 below is a review of how national regulation affects retailers in various countries in Europe. There is also information on national provisions on opening hours.

Food retailers and some distributors do not compete directly with comparable undertakings in other countries. Some of the major cost factors, including labour costs, are contingent on local and national conditions, such as collective agreements and public regulation. The same is the case within transport, although foreign carriers may be able to undertake some transport in competition with local operators.

The impact of labour costs on food prices has not been studied specifically. But various calculations suggest that labour costs do vary. However, the impact thereof on the level of food prices in the Nordic countries compared to the rest of the EU is difficult to assess.

Eurostat's labour cost figures for the service sector (2002) clearly show the differences in wages between the countries, cf. table 4.4. Denmark, Sweden and Belgium are among the countries with high wages whereas Iceland, for example, is below average. In addition to wages in the retail sector, the figures in the table also include wages in the wholesale sector and car repairs.<sup>56</sup>

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<sup>56</sup> Data from the retail trade indicate that wages for the same type of work in the shops are higher in the Nordic countries than in countries such as Germany and the UK. The differences may be as high as 15-20% or more.

**Table 4.4. Hourly wages in the service sector - (€/hour)**

	2002	EU9=100
EU 9	23.11	100
Denmark	26.54	115
Sweden	26.35	114
Belgium	26.31	114
Finland	24.04	104
France	23.70 <sup>1</sup>	103
Germany	21.60 <sup>2</sup>	93
Netherlands	21.54	93
Iceland	21.18	92
UK	20.31	88
Italy	17.61	76

Source: Eurostat. Labour cost

The data in table 4.4 include all direct labour costs in the service sector, i.e. also social security contributions.

In addition to wage rates and labour costs, different levels of productivity should be taken into account in comparisons. Data suggest that productivity varies from one country to another. Moreover interviews with retail organisations reveal that in Denmark the number of specially trained shop assistants is comparatively higher than in the other Nordic countries and Germany, in particular. Presumably, specially trained employees generate higher sales per employee. A number of jobs in a supermarket is very much the same in all countries, for example working at a cash terminal or the refilling of shelves, but table 4.5 confirms that sales per employee are higher in Denmark than in other countries.

**Table 4.5. Sales and margins generated by supermarkets**

	Purchase per employee € million					Margin per employee € million <sup>1</sup>				
	DK	S	N	D	Aver. <sup>2</sup>	DK	S	N	D	Aver.
1997	0.19	-	-	-	0.13	0.05	-	-	-	0.04
2000	0.26	0.19	0.13	0.12	0.15	0.06	0.06	0.05	0.04	0.04
2002	0,26	0.23	0.15	0.13	0.16	0.06	0.07	0.03	0.04	0.04

Source: Eurostat

Note 1. Return/employee

Note 2. Average = figures for Denmark, Sweden, Norway, Germany and Netherlands.

Second, the labour cost share of sales varies depending on the type of shop. The labour costs of conventional supermarkets and hypermarkets are higher than the labour costs of discount markets, particularly hard discounters, cf. table 4.6 which is based on data from the retail trade. Large supermarkets and hypermarkets have more employees to fill shelves and perhaps provide personal service in the service sections with non-food products and shop-in-shop of the stores.

**Table 4.6. Labour costs in retailing**

	Labour costs as a percentage of sales
Hard discounters	3.0-3.5
Soft discounters	5-6
Small supermarkets	7-9
Large supermarkets / hypermarkets	10-13

Source: Interviews with retailers

Labour costs thus vary within a range of almost 10 per cent of sale depending on the type of shop and service. This means that the retail structure will impact greatly on the extent to which labour cost differences are reflected in price levels. There are significant differences among the grocery retail structures of the various countries, cf. section 4.2, and in the light of the percentages set out in table 4.6, it is evident that the impact on food prices of such differences are greater than labour costs.

In retailing labour costs amount to between a third and one half of total gross margins. According to our data, the gross margin of hard discounters may be as low as approximately 10 per cent of sales. Other supermarkets have higher margins, and for all supermarkets as a whole the gross margin is more than 20 per cent.

In comparisons of gross margins obtained by supermarkets in the Nordic countries with those of supermarkets in other EU countries, the higher wages in the Nordic countries are not reflected, cf. table 4.7 based on Eurostat data.

**Table 4.7. Gross margins and sales of supermarkets**

	Sales per undertaking € million					Gross margins as % of sales <sup>1</sup>				
	DK	S	N	D	Aver. <sup>2</sup>	DK	S	N	D	Aver.
1997	2.0	2.2	1.3	3.8	2.8	0.18	0.23	0.19	0.21	0.20
2000	3.3	2.3	2.2	4.2	3.6	0.20	0.23	0.26	0.24	0.21
2002	3.7	3.0	2.5	4.8	4.3	0.20	0.22	0.24	0.24	0.21

Note 1. Gross profit/turnover

Note 2. Average= Figures for Denmark, Sweden, Norway, Germany and Netherlands.

Source: Eurostat

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The figures from Eurostat show that gross margins in the Nordic countries are not noticeably different from gross margins in Germany. This may be because the varying levels of productivity and shop types, in particular, equal out the wage differences.

The figures on gross margins in Europe in table 4.7 do not comprise all countries in EU15, and the figures must be interpreted with some caution. It should, for example, be noted that data from statistics authorities on retail margins do not make allowance for the degree of vertical integration. The activities of retailers, wholesalers, suppliers, etc. change continually. Producers and distributors are constantly customising their activities with a view to enhancing efficiency and such customisation affects the margins achieved by retailers and suppliers. One example is the customisation of distribution patterns. Retailers have rationalised stores function and are, for example, taking over the actual delivery to the stores from more and more distributors.

Another example is joint marketing, where suppliers pay in order to be included in retailers marketing.

There are considerable differences in the labour costs of supermarkets in the Nordic countries (notably Denmark, Sweden and Finland<sup>57</sup>) and the rest of the EU. However, to some extent the impact on prices is equalled out by the differences in productivity and the different retail structures. According to Eurostat's statistics retail, gross margins and margins per employee are not higher in Denmark, Sweden and Norway than in the rest of the EU. This indicates that overall the higher labour costs are not reflected in prices. Though this conclusion is uncertain.

## 4.5. Public regulation

Public regulation in the European countries affects consumers and retailers in different ways. Land-use planning regulation affects the location of retailing, while other instruments of government can affect the operation of the business. Recent changes in this area have seen an easing of restrictions on opening hours but a tightening of land-use planning regulation and the rules governing retailing, such as price marking and display regulation, to safeguard consumer interests and regulate trading conditions.

Directive 98/6/EC provide the rules about prices of products offered to consumers. This Directive do not prevent Member States from adopting or maintaining provisions which are more favourable as regards consumer information and comparison of prices. These rules are implemented in the national legislation.

Denmark has a special Price Marking and Display Act<sup>58</sup>, and so has Sweden. In Norway, the rules are incorporate into the Marketing Practice Act and the same in Finland.

### Sweden

Opening hours are not regulated in Sweden. But retailers are responsible for reasonable working conditions. Authorities may close or restrict trading by retail shops on security grounds, typically in large cities in late hours. Generally, hypermarkets are open 7 days a week from 8-10 am until 7-10 pm. The regime in Sweden is less restrictive than the regimes in Denmark and Norway. Sunday trading began in the 1980s and is steadily growing in popularity, especially among the centres and hypermarkets.

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57 Norway is not included in the data available from Eurostat.

58 A new proposal is being prepared

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In terms of planning policy, Sweden lies in stark contrast to its Scandinavian neighbours. A number of supermarkets have opened in recent years, which indicates that the regulations are fairly liberal compared to other Nordic countries. However, the planning process, in which the municipalities are the principal decision-makers, is generally considered one of the most difficult entry barriers contributing to the static market structure in Sweden. With the advent of hard discounters and a public debate on food prices, it seems that municipalities have become somewhat more tolerant towards new shop developments<sup>59</sup>.

### **Norway**

Since April 2003, opening hours in Norway have not been regulated, except on Sundays and official holidays. There are exceptions to this rule: Stores are permitted to stay open on the three Sundays before Christmas. Stores in designated tourist areas are permitted to stay open on Sundays, as are grocery stores smaller than 100 square metres and petrol stations smaller than 150 square metres.

The five-year moratorium on the building of new stores or shopping centres of more than 3,000 square metres, announced in 1999, has been replaced by new legislation leaving it up to the local authorities to decide which kind of development they want in their area. The aim still is to prevent the erosion of town and city centres by putting an end to new establishments in green-belt areas. However, if plans may have an appreciable impact on the competitive conditions, the planning authorities are obliged to make assessments of this.

### **Finland**

Stores are permitted to stay open between 7 am and 9 pm from Monday to Friday and from 7 am to 6 pm on Saturdays. Sunday trading has been permitted since 2000, but only between 12 am and 9 pm and only in November and December and from June till August. Food shops smaller than 400 square metres are permitted to stay open every day except on public holidays.

As in many European countries, the focus of Finnish retail planning policy is to protect town centres by carefully controlling the amount of new out-of-town developments. One of the key aims of the new Land Use and Building Act, which came into force in January 2000, was to exert greater control over large-scale retail development, notably hypermarkets, in an area that was not regulated previously. The Act provides that commercial property of more than 2,000 square metres will only receive planning approval if the site is specially designated for such purpose in the local plan. Local authorities have power to make independent decisions in land-use planning matters. As in other Scandinavian countries, decision-making has been decentralised from national government to the municipalities and, as a consequence, retail development varies from location to location.

The current Land Use and Building Act is thought to slow down the construction of large retail stores significantly, but it is largely at the discretion of the municipal decision-makers to decide whether building projects ultimately proceed at an acceptable pace.

### **Denmark**

Shops are permitted to stay open from 6 am on Monday to 5 pm on Saturday and they are not required to close at all between these times if they do not wish. Sunday trading is allowed from 10 am to 5 pm on 21 Sundays throughout the year. Small food and grocery stores with annual sales of less than € 3.4 million are permitted to stay open on all Sundays as are outlets at junctions as stations, airports and petrol stations.

Denmark has had regulations concerning planning for new shops and their maximum size since 1997. Development of food stores in general should not exceed 3,000 square metres

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<sup>59</sup> Konkurrensverket has in "Konsumenterna, matpriserna og konkurrensen", 2004, proposed five reforms which would facilitate entry of food retailers.

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and large-scale retail planning in out-of-town centres is quite restrictive. This aims to protect city centre retailing and small dependent retailers, while it also prevents significant out-of-town development.

Opening of large outlets is not impossible, however, but special planning arguments must be provided.

A change in 2002 transferred enhanced planning authority from counties to municipalities. Recently, a committee has been appointed to evaluate the need for adjustment of the existing law.

The planning regime in Denmark has resulted in a limited number of hypermarkets and has benefited the discount sector which establishes shops with floor space below the permitted limit.

### **Iceland**

Shops are allowed to stay open 24 hours a day, also on Saturdays and Sundays. Therefore there are many retail chains that emphasize long opening hours, usually from 9 or 10 am until 9 or 11 pm. Despite that shops are required to limit their opening hours on public holidays like, for example, Easter and Christmas.

Planning regulation in Iceland is from 1998. There are no provisions in the act directly governing trade or the use of stores. Instead, they are included in a regulation which contains provisions on both trade and service. Decision-making has been decentralised to the municipalities and as a consequence, retail development varies from location to location.

### **UK**

There are no restrictions on trading hours during the week, but stores of more than 3,000 square feet are only permitted to stay open for 6 hours on Sundays. Many of the leading supermarket/hypermarket chains have stores that are open 24 hours a day.

Planning Policy Guidance (PPG) 6 restricts large-scale out-of-town development in favour of town centre regeneration and imposes a sequential test for development. In order to build out of town, it must be proved that no suitable site can be found centrally, and that there is a need for the scheme to go ahead. Similarly PPG 13 aims to control out-of-town development and directs new development to areas that will utilise more sustainable transport modes and reduce dependence on the private car. In addition, the government is trying to restrict the parking ratios for all new developments, encouraging planners to make shoppers and leisure users share parking provision and use greener forms of transport.

PPG was a result of a large growth in new retail floor space and shopping centre openings in the 1980s. The first half of the decade was characterised predominantly by town centre development, while the late 1980s was characterised by the growth in out-of-town shopping development, with a change in Britain's urban retail landscape. Out-of-town sites were relatively easy to assemble and the shopping centres were popular. But despite the trend some 75 per cent of total space opened during this period was in towns.

The UK thus had a very early development in the retail sector towards shopping centres with hypermarkets and UK grocery retailing is dominated by big retail chains. This has prevented the discount chains from capturing large shares of the retail market. UK retailing only claims a share of 5 per cent<sup>60</sup>, which is far below other European markets.

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60 Source: Euromonitor International 2003. A future for Discounting 2003.

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## **Germany**

Trading hours have become a serious issue in Germany where restrictions, traditionally, have been tighter than almost anywhere else in Europe. Trading is permitted from 6 am until 8 pm on weekdays and on Saturdays until 4 pm. Sunday opening is forbidden, except for convenience and travel goods shops.

The German retail planning system is restrictive with strong environmental concerns coming into play. Current legislation permits the construction of large-scale retail schemes, such as shopping centres, hypermarkets and factory outlets, only in core areas and special areas, and openings in special areas are conditional on the local town and country planning regulation being taken into account. In 1998, the law concerning construction and regional planning was revised, making the planning and development of large-scale retail schemes subject to the discretion of the regional planning authorities. Additionally, large-scale outlets have to undergo an environmental impact assessment, if their sales area exceeds 5,000 square metres. This means that floor space in Germany per inhabitant is less than in France and the UK, and this regulation has opened up opportunities for discounters.

## **Netherlands**

Supermarkets may stay open from 6 am to 8 pm six days a week with Sunday opening permitted up to 12 days a year. In tourist cities shops are permitted to stay open every Sunday. Retailers may apply for special licences allowing them to stay open until 9 pm during the week. Municipal authorities have the last word on what is permitted in the local area.

Dutch geography means that many towns are located close together. This has heightened concerns about the impact of out-of-town retailing, resulting in the absence of the hypermarket concept. Until the early 1990s the focus of Dutch retail planning was on concentrating shops in a limited number of shopping districts within built-up areas. A change facilitated the development of concentrations of large-scale retail parks outside existing retail locations. However, this is only permitted in the thirteen largest population centres around the country. The restrictive regulation has resulted in the almost complete absence of hypermarkets.

## **France**

Trading hours in France have become very flexible. The main limitation being the maximum number of hours that employees are permitted to work (46 hours for food outlets). Sunday opening is limited to tourist areas, convenience and service retailers. Shopping centres may stay open five Sundays a year.

In 1973, France was the first Western European country to introduce special legislation to control the development of retail space. Under this legislation retail developments with sales space of more than 1,500 square metres (or 1,000 square metres in towns with less than 40,000 inhabitants) were required to obtain planning permission from the Town Planning Directorate. The prime objective of this legislation was to protect the small retailers from the big distributors and hypermarket operators. In 1996 a more restrictive law was introduced requiring all retail units of more than 300 square metres to obtain a special authorisation. The restrictive legislation has not prevented the development of a large hypermarket sector in France accounting for 50 per cent of retail sales<sup>61</sup>. Rather, the effect of this legislation has been that retailers have been forced into mergers.

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61 Source: Bain & Company Press Release 6/17/2004.



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## 4.6. Conclusions

In all the Nordic countries, the number of retail shops has decreased considerably and the food retailing has shifted towards the supermarkets, which today accounts for approximately 80-90 per cent of retail sales of food products. Whereas overall changes more or less have been the same, the picture today is somewhat different when it comes to number of shops. The number of shops per capita throughout the Nordic countries is relatively high in comparison with other countries, such as Germany, the Netherlands and the UK. At the same time, the population density is lower, except in Denmark.

Within the supermarket sector, especially discount stores and hypermarkets have increased their market shares. Discount shops are characterized by low prices and a narrow assortment. Hypermarkets have larger assortment - both food and non-food products. Their market policy often includes numerous campaigns with price cuts. The large number of discount markets and hypermarkets and their mutual competition influence prices and the selection of food products significantly, and their progress contribute to explain the reduced price gap between the Nordic countries and EU-15.

The retail organisation in the Nordic countries have become more concentrated, organised in marketing chains and buying groups. The Nordic retail sector is clearly more concentrated than it is in for example France, Germany and the UK.

This concentration has entailed a change in the balance of market power. Powerful buyers can negotiate low prices paving the way for lower consumers prices. If competition is strong at the retail level most of price rebates and bonuses granted to the retail chains will be competed away to benefit of the consumers. However if exercise of buyer power restricts the number of substitutable products in the shelves, there is a risk to diversity. This risk is enhanced if suppliers are foreclosed from the market, leading to increased supply side concentration in the long run.

High market concentration in the retail market may have weakened the competition between the market participants. If competition becomes weaker then lower prices from suppliers to a less degree is passed over to the consumers compared to a situation with more fierce competition. Moreover, some of the retail markets in the Nordic countries exhibit some characteristics that are compatible with a stable tacit collusion; They are concentrated and there are fiercer competition. Prices are volatile but the increased collecting of data about prices and sale makes it easy to react swiftly to any price initiative. It is therefore vital for competition authorities to preserve the competitive pressure at the retail level and lowering barriers to entry.

Wage cost - at the retail level - are higher in the Nordic countries than in many other European countries. But this is not fully reflected in higher retail margin on the average. This can be explained – at least partly – by differences in productivity and in the retail structure.

Purchasing patterns are still largely national, but with a process of internationalisation similar to the suppliers. Cross-border operations, new ideas from other countries and cooperation with supermarkets in other countries have become more common and are growing in importance. Lidl's entry on the Nordic markets is an example of the increased internationalisation.

Assortment and marketing still vary from one country to another and only a small amount of food products are the same in the Nordic countries. However there are no reason to presume that the difference between the Nordic countries are larger than between other EU countries.

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Public regulation in the European countries affects retailers in different ways. Land-use planning regulation affects the location of retailing, while other instruments of government can affect the operation of the business. The zoning regulation has affected the pattern of establishing discount-shops, hypermarkets and out of town centres differently. Recent changes in this area have seen an easing of restrictions on opening hours but in some countries land-use planning regulation and the rules governing retailing, such as price marking and display regulation, to safeguard consumer interests and regulate trading conditions have been tightened.

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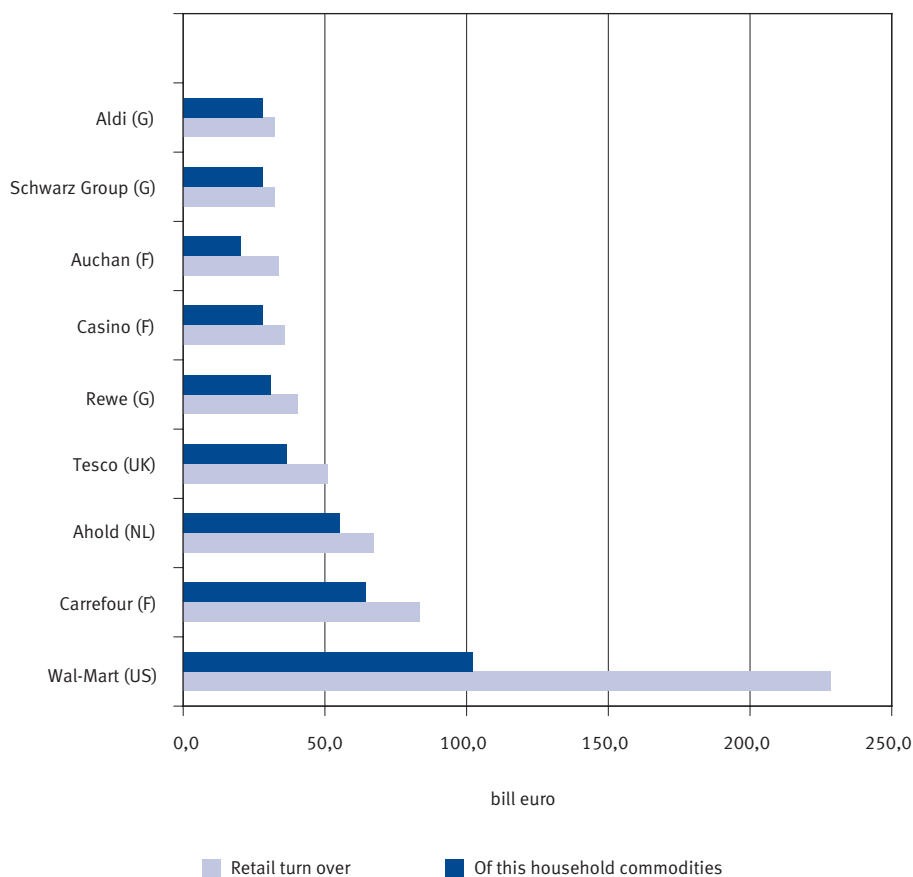
## 5. Competition for the store shelves

### 5.1 Introduction

Relationships between food industry manufacturers and retailers have changed fundamentally during recent years. International deliveries together with the formation of retail buying and selling joint ventures and other forms of cooperation have become common in a large number of product areas.

The sales of retail chains which are present in several countries measure up to is considerable, cf. figure 5.1.

**Figure 5.1. Sales of the big retail groups, 2004.**



Source: Danish Agriculture Council – May 2005

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Furthermore, retailer groups' own market research and their closeness to consumers have provided them with considerable amounts of market information based on which they control in-store merchandising and shelf space management. Their private labels also provide them with cost information.

The increasing market power of retail groups has led to a situation where suppliers often have to pay allowances to get products on the store shelves. Furthermore, retailers increasing interest in developing their private label products has given them new interest in control of the shelf space in the supermarkets.

Agreements between the retail groups and the suppliers often have a duration of one year or more. However, grocery manufacturers and supermarkets deal with each other daily as supplier and customer. In these roles, they have to agree upon a wide variety of conditions. In this paragraph, the key issues addressed are shelf space entry, procurement and distribution, private labels, rebates and ECR –systems ("Efficient Consumer Respons").

## **5.2 Shelf space entry**

Even though the average sizes of retail stores are growing, the competition for shelf space has become tougher for the producers. Retailers are now part of large chains, with up to 400 shops, and the retail market is concentrated. In all the Nordic countries 3-5 large retail groups dominate the market. Thus, the retail chains have considerable buying power.

Moreover, the chains evaluate the sale from every inch of shelf space in order to get the highest profit. The retail chains control the assortment in the chain shops. This is done by placing the products in different assortment and marketing categories. For example, if a product is placed in one particular category, every shop in the marketing chain must have these products in the shelves. If the product is placed in another marketing category, the shops are free to choose from these products. Obviously, it is vital to the supplier to get as many products as possible placed in the most favourable categories.

New products, food and non food, enter the market constantly. It is, of course, impossible for the chains to stock all available products. Thus, there will always be competition for shelf space. Moreover, by reducing their assortment the chains may increase their buying power. This is one of the fundamental ideas underlying the discount chains. By reducing the number of goods in each category, the price competition between suppliers becomes more aggressive, and the prices thus lower. The entry of discount chains therefore has made the competition for shelf space tougher.

The bargaining process between suppliers and retail chains comprise a range of different aspects. The retail chains control the scope of distribution by placing the products in different assortment and marketing categories, they control the physical placing in the shops, other kinds of marketing carried out by the chain, and they decide which close substitutes are available in the chain shops. The suppliers are willing to pay to get favourable outcomes on these aspects. The payments may take the form of lower unit prices. However, it seems to have been increasingly common that suppliers pay annual bonuses, slotting allowances, marketing support, loyalty bonuses, etc. for these services. These payments are sometimes directly connected to the individual services, but it is also common that none of the payments are tied directly to any of these.

Slotting allowances is one special kind of payment for shelf space entry that has been widely discussed the latest years. Slotting allowances are predetermined fixed amounts paid by suppliers to retailers, independent of the purchased volume. The nature and scope of the trade-offs negotiated by the chains in return for promoting sales in the individual chains have increased considerably. A report from 2005 by the Norwegian Competition

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Authority (NCA) provides a summary of some of the systems in place in Norway with a particular emphasis on systems where shelf space is conditional on payment.<sup>62</sup>

Such payments can be up to 20 per cent of the retailer's rebates. The NCA concludes that the use of slotting allowances may yield efficiency gains in the relationship between supplier and retailer. It may also, under some circumstances, have a rent shifting effect, so that the retailer's profit increases at the expense of the supplier. Provided there is sufficient price competition between the chains, this will also lead to lower consumer prices. Slotting allowances may, however, also have negative effects. Under some conditions slotting allowances may be used in a strategic way to soften competition<sup>63</sup>. Slotting allowances may also be used to pay for exclusionary agreements, but in such cases their effect is not significantly different from the effect of other payments. The NCA therefore concluded that the use of slotting allowances should be assessed on a case to case basis.

Another important aspect concerning shelf space entry is private labels. Hard discounters mostly sell private labels. The retail chains develop and market these products. They secure a prominent position for their own brands on the shelves. This leaves less space for producers' brands. It is thus getting tougher for the producers to get access to the best shelves in the shop, unless they pay for it. This often leaves small producers with fewer financial resources without shelf space at all. The competition for shelf spaces is thus increasing.

This has changed the relationship between shops and producers, and producers must increase their efforts to provide (and sell) branded products. However, processors are likely to bear increasing shares of promotion costs (increasing shelf-space charges) to get their products before consumers. The study from The Norwegian Competition Authority shows that the retailers use their knowledge of the cost of private labels to get the prices down on branded goods<sup>64</sup>.

Does the competition for shelf space reduce the product assortment under the efficient level? Economic theory cannot provide an a priori answer to this. The retailers, especially hard-discount chains, reduce the number of products to increase the suppliers' competition for shelf space. This, however, leads to lower consumer prices if the price competition between the chains is sufficient. For the consumers there will be a trade-off between these two effects, and the result may be that the consumers are better off. However, when slotting allowances are used as payment to a retail chain for foreclosure of (potential) competitors, this is done because the supplier finds it profitable – for example because the weakened competition makes it possible to raise the prices. In that case, the consumers face both higher prices and a narrower assortment.

The development towards a concentrated retail level, and integrated retail chains, presents the smaller suppliers with some new challenges. Producers operating with small production volumes and capacity might have difficulties to meet retailers' volume requirements. A larger counterpart, when competing for shelf space in retail stores hence easily displaces them. The increasing market power of the retail level could therefore increase consolidation pressures on smaller processors who could have trouble finding outlets for their products if they cannot meet scale requirements by large retail operations. A Swedish study suggests that the no. 2-5 processor in most markets have lost market share in the last five year. This is due to the retailers' shelf space management<sup>65</sup>.

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62 Norwegian Competition Authority: Payment for shelf space, 2005 63 Shaffer (1991) shows this.

63 Shaffer (1991) shows this.

64 Betaling for hylleplass, virkninger for konkurransen for dagligvaremarkedet i Norge, Konkurransetilsynets skriftserie 2/2005

65 Anselmson, Johansson, Larsdotter & Nilsson: Svenska dagligvareleverantörers strategier i konkurransen mot egna varumärken, Lund International Food Studies 2004/3

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### 5.3 Procurement and distribution

A small number of vertically integrated chains dominate the Nordic retail sector. They control the distribution and logistics of the food products to a large number of shops and form an important element behind the increasing power of the retail sector within the Nordic countries.

The retail chains have gained many advantages after they took over distribution. Primarily, they can reduce cost by more volume, which creates higher efficiency and a better use of stocks and warehouses. It also gives them strategic advantages toward the producers and other (independent) shops as the producers in order to keep their contracts give better and more specific offers to the chains. The retail chains stronger position often creates buying power, as the suppliers grow dependent of a few large retail chains. Thus, a producer with large fixed cost may want to run his plants at more or less constant capacity, and this may mean that he will accept significant price reductions rather than loose an order.

The retail chains demand on-time delivery and other specific requirements to the producers such as proof of ethical behaviour, special branding/labelling, product documentation, packaging, and bar codes. The number of demands can depend on the product but most chains have standard requirements.

Some manufacturers still deliver their own products directly to individual stores. However, it is expensive and reserved for the manufactures, who deliver large volumes (at a low cost). Direct supplies by the manufacturer to the retailer are common particularly with milk, bread, soft drinks, and beer, which individually place special demands on the methods of distribution, for instance demand for special temperatures. In Norway and Denmark, it is not unusual for dairies to carry other fresh products such as meat, poultry, vegetables and fruit, in their refrigerated vans also.

There are, however, still numerous examples of mostly large supermarkets, hypermarkets, etc., making a point of including local produce in their range. Often consumers will feel a certain loyalty towards beer from the local brewery, meat and cold cuts from the local abattoir or fresh vegetables from nearby growers. But their share of total sales keeps falling.

The suppliers who deliver to the chain distribution centres have no immediate access to information on how their products sell in the individual chain stores and to which groups of customers. It will also be hard to obtain information on marketing at store level without cooperation with the chains. Information on consumer's reactions to new products or new campaigns at the store level may be valuable and the sole access to such detailed knowledge may be exploited by the retailers in their negotiations for supplies<sup>66</sup>.

On the other hand, centralised purchasing in bulk provides for example smaller producers of high quality food with an opportunity for penetrating the market extensively because their products will get access to the shelves in numerous supermarkets merely as a result of the conclusion of one agreement.

Recently, retailers' have started to use auctions to get the best offers, especially when they seek new producers to their private labels. One reason for the increased interest for auctions is the internet, which facilitates cheap opportunities for participation of a wide range of companies. International auction houses organise these auctions where producers from many countries compete to get the orders. Especially for goods with low transport cost, this means fierce competition among the suppliers as the auction draws interest from suppliers from different countries.

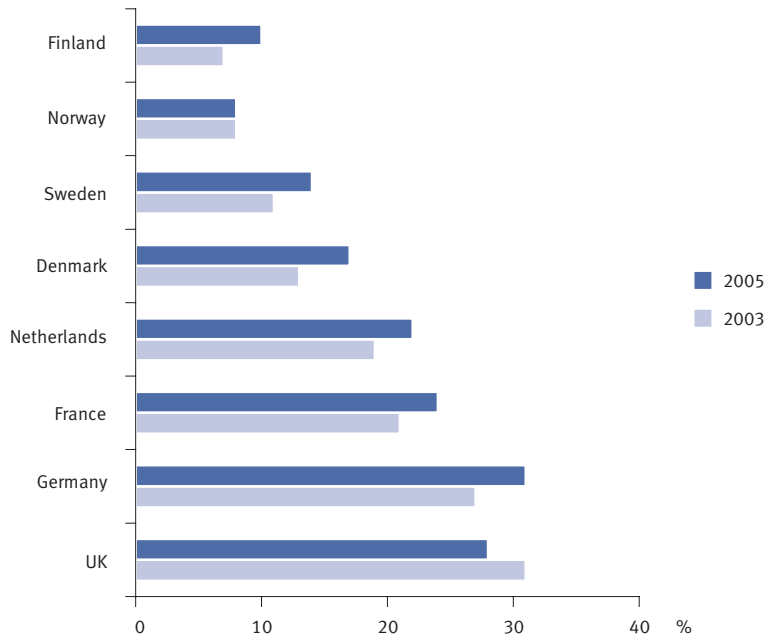
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<sup>66</sup> Market researchers such as ACNielsen and GfK gather data from the store checkout lines and consumer panels, but these data will not be as detailed as the data available directly from the stores.

## 5.4 Private labels

The number and market share of private label products are growing. The value share of private labels accounts for 10–30 per cent of consumer goods in most European countries with Germany and the UK at the top. In the Nordic food markets, the aggregate market share of the private labels is app. 10 per cent, but increasing, cf. figure 5.2.

**Figure 5.2. Share of private labels in selected countries<sup>1,2</sup>**



Note 1. Denmark's share is exclusive figures from Coop Denmark

Note 2. Private label is defined as "any brand sold exclusively by a specific retailer or chain".

Source: ACNielsen: A review of growth trends around the world 2003 and 2005. <sup>67</sup>

Food products are among the product areas with a high share of private labels. Refrigerated food (for example milk and complete ready meals) and frozen food (for example vegetables, potato fries and pizza) are among the products groups with the highest share, whereas beverages (alcoholic and non-alcoholic) and baby food generally have low private label shares<sup>68,69</sup>.

A contributing factor to the growth of private labels has been the growing presence of hard discounters. Hard discounters sell a limited selection of products at a very low price. Moreover, hard discounters mostly sell private label products. Within Aldi, private label products account for approx 95 per cent of sales internationally<sup>70</sup>.

<sup>67</sup> ACNielsen includes in the retail data views from 80 different categories within 14 larger product areas as alcohol, snacks, baby, frozen food etc.

<sup>68</sup> ACNielsen: A review of growth trends around the world, 2005.

<sup>69</sup> Dairy private labels have traditionally only accounted for small market shares in the Nordic countries, whereas they have commanded shares of 30-60% in countries as France, Germany and UK.

<sup>70</sup> ACNielsen: A review of growth trends around the world, 2005. The share of dairy private labels has however started to increase. The entry of hard discounters to the market is part of the explanation.



In essence, there are two driving forces for these changes: brand value and better prices and margins. Large retail chains see private labels as a strategic weapon in order to differentiate their identity from their competitors with strong brands of their own, allowing them to cut costs, improve profitability and keep the entire supply chain in their hands from product planning to the customer. Private labels, however, do not mean that the retailers will not sell branded goods. Some times branded goods give better profits and the consumers expect that the retailers have some of the well-known international or national brands in their shops.

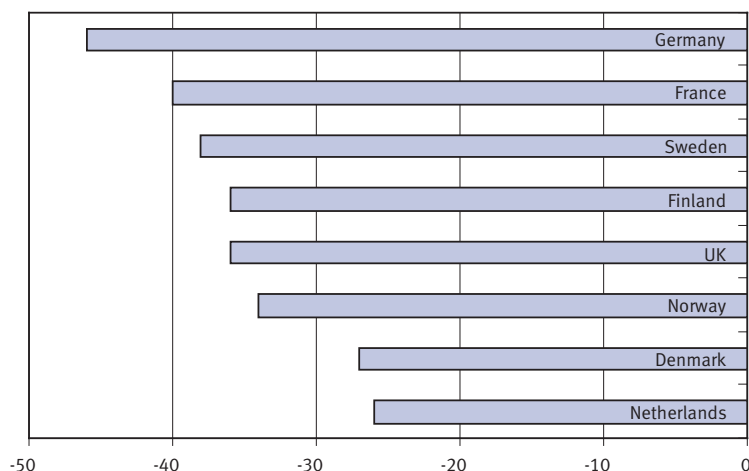
Private labels are not a new issue. For many years, the Nordic Coops had their own productions plants and mills<sup>71</sup>. They produced for instance fats, cereals, flour, coffee, and bread. Moreover, Coop developed products that they had produced by private companies. Coop gave up this strategy as it became too expensive to produce exclusively for the coop sector and began to concentrate 100 per cent on retail. However, the company still has many private labels compared to their competitors.

The retail chains often use private labels if they miss a product in the value chain within a category, be that a high-end, low price or mid price products. A number of English private labels are for example high-end products, while German retailers have low price private labels. Private labels make it difficult for the consumers to compare prices.

For the producers private labels represent a challenge not only because they substitute their own brand but also because they are competing with them in-store. The retail chains have very low cost on marketing their private labels, while the suppliers not only must market their brands so the consumers can identify them, they must also pay to be part of the retail chains' marketing including marketing of private brands<sup>72</sup>. In addition, buyer power may be stronger for private labels, as the potential sourcing market may be wider.

Moreover, retailers decide the price both for their private brands and for the producer's. Thus, prices for private labels are generally set lower, than manufacturing brands. Figure 5.3 illustrates the price differentials at the shop level between manufacturing brands in selected countries and private labels. The comparison is made on a category by category basis and must thus be interpreted with some caution.

**Figure 5.3. Price differential between private label and manufacturing brands by country**



Source: ACNielsen: A review of growth trends around the world, 2005 <sup>73</sup>

71 Coop Norge still have some plants left.

72 Recent registrations from Denmark show that the chains increasingly market their private labels through the weekly promotional brochures. In 2005 more than half of the adds has been for private label products.

73 Data from 80 categories within 14 product areas.

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Regarding the net effect on prices there is convincing theoretical as well as empirical research that indicates lower prices, although this may not always be the case (HUI 2005). As indicated in figure 5.3 prices of private labels are usually set at low and competitive levels reflecting the better margins and the retailers' objective of maximising sales. Branded products may respond by lowering the prices charged to retailers which may, depending the degree of competition among retailers, be passed on to consumers. The empirical evidence, albeit somewhat fragmented, points in the direction of lower prices with growing shares for private labels.

Most private labels take the shelf space from the producers' brand. The most vulnerable producers are minor ones, as the retail chains need the strong international or national brands in their assortment and shelves. Some minor producers find themselves omitted from a number of retail chains. Their only way to stay in the market is perhaps to win procurements on private label production.

The competition to get the private labels orders can be hard too, as producers with strong market position also participate. For the large producers whose brands are present on most shelves, private label production gives them the opportunities to get the newest information on taste patterns from the retail chains. Furthermore, they can use their production facilities more efficiently. Even though the profits from producing private labels are not as high as the profits from producing their own brands, the volume from private labels gives them better opportunities to develop new products. Finally, by winning procurements on private labels production large companies can close or take over smaller competitors.

In this respect, more private label production is no bulwark against concentration on the market. Some retailers are well aware of this. They have therefore developed long-term strategic contracts with smaller producers in order to give them an opportunity to remain in the market. The retailers gain another advantage by this, as the producer grows dependent on the contract with the retailer.

Private label production also has an impact on R&D. Since the pay-off from new innovations is lower in a world with high market shares for private labels, one would expect R&D expenses would decrease with detrimental consequences for the development of new products. On the other hand, the only option for suppliers eagerly protecting their brands is to offer even better products than before, which is an argument that points in the opposing direction. Thus, large producers generally have superior knowledge of the markets internationally and know how to exploit this and have the resources to do so. These few producers see R&D as one of their best means to stay in business and expand. They believe that if they can continue to develop new products, the retailers will be more reluctant to take their brands off the shelves.

On the other hand, if low price private labels continue to win a higher percentage of the market, the strategy to keep developing new products that appeal to the consumers and which are copied by the competitors will get tougher. Industry claims that the retail sector cannot afford to make the necessary R&D to develop new products. So, if consumers really want diversity of new products, which demand extra resources to research and development, retailers may turn to reserve part of the floor space to such products whether they are branded or not. For high-end private labels, this will give new opportunities for the producers or independent researchers.

For some food categories, branding is less important. Generally, fresh meat and vegetables are not sold under brand names. Preferences for certain manufacturing brands or private labels are not generated. This influences price competition and the range of different products in the retailers portfolio. Moreover, without brand awareness it may be difficult for foreign producers to penetrate the market and differentiate their products from those already available. Another aspect of this is that it is difficult for producers (especially small producers) to get credit for special properties, qualities of their produce.

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## 5.5 Category Management and Efficient Consumer Response

In category management, retailer and a leading supplier cooperate about how to create the most efficient shop when it comes to meeting consumer demands. Under category management, the retailer and the chosen supplier make decisions about product selection, placement, promotion, labelling, pricing, etc on a category-by-category basis with an aim of maximizing the profit of the category as a whole. (A category can for example be all kinds of hard cheese).

The retailer gives the supplier detailed point of sale statistics, while the supplier has R&D and brand promoting knowledge. Even though a single supplier is in charge (a so-called Category Captain), the category management agreements are not supposed to be exclusive. The retailer expects that a supplier chosen as captain comes with plans on how to reach the best result for the whole category.

Efficient consumer response (ECR) is another form of cooperation between the food industry and the retail trade. ECR is information sharing between retailers and suppliers. The goals central to the development are customer-orientated performance, good attainability of products, rapid processing of deliveries and an overall saving of costs. Logistics and information management play a key role in ECR. Food industry processors can benefit from the massive amounts of consumer purchasing information from the retailers even if they have to bear an increasing share of the product development risk. An increasing number of retailers share their frequent shopper data with manufacturers and marketing information companies, including registrations on how certain events, displays, ads and price reductions influence sales<sup>74</sup>.

Category Management and ECR build on modern IT which makes it possible at a low cost to improve the knowledge of sales through extensive registration, systematisation and analysis of data on the sales realised in stores. Articles are bar coded to allow the IT system to identify them at all stages of the supply chain and transmit the price to the cash register. By combining data on the sale of individual products with purchasing data it becomes possible to react promptly whenever there is a need for replenishments and perhaps place automatic orders with wholesalers and suppliers.

A new form for identification of individual articles is RFID (Radio Frequency Identification), where every article is tagged with a chip embedded with a radio signal allowing the store to know where the products are at all times. Such systems may transform the entire distribution process.

The purpose of the cooperation between retailers and leading suppliers is to get higher efficiency and thus lowering the cost. This can lead to lower prices for the consumer.

However, category management also paves the way for practices which give cause for concern under competition law; one supplier is given preferential treatment which it may use to its own advantage and detriment of competitors<sup>75</sup>. This is particularly so where the category captain also is a dominant undertaking on the market. Category Management seems to benefit the leading brands within a category as well as the retailers' private labels.

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<sup>74</sup> Cf. the study by the Food and Resource Economic Institute in Denmark: Are retailers' promotional and advertising campaigns effective 2004 analysing how the demand for food is affected by retailers' marketing. The study was carried out on the basis of the information obtained by retailers at *inter alia* checkout counters.

<sup>75</sup> Global Competition Review 2005 refers to an action in the USA (R) Reynolds Tobacco v Philip Morris Inc, 199 F Supp 2nd 362 (MD NC 2002)) brought by several tobacco suppliers against a category captain that had recommended a system of discounts and specific marketing initiatives which in reality discriminated against those retailers that did not join the system 100% but chose to cooperate with competitors of the category captain as well.

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Indeed, some investigations show that the retailers can be able to favour their own private label products even more than as agreed with the Category Captain<sup>76</sup>.

There is also the potential risk that the same, possibly dominating, supplier is selected as the category captain of several competing chains. That would put the supplier in a position to coordinate competitors' practices in a manner which is contrary to the general efforts to promote effective competition. The threat of cartelisation is also present if the retail chain invites several competing suppliers to prepare the category programme.

## 5.6 Rebates and loyalty systems

Suppliers' rebates are an important and often positive part of the pricing practises. The use of for example cost-based rebates, or fixed slotting allowances, may create efficiency gains. Different kinds of rebates, bonuses and slotting allowances may also help the chains to make the most of their buying power, thereby shifting profit from the suppliers to the retail chains. Provided there is sufficient price competition between the retail chains, this will lead to lower consumer prices.

However, the use of rebates, bonuses and slotting allowances may also have negative effects on competition. In some cases, such payment schemes foreclose actual or potential competition or put some parties at a disadvantage, for instance if they receive a higher rebate from a dominant supplier than their competitors without any objective reason. For the consumers the results of such exclusionary practices are higher prices and a poorer product range.

Such problems may arise upstream or downstream. Generally, it is not likely that rebates from suppliers will harm the competition downstream (the competition between retailers) in the Nordic food market unless there is market power. Differences in rebates, bonuses etc. from a dominant supplier may, however, have an exclusionary effect if for example a newcomer – a new retail chain – gets considerably poorer conditions than the established retail chains. If several suppliers offer poorer conditions to the newcomer, he may have a major disadvantage in the competition with the established retailers.

Dominant suppliers may also use rebates, bonuses, slotting allowances, etc to foreclose smaller suppliers. When a supplier is sufficiently strong, it may be profitable for him to pay a retailer for exclusivity. This is the case especially in markets where only the dominant supplier has a strong label, is the sole supplier in the other chains, or the only one with the production capacity to cover the chains' total demand. Suppliers may use rebates, bonuses, or slotting allowances as payment for exclusivity in such cases.

Loyalty bonuses are rebate schemes where the retailer gets extra rebates for being loyal to the producer. Such schemes include every kind of payment from the producer. If this means that the retailers get a better bargain without other objective reason than that the retailer buys solely or a pre-set large share of his goods from the producer, such bonuses can have a strong loyalty effect. When such a scheme is used, the small supplier will have difficulties to enter the market unless he offers the retailer very low prices, cf. the Finnish example in the box.

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<sup>76</sup> The Commissions' investigations on the merger between Procter & Gamble and Gillette, Case No Comp/M3732, 15/07/2005, 134-151.

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### Box 5.1 The Valio case

The major Finnish dairy products company Valio Ltd used a rebate table, which only allowed the customers the highest possible rebate if they purchased all the other dairy products from Valio. In addition, Valio had paid marketing money to the trade, and its maximum amount been determined based on the total value of the customers' purchases. The FCA found the rebate table to be tying and that it resulted in the foreclosure of Valio's competitors from the market. That the amount of marketing money depended on total value of the customers' purchases also tied the customers' liquid dairy product and upgraded product purchases to each other. The FCA found this an abuse of a dominant position. The amount of marketing money granted by Valio Ltd to the trade had varied per customer and region in accordance with the competitive situation, with the result that customers who were otherwise of the same size had obtained different amounts of marketing money. Paying a bigger rebate only to business undertakings, which were able to choose between Valio and other milk producers, the court considered was forbidden price discrimination. The court found Valio's conduct was not a response to competition with the aim of preserving the customer. (Decision from the Supreme Administrative Court of 11 November 1998.)

Another example is the Finnish Competition Authorities'(FCA) prohibition to the producers to make agreements solely to the retail chains and make invoice through the chains obligatory. The reason for this prohibition was a suspicion that the invoice agreements led to a decrease in suppliers assortment.

Recently, in September 2005, the Norwegian Competition Authority (NCA) announced its intention to fine Tine, the dominant supplier of cheese in Norway, for violating the Norwegian competition act by entering into an agreement with Rema1000 on Tine's exclusive supply of cheese to the chain.

## 5.7 Conclusions

Vertical relationships are today very different from a few decades ago. Retailers integrate most of the activities that formerly was performed by wholesalers and other middlemen. Buyer power at the retail level has increased, and it is increasingly important to exploit economies of scale both in the negotiating game with producers as well as in the distribution system to the consumers. Is this development only to the benefit for consumers? Not necessarily so. Whereas larger corporate structures are frequently better able to enhance productivity, they are also in a stronger position on the market. It is up to a sound competition in the market to determine the consumers' share of the benefits.

In getting a grip on the extent of buyer power in the market, buyer concentration is a primary parameter to explore. Buyer power naturally rises with the concentration in the retail market, which determines the number of alternative buyers in the market for suppliers and their relative size.

Given some degree of buyer power, a retailer group may impose terms and conditions upon suppliers, vertical restraints, aimed at either enhanced efficiency or to extract rents. An example of a vertical restraint that improves logistic efficiency is the requirement on suppliers to supply distribution centres rather than stores directly. Such a restraint is likely to be welfare-improving in most situations. Other restraints, such as listing fees, slotting allowances, special payments and so on, may also improve efficiency, or they may rather represent a retailer's efforts to extract economic rents from suppliers.

The outcome of increasing buyer power in terms of welfare is determined by the competitive situation. This, again, is influenced by the structure on upstream and downstream markets. Generally, an increase in buyer power among comparably weak retailers may result in better conditions offered by mighty suppliers which, in the end, benefits consumers

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by lower prices and possibly a better product variety. On the other hand, if retailers are already strong, and suppliers comparably weaker, consumers may not benefit from a power shift to the advantage of retailer groups. The welfare effects of an, say, increase in buyer power are therefore uncertain and depends on the specific situation<sup>77</sup>.

If a supplier has a dominant position, the use of various forms of vertical restraints may have anticompetitive effects among suppliers. For instance, it can be profitable for a supplier to pay a retailer to gain exclusive shelf-access, i.e. to pay for exclusion of rival suppliers. The buyer's market share is vital for the outcome. If alternative retailers are absent or inadequate to compensate for the loss in market channels for these rivals, consumers may be harmed in terms of higher prices, restricted choice and possibly negative dynamic consequences in terms of research and development of new products. If, on the other hand, alternative ways exist to reach the market, such anticompetitive effects are much less worrisome.

Strong retailer-buyers are naturally also large which may facilitate various efficiencies associated with distribution, development and transaction. Depending on downstream market conditions, such efficiencies may work to the benefit of consumers.

In conclusion then, it cannot be argued that the development experienced today with increasing buyer power among retailers *automatically* benefits consumers. A concentrated retail market, with strong buyer positions for retailers may even be harmful for competition and for consumers.

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<sup>77</sup> Clarke R., S. Davies, P. Dobson and M. Waterson (2002), *Buyer power and competition in European food retailing*, Edward Elgar, Cheltenham UK

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## 6. Competition in the food industry

### 6.1 Introduction

In the Nordic region, the food and beverage industry has a major economic and industrial importance. Compared to the total European market, the Nordic food and beverage industry is small. However, as markets are often national, the Nordic companies can hold a strong market position in one or more countries.

The Nordic food industry has grown considerably in recent years. More intensive R&D has accompanied this growth into new products and methods, a higher degree of processing, and rationalisations. In some industries large-scale operation and lower production costs have been necessary for the companies in order to be competitive in the market. Some Nordic companies have taken part in this process increasing their exports and entering into mergers and take-overs all over the world. Many acquisitions and mergers have taken place outside the companies' home market in order to secure their position on the markets. Internationalisation and globalisation is thus also a trend within the Nordic food sector.

In addition, output pr. employee has grown considerably in recent years in the Nordic countries. This relationship shows the Nordic industry's ability to adopt new methods, new products, and increasing productivity.

Legislation plays a considerable role when it comes to the Nordic food markets. The politicians have regulated the food markets heavily, among other things in order to protect consumer's health and welfare. Different national regulations and the public demand for health and food safety affects the suppliers and trade across borders.

### 6.2 Structure and structural changes

#### 6.2.1 Size of the Nordic Food market

The food sector<sup>78</sup> includes agriculture, fishing, the food manufacturing industry and food stores.

Denmark's, Finland's, Iceland's, Norway's and Sweden's total export of foods and food products amounted to approximately 18.9 billion € in 2003, which is app. 800 € per capita.

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<sup>78</sup> The food sector includes the agricultural sector since the input for the food sector mainly stems from the agricultural production. The agricultural and food manufacturing industry in international statistics traditionally includes wood and paper, beverage, tobacco, textiles and leather industries.



The whole food sector's (agriculture and food manufacturing) share of GDP was 5-12 per cent, cf. table 6.1. The food sector is in particular strong in Denmark (12 per cent of GDP). The fishing industry dominates in Norway and Iceland, but plays a minor role in the other countries. The importance (i.e. share of GDP) of the food sector has been decreasing 1996-2002, cf. table 6.1; in Finland its share of GDP has declined from 8.2 to 6.4 per cent. At the same time the importance of the service sector, including IT and communications, has been growing rapidly.

**Table 6.1. Food industry's share<sup>1</sup> of GDP (%), 1996-2002**

	1996	2002
Denmark	12.1	11.8
Finland	8.2	6.4
Iceland	7.3	5.1
Norway	9.7	8.4
Sweden	6.6	5.6
EU15	10.3	9.0

Source: Eurostat.

Note 1. Manufacturing (incl. food, beverage, tobacco, textiles, leather, wood and paper).

The greater part of the turnover of food products stems from processed products. The degree of processing has been increasing – the value added to the agricultural products has thus increased (e.g. ready-to-go packs). Also, the development of products is continuing to meet new demand from consumers and new claims from retailers. Where supply of milk for 30-40 years ago consisted of 6-8 standard products with different fat contents, today's products are presented with different additives, shelf life and some products are even individualised after cow breed and place of origin (name of the farm).

Organic milk and organic oats, eggs, pasta, etc. have also become more and more popular in several countries (e.g. Austria, Denmark, Sweden and Germany). Organic products require special precautions during the whole production process. Organic milk has become common in several countries.

The slaughterhouses receive livestock such as pigs, cattle, chicken, and cut it up for further processing in the food processing industry. Milk needs to be heat treated shortly after the milking which makes it very difficult to export or import raw milk. Processed and heat treated products such as butter, cheese, frozen meat and bread are more easily exported and imported.

Direct output from the agriculture is to a small extent exported as barley for malt or wheat for flour. Moreover, there is some export of live animals for slaughtering plus breeding animals.

### **Nordic countries outside the EU**

Norway and Iceland are EFTA-members.<sup>79</sup> In 1992 the EEA Agreement<sup>80</sup> was signed between Norway, Iceland and the EU. The aim of the agreement, among other things, is to guarantee free movement of goods including foodstuffs and veterinary matters.

<sup>79</sup> European Free Trade Association. The other member is Lichtenstein.

<sup>80</sup> European Economic Area Agreement.

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Though the EU and EFTA coordinate their policy on these trade areas, the two countries have their own independent agricultural policies. Thus, the EEA Agreement does not apply to the Icelandic and Norwegian agricultural policies, where national trade policies based on tariffs are in force. Bilateral agreements that open up for imports at reduced tariff rates or tariff-free quotas are concluded with other countries, especially the EU.

An agreement between the EU and Norway entered into force on 1 July 2003,<sup>81</sup> with a view to deepening bilateral trade in agricultural products on a reciprocal basis.<sup>82</sup> The agreement provides for the elimination of duties on a number of tariff lines (especially plants, fruit, and vegetables); for various duty-free quotas; and for the consolidation of enlarged cheese quotas by both sides. Also bovine, pigs, chicken, turkey and fowl meat, butter, and eggs are included in the agreement.

However, Norway still has high import tariffs and tariff quotas on products that can be produced in Norway. This is, especially, true for cheese, butter and meat which are also exported. There are normally no import tariffs on products that cannot be produced due to poor farmland and climate conditions.

In Iceland transferable quota shares have played a key role in ensuring the sustainable exploitation of agriculture. Iceland's commitments under the WTO and EEA Agreements provide further momentum for the replacement of price support measures with direct income payments for agricultural production. These grants considerable support to domestic producers notably of lamb.<sup>83</sup>

Iceland, the Faroe Islands and Greenland all have state funded export subsidies. Greenland's agricultural policy includes income support per kilo of lamb meat produced for the farmers and the farmer receives a mother sheep premium for each mother sheep. Despite of this, Greenland is still a net importer of lamb meat. Earlier, the farmers also received a fertilizer and fuel support, but this has been phased out.

The government of Iceland and the government of Denmark and the home government of the Faroe Islands made in 2005 a most favoured nation agreement with the purpose to eliminate an discrimination of for instance goods that are traded between Iceland and the Faroe Islands.

Major reduction of trade barriers, including the trade barriers in EU's common agriculture policy, are called for during the current WTO-negotiations (Doha-round). Especially, EU's obligations under the WTO-rules make a reform of the sugar regime necessary as it is considered illegal by the WTO-tribunal.

Some countries, for instance the Nordic countries outside the EU, have agreements that limit these trade barriers. EU's agricultural policy has an impact on the price level in the Nordic countries, as it makes imports of some products more expensive, but can not explain why foodstuffs are more expensive in the Nordic countries compared to (other) EU countries.

### **6.2.2 Processing**

The food and beverage industry is the largest manufacturing sector within the EU, with a production of around € 745 billion (2002), which is 13.6 per cent of the total industrial production. In Norway, Iceland and Denmark the share is significantly higher, 24-53 per cent<sup>84</sup> of industry output, whereas it is somewhat lower in Sweden and Finland, 8-10 per cent.

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81 Article 19 of the EEA Agreement provides for continued bilateral negotiations between the EU and Norway on trade in agricultural products.

82 *Official Journal of the European Union* L 341, 17 December 2002, and L 156, 25 June 2003.

83 WTO, Press release, PRESS/TPRB/125, January 25<sup>th</sup> 2000.

84 Fishing industry included.

Compared to the total European Union, the Nordic food and beverage industry is small with Denmark, Sweden, Norway, Iceland and Finland accounting for 7.9 per cent of this market, cf. table 6.2. In some segments of the food market, however, Nordic companies have an important position. Thus, the Danish pig industry produces more than 10 per cent of the European pig meat.

**Table 6.2. GNP and share of the EU food market 2002**

Country	GNP share of EU-25 %	Food industry share of EU-25 %
Denmark	1.9	2.5
Finland	1.5	1.1
Iceland	n. a.	0.3
Norway	2.0	2.0
Sweden	2.7	2.0
Total	8.1	7.9

Source: CIAA, Eurostat, and Statistics Iceland

Among the Nordic countries, Denmark's share of the EU food industry is the highest and higher than the country's share of GNP. Norway and Sweden also have a large food industry. Compared to the other Nordic countries Denmark is well situated for agricultural production with a large share of the country being fertile soil. Both Norway and Iceland have a large fishing industry.

The food manufacturing industries' turnovers range from 9 billion € in Finland to 21,5 billion in Denmark. Sweden and Norway have a turnover of approximately 15 billion €, cf. table 6.3. More than 1/6 of the value added in the manufacturing industries in Denmark derives from food.<sup>85</sup>

Generally, slaughterhouses is the largest industry in the Nordic food sector generating approximately 1/4 of the total turnover. In EU it is 19 per cent. Finland's dairy industry and bread factories have a high share of its food manufacturing industry (23 per cent).

**Table 6.3. Development in food industry's turnover (billion €) 1996-2002**

	1996	1999	2002	Growth 1996-2002
Denmark	17.5	17.5	21.5	123
Finland	8.2	7.9	9.0	110
Iceland	1.4	1.8	2.00	138
Norway	12.1	14.1	16.9	140
Sweden	14.0	13.6	14.3	102
EU15 <sup>1</sup>	704.1	726.9	795.5	113

Source: Eurostat, Statistics Iceland, and own calculations.

Note 1. Greece not included.

<sup>85</sup> Source: The agricultural Council in Denmark.

**Table 6.4. Number of enterprises in the food, beverages and tobacco industry, 2001<sup>1)</sup>**

	Total number of enterprises in food manufacturing	Number of enterprises:			
		Breweries	Dairies	Slaughter houses	Bread factories
Denmark	1,900	39	61	157	1,170
Finland	2,000	91	56	233	874
Norway	1,300	29	24	184	391
Iceland	485	2	6	15	69
Sweden	3,000	93	97	496	1,300
EU15 <sup>2)</sup>	244,100	15,000	9,100	40,300	131,600

Source: Eurostat.

Note 1. The figures are based on information reported to Eurostat. The Danish food industry has indicated that the figures are too high.

Note 2. Greece is left out.

The Nordic food industry has grown considerably in the recent years with Norway at the top, cf. table 6.5. However, when you look at the structure of the food sectors there are significant differences, cf. tables 6.8 to 6.11. All the Nordic countries have a large number of food enterprises, especially bread factories. At the same time the food sector employs a lot of people with the slaughterhouses as the largest employer. Measured by the number of employed pr. enterprise, the Nordic countries are on average significantly larger than their European competitors, with the Norwegian and Danish companies clearly on top in each segment. Thus, a Norwegian brewery or dairy employs 7-8 as many persons as the European average.

Overall the food industry has become more concentrated. Turnover has grown in all countries. The number of enterprises and of employees has grown considerably less – several countries have even seen a fall, c.f. table 6.5.

**Table 6.5. Development in turnover, no. of enterprises and employees in the food, beverages and tobacco industry (%), 1996-2002**

	Turnover	No. of enterprises <sup>1)</sup>	No. of employees
Denmark	23	-19	-4
Finland	10	2	-11
Norway	40	-10	-3
Sweden	2	16	10
EU15 <sup>2)</sup>	13	-6	-1

Source: Eurostat and own calculations.

Note 1. The figures are based on information reported to Eurostat. The Danish food industry has indicated that the figures are too high.

Note 2. Greece is left out.

Denmark is by far the largest exporter of food and food products of the Nordic countries, cf. table 6.6. This is largely due to the export of meat and meat products and dairy products. Sweden has a relative large export of beverages as well. Fish represent the largest part of

the Icelandic export – more than 98 per cent of the total export in food manufacturing is fish and fish products. Fish also represent the largest part of the Norwegian food export.

**Table 6.6. The food manufacturing industry's export (million €), 2001**

	Total export	Export:			
		Beverages	Dairy products and eggs	Meat and meat products <sup>1</sup>	Cereals and cereal products <sup>2</sup>
Denmark <sup>3</sup>	8,900	500	1,560	3,700	570
Finland <sup>3</sup>	909	82	272	105	65
Iceland	1,112	1	1	9	1
Norway <sup>4</sup>	3,000	n/a	n/a	n/a	n/a
Sweden <sup>5</sup>	1,900	520	180	110	380

Source: WTO and national statistic bureaus.

Note 1. Include pig meat; bovine meat; sheep, goat and lambs meat; games meat and prepared meat.

Note 2. Include wheat; cereal preparations and preparations of flour or starch of fruits or vegetables.

Note 3. Data is from 2004.

Note 4. Data is from 2002.

Note 5. Data is from 2003.

At the same time, import is considerable, cf. 6-7. Sweden and Finland are net importers of foods and food products. Denmark on the other hand, is a large net exporter of about 5 billion €. Iceland is also a large net exporter of about 900 million €. Imports are mainly products which cannot be produced in the Nordic countries, e.g. wine, tobacco, olives, etc.

**Table 6.7. The food import (million €) 2002**

	Total import	Import:			
		Beverages	Dairy products and eggs	Meat and meat products	Cereals and cereal products <sup>1</sup>
Denmark	4,800	640	470	700	460
Finland	1,700	289	168	88	282
Iceland	222	25	2	1	40
Norway <sup>2</sup>	2,100	300	41	60	290
Sweden <sup>3</sup>	4,400	560	300	510	340

Source: WTO and national statistic bureaus.

Note 1. Include wheat; cereal preparations and preparations of flour or starch of fruits or vegetables.

Note 2. Data is from 2002.

Note 3. Data is from 2003.

Output pr. employee has grown considerably in all the Nordic countries, cf. tables 6.8 to 6.11.

Secondly, changes in the composition of output will influence both the turnover and the number of employees but not necessarily at the same pace. If an increasing part of the slaughtered pig or cow is sold as processed food – bacon, sausages, cold cuts, special

hams – turnover will most likely increase, but so will the number of employees. The net result of these two tendencies is uncertain.

To interpret the figures in the tables 6.8 to 6.11 you have to consider these aspects. New demand and rationalisations have led to adoption of numerous changes in the production system in order to optimize the output mix and this influences the results. Parts of the manufacturing process, for example labour-intensive operations as de-boning of slaughtered pigs or cows, have been out-sourced to countries with lower wage cost. Thus, growth in food output and changes in the product mix are well-established facts in all Nordic countries, but not to the same extent.

**Table 6.8. Key figures for the Nordic meat sector 1997-2002**

Meat	Year	Gross operating <sup>1)</sup> rate %	Turnover pr. employee m€	Wages and social cost /turnover %
Denmark	1997	6.2	0.225	14.4
	2002	6.8	0.234	16.1
Finland	1997	6.9	0.155	17.9
	2002	6.5	0.218	15.8
Iceland	1997	-1.0	n/a	16.0
	2002	-2.5	n/a	20.2
Norway	1997	3.4	0.205	n/a
	2002	5.3	0.294	13.4
Sweden	1997	2.8	0.204	13.2
	2002	4.1	0.218	15.2

Source: Eurostat and Statistics Iceland

Note 1. Gross operating rate is profit in per centage of turnover.

In the meat and meat processing industry, the Norwegian industry has had the largest increase in the turnover/employee relation. The turnover/employee relationship in the other countries is close to each other, Danish industry having a little higher output than Finland and Sweden. This is also necessary as the Danes have the highest labour costs. Large cooperatives dominate the meat sector in all countries. The owners of the cooperate slaughterhouses are thus also suppliers and decide the prices for the animals they breed. This must be taken into account when looking at the figures for the gross operating rate.

**Table 6.9. Key figures for the Nordic dairy sector 2002**

Dairy	Year	Gross operating rate %	Turnover pr. employee m€	Wages and social cost /turnover %
Denmark	1997	5.9	0.332	8.6
	2002	n/a	n/a	n/a
Finland	1997	5.9	0.307	10.1
	2002	3.8	0.375	10.1
Iceland	1997	4.7	n/a	13.2
	2002	3.6	n/a	12.4
Norway	1997	3.1	0.357	n/a
	2002 <sup>1</sup>	6.2	0.408	12.7
Sweden	1997	3.8	0.255	10.8
	2002	5.1	0.188	13.5

Source: Eurostat  
Note 1. 2001

Lower labour cost and higher turnover pr. employee suggest that the dairy industry is more automated than the meat market. Large-scale production is very important on the Nordic dairy market. The turnover/employee relationship is high in Norway and in Finland.

Agricultural cooperatives own the Nordic dairies and thus the farmers decide the price for their own raw milk. In Norway the maximum price on raw milk is negotiated by the state and the farmers' organizations, and is therefore a regulated price.

**Table: 6.10. Key figures for the Nordic beverage market 2002**

Beverages	Year	Gross operating rate %	Turnover pr. employee m€	Wages and social cost /turnover %
Denmark	1997	23.0	0.175	19.1
	2002	14.0	0.294	15.4
Finland	1997	20.1	0.191	19.1
	2002	23.1	0.263	16.2
Iceland	1997	7.0	n/a	19.4
	2002	11.2	n/a	20.4
Norway	1997 <sup>1</sup>	8.2	0.188	n/a
	2002 <sup>1</sup>	n/a	0.310	n/a
Sweden	1997	16.5	0.189	16.4
	2002	17.1	0.267	17.6

Source: Eurostat  
Note 1. 1998 and 2001

The figures for beverages show a rapid growth in the turnover/employee relationship everywhere. This has been a period with structural changes, several mergers and take-overs. Labour cost as a per centage of turnovers has been decreasing, except for Sweden.

**Table 6.11. Key figures for the Nordic bread market, 2002**

Bread	Year	Gross operating rate %	Turnover pr. employee m€	Wages and social cost /turnover %
Denmark	1997	15.8	0.048	29.1
	2002	12.4	0.059	31.7
Finland	1997	11.6	0.067	34.5
	2002	11.5	0.085	33.9
Iceland	1997	0.6	n.a	37.7
	2002	1.9	n.a	38.9
Norway	1997	6.0	0.113	n.a
	2002	11.4	0.105	n.a
Sweden	1997	7.6	0.075	34.4
	2002	6.3	0.085	35.2

Source: Eurostat

The bread market is more labour intensive than the previous branches. Turnover pr. employee is lower in Denmark, Sweden, and Finland than in the Norway. This is due to many small firms compared to Norway.

### 6.2.3 Conclusion

The tables show that the Nordic food industry has grown considerably in the later years measured by turnover. In some industries large-scale operation and lower production costs have been necessary in order to be competitive in the market, and some Nordic companies has taken part in this process by increasing their exports and entering into mergers and take-overs all over the world. In all of the mentioned branches, except the meat industry, labour costs as percentage of turnover have been lower in Denmark than in the other Nordic countries. This result, which industry has confirmed in interviews, is, at least for a part, due to lower social security cost paid by the industry.

The figures suggest that there has been a consolidation of the Nordic food industry. This means higher concentration and can thus lead to competition problems, if there is no import penetration on the mostly, national markets. The figures also show increasing labour costs which can be a problem for exporting companies, especially as the labour cost are higher in the Nordic countries than in the EU.

## 6.3 Market players in processing

From competition authorities' point of view, the Nordic food market consists of a lot of different relevant markets corresponding to the actual issue. The relevant market has a product and geographic dimension. The analyses of relevant markets are based on an assessment among other things of consumers' ability to substitute different products in each different case. The aim of market definition is to identify a relevant product group and a relevant geographic area in which it is possible to achieve market power. Therefore, the



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relevant market is sometimes described as "a market worth monopolising". The definition of the relevant food market in a specific competition case often consists of one or a small number of products produced and sold in either a local, national or international market. Sometimes markets' definitions are very different from what the market participants characterize as their competitive market. It is important to bear this in mind when we as here are talking about food industry in a more general manner.

### **6.3.1 Mergers and acquisitions**

Most of today's producing companies have started as suppliers to local markets. So the Nordic markets used to be at least national if not regional. Some of the companies eventually grew larger and started to expand beyond their original market. This ignited a process of consolidation and expansion, especially in the last couple of decades. This meant that a number of companies merged and that some of the stronger companies took over their weaker competitors.

Mergers and acquisitions thus shift the structure of the Nordic food industry. Reasons behind mergers include continued consolidation. For instance companies build new effective plants and close down inefficient ones. Mergers have taken inefficient producers and competitors out of the market. The potential efficiency gains can provide strong incentives for firms to merge or to expand by other methods, even in the absence of cost advantages from larger size. Consolidating by mergers and take-overs can also harm competition in the markets and thereby harm consumers. This could occur if the merger leads to or strengthen market power and dominance. The competition authorities therefore have to balance or weigh the positive competitive efficiency effects against the anti-competitive effects in merger-cases.

Consolidations may be an effective way to broaden a firm's production line and expand market share in a mature slow growing domestic market. More capital-intensive technology, economics of scale and of scope, specialized production methods and efficiencies from vertical coordination continue to drive trends toward new way of organising production and distribution. Another reason is that the food industry players wish to increase their market power or selling power towards their buyers, also under large retail chains as in the Nordic region. The deliverers lacking the facility to act as suppliers to large retail chains may have to accept to sell their products to less significant, more select groups of buyers.

Numerous mergers have occurred in the Nordic industry during the last decade. One of the companies that have been most active is the Danish cooperative slaughterhouse Danish Crown. Due to the many acquisitions, Danish Crown is now the largest slaughterhouse in Europe. Carlsberg, Danisco, Orkla and Cerealía have also been involved in mergers and take-overs, and there have been several mergers and take-overs in the dairy sector through out the Nordic region in the past years.

The largest Nordic food and beverage suppliers own affiliating companies throughout Europe. Nordic owned food and beverage companies thus play an important role on the European food and beverage market. Arla Foods is the largest dairy in Europe and Danish Crown the largest slaughterhouse on the European market. Several Nordic food companies have a strong or significant position in more than one Nordic country, cf. table 6.12.

**Table 6.12. Companies with a strong or significant position on more than one of the Nordic food markets (+ = strong position, - = not present, (+) = present)**

Company/market	DK	SF	N	S	IS
<b>Meat</b>					
Danish Crown	+	-	-	+	-
Atria	-	+	-	+	-
<b>Milk</b>					
Arla Foods	+	-	-	+	-
<b>Bread</b>					
Cerealia	+	(+)	(+)	+	-
Wasa	+	+	+	+	+
Orkla	+	-	+	-	-
<b>Beverages</b>					
Carlsberg	+	+	+	+	(+) <sup>1</sup>
Coca-Cola <sup>1</sup>	+	+	+	+	+
PepsiCo <sup>1</sup>	+	+	+	+	+

Note 1. In cooperation with local companies

Some of these companies are also among the five largest food companies in the Nordic countries, cf. table 6.13.

**Table 6.13. The five largest Nordic food companies 2004**

Company	Turnover (€ billion)	Products
Arla Foods	6.4	Dairy products
Danish Crown	6.0	Meat, meat processing
Carlsberg	4.8	Beer and soft drinks
Tine	1.7	Dairy products
Valio	1.6	Dairy products

Source: Annual reports

The leading players on the European markets are Nestlé, Unilever, and Diageo (cf. table 6.14). These companies also play a part on the Nordic food markets.

**Table 6.14. Top 5 European food and beverage companies 2002-03**

Company	Turnover (€ billion)	Products
Nestlé	60.4	Cereals, dairy, beverages, confectionary
Unilever	27.4	Dairy, beverages, dressings, frozen foods, cooking products
Diageo	15.0	Alcoholic beverages
Danone	13.5	Dairy, beverages, biscuits and cereals
Heineken	10.3	Alcoholic beverages

Source: CIAA

These companies are at the same time among the 12 largest food and beverage companies in the world. Nestlé is actually the largest food and beverage company in the world, and Unilever is no. 5. The rest is US-companies such as Cargill, Kraft Foods, PepsiCo, Tyson Foods, Coca-Cola, and Anheuser Busch (2002-03).

Growth is important for modern industry. Growth gives the companies new opportunities when it comes to meeting the demands from customers, consumers, and regulators. Food industry is, however, at least to some extent, a mature industry with relatively slow growth potential. Typical features that characterise mature industries include overcapacity problems, increased international competition and decreased industry profitability.

The food markets are over all only growing slightly in volumes, so the food companies have only few ways to expand. One is to broaden the markets with more export. Another is mergers and acquisitions. A third way is to invent new products. The Nordic food companies use all three ways.

### 6.3.2. Market concentration

As mentioned earlier Competition Authorities look at products and geographic positioning of markets when they define a relevant market for a specific issue. The relevant market is thus not always one state, but can be a region or more than one country. The EU Commission has stated this in numerous cases in the food sector<sup>87</sup>.

Market concentration must be seen in this context. This means that concentration on a national market must be seen in relation to the openness and competition pressure on the particular national market. Key factors are thus for example the number and the capacity of the companies on the market, transport costs, public regulation and possible special demands from the consumers.

High concentration may allow firms to raise product prices above competitive levels or cut the prices they pay for agricultural inputs below competitive levels. If foreign competition is possible, high concentration in itself within the national boundary is not necessarily a sign of market power. However, the Nordic food industry has within many branches low import penetration although import has been increasing.

<sup>87</sup> For instance, investigations in some cases have identified smaller geographical markets than the national state. This is especially the case in Germany. On the beer market, for instance, the Bundeskartellamt has divided the country into core sales areas, which mostly consist of Länder. The Commission has recognised this in several cases, although the Commission has never considered it necessary to make a decision with respect to the German beer market, including a definition of the geographical market. (Case No. COMP/M.3372 – Carlsberg/Holsten, Case No. COMP/M.3289 – Interbrew/Spaten Franziskaner, and Case No. COMP/M.2569 – Interbrew/Beck's.

Import may be difficult for example when transport costs amount to a high percentage of the price or the need for freshness is important. Transport of goods to Iceland and Greenland is expensive, which gives home produced goods an advantage. The consumers' demand for freshness of for instance some dairy goods sets limits for penetration from foreign companies on this market.

Import penetration is of course not possible if the governments set limits for import (quotas) or put heavy tax on imports. This is the case in Norway and Iceland. Norwegian companies can participate in the tenders for quotas. As winning this tender will protect their market and keep competitors away, the Norwegian companies with market power will have an interest in making higher bids than their foreign competitors will. They can regain the higher price paid for the quotas by using their superior market power.

However, as it have been shown earlier, differences in demand can limit import penetration too.

Moreover, special national habits and campaigns urging customers to buy food products from their own countries can also influence import penetration.

Finally, firms may be in fierce international competition, but lack domestic competition and thus be able to pursue a pricing-to-market strategy at home. Suppliers' ability to price discriminate between different countries suggests that geographic markets are national.

This is the case for example for carbonated soft drinks, as prices for international brands differ very much between the Nordic countries and between the Nordic countries and countries in Eastern Europe. This has led to parallel import and illegal trade.

Within the Nordic region the Competition Authorities have in specific cases identified very high concentration levels, cf. table 6.15.

**Table 6.15. Concentration on four national based food markets 2003**

	Sale to			
	Pig meat	Liquid milk	Beverages	Bread
	CR <sub>1</sub> /CR <sub>4</sub> <sup>1</sup>	CR <sub>1</sub> /CR <sub>4</sub> <sup>1</sup>	CR <sub>1</sub> /CR <sub>4</sub> <sup>1</sup>	CR <sub>1</sub> /CR <sub>4</sub> <sup>1</sup>
Denmark	70/90	85/95	65/95	55/>60
Finland	40/-	80/100	45/95	30/>60
Iceland	-/50	42/95	40/95	-/-
Norway	60/85 <sup>2</sup>	95/100	55/95	30/60
Sweden	60/-	60/95	45/85	35/-

Source: The Nordic Competition Authorities

Note 1. CR1 = Market share of the leading company. CR4 = market shares of the four leading companies.

Note 2. Includes beef and mutton

High concentration rates imply that retailers and consumers have fewer suppliers with whom to negotiate their supply. High concentration may also imply that the (dominating) manufacturers do not register any pressure from competitors to rationalise, keep low prices and introduce new products and new services. On the other side, the food industry in the Nordic countries today is met by strong retail chains. This limits the possibilities for any market player with a dominating position to exploit such a position, as strong buyers are more inclined to threaten to look for alternatives and perhaps start up their own production line than smaller retailers who do not command sufficient financial resources.

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Dominating players are not the only concentration aspect in the food market. On several food markets there are tendencies to oligopolies where a few large producers cover nearly all supply. Such a market structure makes it very simple for competitors to control market developments, and therefore it may limit competition on prices and new products, as the market players expect that any new initiative will be copied very fast by the (few) competitors thus limiting any opportunity to earn an extra profit/bonus.

The answer to such a situation with a (stable) oligopoly may be to ensure entry to the markets for new or foreign companies. That is for example why Competition Authorities emphasize that public regulation must not limit entrance to the national markets, unless there are good reasons for it.

### **6.3.3. Conclusions**

Concentration is high on most of the national Nordic food markets. The possibilities for the companies to use the strong market position depend on the possibilities for entry to the national markets, concentration in the retail sector and the demands from the consumers. If entry is easy, the relevant geographical market from a competition point of view can be considered as larger than the national state. In such cases concentration does not create a problem to attract cheap supply of all kinds of food products, and the retailers will be able to present their customers with a wide range of different products to match their demand.

The Competition Authorities thus pay a great deal of attention to barriers to entry to the market, whether these are public regulation or agreements between undertakings to keep competitors away from the market. Examples of this are shown in chapter 5's description of the battle for shelf space.

## **6.4. Market size**

The Nordic markets are small. There are appr. 24 million inhabitants located in vast areas in the Nordic countries. In the Benelux countries for instance, the same amount of people lives in an area close to the size of Denmark alone.

The Nordic market conditions mean lower purchasing power per km<sup>2</sup>, small amounts, and higher transportation costs. Thus, some has suggested that the producers cannot get enough volume to optimize production and to get sufficient means to the necessary R&D. The economic small, but huge geographical, Nordic markets are claimed to be one of the main reasons for limited supply in the Nordic shops.

Moreover, the Nordic consumers have some special preferences that are not included in foreign companies' product programmes and a critical view on foreign food and beverages.

However, looking closer at this argument, market size does not seem to limit the retail shops possibilities of buying foreign products and thus broaden the supply. The Nordic consumers buy many foreign produced goods, and the retail shops have plenty of products from foreign countries<sup>88</sup>. This is not only true about non-food or groceries; it is also the case with food, although at a smaller scale. The foreign producers can increase their profit by producing to new larger markets. The producers will gain this higher profits as they get a larger sale to cover the fixed costs. The influence of transportation costs has decreased, which makes it possible to sell products far away from the factories. The figures below show that food imports have been increasing over the last years.

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<sup>88</sup> But not necessarily the same products, as the demand seems to differ in Nordic countries.

**Table 6.16. Development in imports (food, livestock, tobacco and beverages 2000-2004 (2000=100))<sup>1</sup>**

	2000	2001	2002	2003	2004
Sweden	100	102	119	149	174
Greenland	100	100	107	148	162
Denmark	100	104	115	137	157
Belgium	100	104	113	140	157
Italy	100	100	108	134	154
Great Britain	100	102	108	131	154
Norway	100	104	116	134	153
Netherlands	100	106	109	134	153
Iceland	100	97	109	121	151
Finland	100	95	101	123	150
France	100	101	109	133	149
Germany	100	102	109	134	147
EU-9	100	103	110	134	152

Source: OECD, the Danish Statistic bureau and own calculations.

Note 1. In 2000-01, the outbreak of diseases coming from meat, especially BSE, rocked the food industry of Europe. The outbreaks influence the figures from 2000-02, as the consumers in that period were more reluctant to buy foreign meat.

Table 6.16 shows that imports on food are growing faster in some Nordic countries compared to similar European countries. Sweden, Denmark, and Greenland had the highest increase in imports during the period 2000-2004, compared to an average of 9 European countries. Norway are above the average of the EU-9 countries, while Iceland and Finland is below.

Even though costs of wages and social security are high, most of the Nordic countries have an increased export of food (see table 6.17 below). Increased productivity, due to automation and rationalisations and higher focus on R&D are important elements explaining this.

**Table 6.17. Development in exports (food, livestock, tobacco and beverages 2000-2004 (2000=100))**

	2000	2001	2002	2003	2004
Sweden	100	106	120	152	184
Germany	100	105	112	141	164
Italy	100	108	118	140	158
Belgium	100	105	112	136	157
Netherlands	100	101	109	130	150
Iceland	100	101	114	120	144
Denmark	100	108	111	128	142
France	100	95	104	126	135
Great Britain	100	93	100	118	129
Norway	100	96	102	106	120
Greenland	100	94	104	102	100
Finland	100	108	n.a	136	n.a
EU-9	100	101	108	131	147

Source: OECD, the Danish Statistic bureau and own calculations.

Transportation cost do not work as a barrier to trade for most products, which use modern logistics. This means that producers can gain large-scale advantages in production even if their markets are located far away from their factory. This is especially the case with expensive high-end products. With the right marketing, the producer can sell the product to a price that can cover transportation costs.

The lower transport barriers can also lead to relocation of production. The high labour cost in the Nordic countries mean that the companies can gain by moving (part of) the production to for instance Poland or the Baltic countries. Even though the productivity is lower in these countries, the differences in costs of wages and social security can make it profitable to produce the goods there. Farmers from the Nordic countries have already settled in the new East European EU Member States.

## 6.5. Public regulation

When the Nordic food industries compare themselves with food industries from other parts of the world, they point at several explanations as to why the resulting prices and the range of products in the supermarkets are different from elsewhere. Some of the explanations relate to legislation, some to the geographical markets, some to costs, and some to specific relations.

Legislation sets the general framework for business, including limits on where and how to produce. A strong and efficient approach towards diseases induced by food and other health threatening issues is important to secure a high standard for food products. On the other hand, some legislation offers the companies protection against unfair business methods and against foreign competitors. The geography is important for food production and the size of the markets may limit the ability to grow. Costs including wages and social costs and rents are major factors influencing production.

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### **6.5.1 . Food protection programmes induced by industry**

Food protection programmes can be based on public legislation or private companies can have their own standards. The latter may be part of a company's profile to ensure their customers products of a high standard. Several companies may have similar high standards due to their interpretation of the wishes from the consumers, for examples on GMO in food. This reaction can stem from public debates on how the human body will react on gene-manipulated products or chemicals used in the production of the product. Therefore, these demands go far beyond what is normally known from public regulations, such as control of hygiene etc.

Differences in regulation and differences in voluntary standards that the industry adapts to face the differences in consumer preferences, will affect trade across borders. This may thus have an impact on the price level.

The following examples illustrate this. The examples stem from interviews with food companies and importers and concern trade in the EEA.

#### **Examples of private programmes**

Farmers use chlormequat popularly known as straw shortening chemicals, in the production of grain. In this way, they can cut costs in harvesting a lot of straw. However, it is possible that straw-shortening chemicals can reduce men's reproductive ability, and this has started a public debate. The authorities find that there is no scientific proof of this as long as the use does not exceed certain thresholds for food production. That is why the use of chlormequat is allowed in all Nordic countries.

In Denmark, the leading retail chains with the exception of Aldi, have demanded that – due to possible health risk of the use of chlormequat – bread sold in their shops is made of wheat or rye not treated with chlormequat. According to industry, this gives an extra cost of € 15 million pro year to industry. The Danish consumers spend € 845 million on bread per year. The cost relates only to bread sold in Denmark and the bread industry can therefore pass the cost over to the consumers. This leads to higher prices on bread in Denmark.

Chlormequat is just one example. Other special national demands have a similar influence on the price level. Bread is a good example as taste and demands differ very much between the Nordic markets. Some of the demands can lead to higher quality, but that may not always be the case. Another bread related issue is the agreement in Denmark between the farmers, the bread sector, and the retail sector about not using glyphosat in the grain production. The agreement is made to protect the Danish ground water, where the water resources are close to farm land. The other Nordic countries do not have these problems, as only a small part of the land is used for farming.

Acryl amid is developed when food is heated. Acryl amid is found in for example coffee, bread, and French fries. In addition, in home made cooking. There is no evidence on how acryl amid in food affect humans. In Sweden, there has been a heavy debate about the amount of acryl amid in food, but this has till now led to no reaction from trade or from consumers like in the Danish case on chlormequat.

Such different national approaches can have an impact on the price levels on the national market.

This is especially so where the discussions have been isolated to a single country. One reason for this could be that discussions are isolated to local newspapers and national television. There seems to be a pattern where these local discussions or national habits lead to agreements that impose higher costs, which the industry and the retailers can pass on to the consumers.



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The conclusion is that some national based agreements or standards may have the same effect on prices as trade barriers. Imports are not excluded. But importers must live up to the agreements to gain access to the market and make special products to that country. This will raise their costs and affect entry.

If the public debate reactions are the same in many countries for instance started by international recognised experts or NGO's, then there is a possibility of mutual understanding, international cooperation and a common attitude in all countries. The EU's prohibition against GMO's is an example of this.

The examples refer to cases where Nordic consumers and Nordic supermarkets have taken a special position. It must be assumed that similar reactions occur in other countries. The effects of such standards are extremely difficult to estimate.

### **Government programmes**

The quality of food production is important to the consumers' health. Moreover, modern large scale production increases the consequences of any deficiencies in the food product process. The authorities are therefore very anxious to ensure that the companies use clean environments and raw materials that are free from bacteria and other health hazards. Furthermore, consumers take an increasing interest in healthy food, avoiding harmful additives, and in animal protection.

Legislation plays a role in many ways when it comes to food markets. Health issues are a very important aspects that really make the food market quite different from other consumer markets.

Health issues are for instance one of the very few considerations, which can allow an exception from the ban in the EU Treaty on all kinds of public regulation, which may restrict trade between member states.

### **Box 6.1. The EU Treaty on quantitative restrictions on imports**

Article 28 in the EU Treaty says that 'quantitative restrictions on imports and all measures having equivalent effect shall be prohibited between Member States'. Article 30 gives some exceptions to the rule. One of these is '...restrictions on imports, exports, or goods in transit justified on grounds of... the protection of health and life of humans, animals, or plants; ...' The 'prohibitions or restrictions must not constitute a means of arbitrary discrimination or a disguised restriction on trade between Member States.'

EU Member States thus have some possibilities to keep national legislation on health issues in food production and animal protection.

Differences in legislation between countries can be a major factor when it comes to trade across borders. Market integration in the EU has solved most of these problems in Denmark, Sweden and Finland. The Danish Veterinary and Food Administration estimate that 95 per cent of the regulations on animals and crops are close to being harmonised in the EU. One of the few regulatory areas, which have not yet been fully harmonised, is the use of pesticides – but here, too, the process towards a common harmonised set of regulations has been adopted. Nevertheless, new aspects concerning food safety and health keep coming up.

Norway and Iceland are through the EEA agreement committed to implement the EU legislation and rules related to food safety and control of production and sale of food products and inputs. The Norwegian food safety control is, for instance, to a high degree harmonized with EU, and is comparable with the systems in Nordic countries which are members of the EU. The only exceptions are legislation and rules related to use of pesticides and to plant health.

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Although many rules are harmonised, there may still be differences in business conditions due to differences in control costs, financing and in the climate.

The occurrence of animal diseases is varying a lot amongst the Nordic countries. This explains to some extent the differences in control regimes, i.e. the regulations, the supervising systems and the financing of the systems.

Zoonoses are diseases that can transmit from animals to humans. One example is salmonella. Salmonella from poultry, pork and beef can infect humans. The problems with these diseases increased some ten years ago. One of the reasons for this was that the traditional way to fight salmonella, the use of antibiotics, became inefficient. There was evidence that heavy use of antibiotics could make the bacteria resistant. This was serious because it reduced the benefits from antibiotics on humans, who have been infected with the bacteria. Therefore, the health authorities did not want the use of antibiotics in the animal production any more.

Finland and Sweden were aware of the risk of salmonella in meat earlier than other countries. The early awareness has almost kept salmonella out of the animal populations in the two countries. This has given the countries a special status. Of all its member states, the EU has granted only Finland and Sweden approval for their extremely stringent national salmonella-monitoring programme, which has done a lot to eliminate the occurrence of salmonella. Finland is one of the few EU member states whose animal disease situation has not grown worse, but improved. Norway has a similar clean record on salmonella.

Denmark has had more problems with salmonella. The infection originally came mainly from poultry and eggs. The Danish government, the agricultural organisations, and the food industry made a plan of action for control of salmonella in poultry that lasted from 1996 to 2002. The plan, which today is continued by industry, has worked well, but Denmark is still some way from having the same standards as the other Nordic countries.

This means that Danish companies are under strong surveillance when they export to Norway, Sweden and Finland. Sweden, for instance, has a policy of zero tolerance. If just one piece of meat is infected the whole shipment will be refused. Products made especially for the Swedish market, such as the Swedish Christmas ham, can be risky to export, as it can be difficult to sell the non-infected remains of the shipment on other markets, as the taste differs very much from ham sold in other countries.

To detect salmonella, the experts and the authorities use several methods. The quickest and still efficient is the so-called EiaFoos method. Although the Swedish authorities use this method, they are reluctant to allow importers to use it. The EU Commission is dealing with this problem.<sup>89</sup>

When it comes to cuttings and other bulk articles, the policy has not hit Danish exporters severely. Moreover, although Norway and Sweden are the two countries, who have rejected most Danish meat, this represents only a very small percentage of the export to these two countries.

Other zoonoses are listeria, campylobacter, yersinia and BSE. The governments have made surveillance programmes and import restrictions on meat with these diseases too.

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<sup>89</sup> A recent judgment from the EC Court of Justice (second chamber) from 20 October 2005 states that it is an infringement of directive 89/662/EC if a member state imposes control on meat that have already been controlled in another member state (Case C-111/03 – The Commission of the European Communities v Kingdom of Sweden). Furthermore, the court emphasizes that ‘it is settled case-law that a Member State cannot rely on a possible infringement of Community law by another Member State in order to justify its own default. Therefore, a Member State may not under any circumstances unilaterally adopt, on its own authority, corrective or defensive measures designed to obviate any such failure, but is bound to act within the context of the procedures and legal remedies laid down to that effect by the Treaty.’

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There are advantages in governments cooperating closer on food protection. Some of the trade barriers can be well-founded, as the protection of public health is an important task for all governments, but the battle against for example zoonoses will be most efficient if all governments agree on the same (high) standards. It is then possible to omit a lot of border control. Moreover, there is a risk that import barriers may include initiatives that have nothing to do with food protection. One example is the Swedish ban on import of Norwegian livestock due to salmonella protection. The Norwegians have at least the same high degree of protection against salmonella as Sweden and the country is almost free from salmonella.

Health is an issue, too, when it comes to additives. Additives can be nitrate, nitrite, vitamins and iodine. Industry uses additives to give food the right consistency, a better look or taste and a longer shelf life. EU Member States are not allowed to take action against food with additives from the common market that is not causing health problems. One case between the EU Commission and the Danish veterinary system shows this.

The case was about the use of nitrate/nitrite in food. Denmark has stricter rules on the use of nitrite/nitrate than the rest of the EU. Nitrite/nitrate is used in meat processing for instance for sausages. Denmark won a case at the EC Court of law against the EU Commission about whether it was correct to use the environmental guarantee in this case<sup>90</sup>.

### **Box 6.2. The environmental guarantee**

The environmental guarantee was introduced in 1987 as an “emergency brake” to ensure that EU environmental protection is at a high level. Under special circumstances, the environmental guarantee allows the individual EU member states to opt out of the EU regulations and uphold or introduce stricter national environmental regulations. Ultimately, the EU Court of Justice decides whether special national regulations can be upheld.

(Source: Home site of the Danish EPA/New handbook on environmental regulations in the EU and Denmark)

The EU Commission claimed that governments could only use the environmental guarantee if the use of a chemical could raise health problems in the specific country. The Court, however, decided that this was not a necessary condition, especially in this case, because there could be raised significant questions about the validity of the scientific evidences behind the Commission’s decision. The court emphasized that a Member State should prove that the national exception secured a protection higher than the harmonised community arrangements and that the national rules do not go further than necessary to reach the projected goal. The Danish government is now working for stricter rules within all the member states of EU. This will also lead to harmonisation.

The Court finds it necessary that any restrictions on trade between Member States owing to the protection of food standards and public health must be based on scientific facts. Moreover, the governments are not allowed to introduce more restrictive regulations than necessary. Protection can only be acceptable, if the government can prove that free import will worsen the situation.

Farmers use pesticides to protect vegetables and grain against fungus, insects, and other threats to crops. Pesticide residues in food can harm health, and the authorities throughout the Nordic countries and in the EU have put limitations on the allowed use. The regulations have been very different in the countries due to differences in climate. The thresholds for allowed residues have differed too. Countries with no need for the use of pesticides have often introduced a ban on any use of pesticide in food, while the countries, where pesticide can be necessary ‘only’ have a very strict control on pesticide residues in imported goods. The EU is now on the brink of a set of common rules on the use of pesticides.

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<sup>90</sup> The EC Court of Justice Case no. C-3/00.

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The conclusion is that the level of harmonisation within the EU now has reached a high level, and that decisions from the Court of Justice have created a solid framework for the development of future regulations. Industry and trade, however, consider that different regimes on food protection still create unnecessary barriers. Figures on trade patterns show that this is first of all a problem for much specialised products for the particular market that can be difficult to sell on other markets. Moreover, new aspects of regulations may stem up, for instance new information, new methods of production, which demand a new approach.

The governments in the Nordic countries have traditionally advocated a policy with high levels of food standards. The best way to promote such policy is international cooperation, preferably in the EU/EEA in order to facilitate international competition. Therefore, as much regulation as possible should be common for the EU/EEA countries. This will help market integration and secure the possibility of lower prices and a more diverse supply.

Trade and industry themselves are, however, also responsible for more market integration as they merge their businesses in the Nordic countries. If the retail chains and their suppliers could agree on the same standards on quality and food protection throughout the Nordic countries, they will have done much to improve market integration. Businesses and politicians throughout the Nordic countries share a high profile when it comes to food protection. Cooperation between the retail sector, food industry, and the governments in the Nordic countries about keeping high standards on food protection could be instrumental also when it comes to harmonisation and market integration in the EU.

### **6.5.2. Control Measures**

Control measures are another area where local regulations or habits influence market conditions differently. One important example is the control of the slaughtering of pigs, cows, and poultry. In 2004, the EU introduced common rules on meat control. However, it is still the governments in the member states, who decide how to control, and who has to pay (the number of veterinary supervisors, their remuneration etc.). This influences the competition conditions for the slaughterhouses. However, it seems unlikely that this kind of costs differences can have an effect on consumer prices. Meat products ab slaughterhouses are sold on a global market. Nordic products compete with beef, pig meat and poultry from all over the EU or all over the world. With competitive market conditions, it is not possible to pass extra control measures on to the consumer on the home market.

Another aspect to this is that some countries (for instance the US and Japan) insist on an extra control by their own veterinaries on situ in the slaughterhouses, if the companies want to export their products to them. The cost of such measures applied to all exporters on a non-discriminatory basis, industry and retailers can most likely pass on to the consumers in these countries.

When it comes to protection of health, the industry can rightly claim that where the single EU country can define its own programme, it can impose higher cost on the companies. This will bring unequal competition, less market integration and thus lower competition pressure.

The conclusion is that harmonisation in the EU has solved most of the integration problems raised by industry when it comes to Denmark, Sweden, Finland, and the rest of the EU. Norway and Iceland are part of the EEA-agreement, and to some extent, the EU-harmonisation is in force in the EEA.

Greenland and the Faroe's are outside the EU. These countries can make their own food protection legislation.

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### 6.5.3. Waste systems

In order to protect nature the environmental authorities throughout Europe have established or prescribed how to handle used packaging and waste. These regulations follow the main principle in the governments' plans for waste handling that the polluter must pay for the cleansing.

This means that industry not only must pay for the waste coming out of the production process, moreover they must in many cases pay for waste handling in the retail sector as well.

Municipal owned waste companies handle most of the waste from the food industry and from food packaging. This waste is normally domestic or industrial waste and thus part of the ordinary municipally handling of waste.

Specialised waste companies handle some kinds of industrial waste from the food industry, for instance hazardous waste from slaughterhouses.

Packages and waste represent an increasing problem in the European countries. The costumers demand consumer friendly packages and industry uses packages as a part of their marketing. With the still higher amounts of packaging, governments do not only consider this a waste problem but also an environmental challenge. Most northern European countries who keep a high environmental profile see waste packaging as an unnecessary polluter. Packaging is thus a problem that needs special treatment.

The Nordic countries have not been among the most vigorous. The German Packaging Ordinance requires manufacturers and distributors to take back, free of charge, all used sales packaging from consumers at or near the point of sale. Manufacturers and distributors, which adhere to a comprehensive collection system, are exempted from this obligation.

Private companies handle the comprehensive collection. One such company is Duales System Deutschland (DSD). For a fee, DSD secures that used packaging is collected.

The EU Commission decided in 2002 that DSD breached the EU competition rules. The problem was the payment system. DSD was paid for all articles, which wore the company's trademark Grüne Punkt. The Commission claimed this was a breach of article 82 in the EC Treaty, because customers paid DSD for the use of the brand and not for the service, the company provided<sup>91</sup>. Companies which choose to handle the waste themselves in some districts or countries would not receive any refund from DSD, but had to pay the full fee if the sold items carried the Grüne Punkt brand.

The EU found DSD's practice was most harmful for competition when DSD charged companies for brands on packaging on goods sold outside DSD's territories. Following the Commission's decision, DSD changed their agreements with industry so that DSD in the future only charges companies for packaging on goods actually collected by DSD.

The Nordic countries have a tradition of recycling empty packages. Empty packages have in particular been a problem for the beverage business. For a very long time refillable bottles have been the most common container for beer and soft drinks sold on the Nordic markets. Denmark had, for many years, a prohibition on one-way containers for beer and soft drinks. Cans and one-way bottles, however, are now allowed and common in all the Nordic countries.

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91 COMP D3/3/34493 – DSD and COMP/34.950 – Eco-Emballage

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This has given the foreign beverage producers a better possibility for entering the Nordic markets. There have been introduced new methods to ensure an environmentally acceptable way of disposing with one-way containers, and the beverage industry has established recycling systems that can handle one-way containers too. The frameworks for these systems are different. In Norway, each beverage producer is free to establish his own system, but if he does not reach a recycling share of at least 95 per cent, he has to pay full packaging tax. In Sweden and Denmark, companies have been established which compose a legal monopoly to collect some or all kinds of packaging.

Sweden had two kinds of return systems, one for aluminium containers (Returpack), and several for all other containers (mostly glass and PET bottles). The division was due to a legal monopoly of recycling aluminium. Konkurrensverket published in 2003 a report on the Swedish return and deposit system<sup>92</sup>. The conclusions were that the system led to reduced competition due to lack of clear rules and complicated public supervision, free rider problems and illegal trade. The system led to higher costs for small providers and the prohibition to put brands on PET bottles hindered cross border trade. Konkurrensverket suggested that the legal monopoly on recycling aluminium should end. Konkurrensverket, moreover, recommended that the supervision of all systems should be placed in the hands of one governmental body only. Systems with a position close to monopoly should have clear guidelines on entry to the system and fees.

The proposals in the report by Konkurrensverket have been partially implemented. The legal monopoly for aluminium cans is abolished. There is a new regulation that makes it compulsory for deposit systems with a dominant position to accept new players in the market. In addition, changes in the requirements for handling permits and fees for participation in deposits systems are implemented, together with the proposal to gather the sector responsibility within one single monitoring agency. Lastly, the relevant agency has taken steps to ensure access by foreign companies on non-discriminatory terms. The remaining proposals are not currently, as far as Konkurrensverket understands, in the process of being implemented.

Dansk Retursystem, the Danish return and deposit system, is owned by the Danish breweries and have a legal monopoly. The Danish EPA supervises the system. Each supplier, who wants to market beer, RTD-products or carbonated soft drinks on the Danish market, must register with the system and pay fees.

The system was introduced in 2000, but it really first came to work in 2002 when the government lifted the ban on one-way containers. After the introduction, a period followed where the small suppliers experienced a large increase in sales. One reason for this is supposed to be diminishing costs to the retail sector when it comes to handling of empty containers. The import of beer to Denmark has increased, and there has been a small but significant change in consumer habits away from the well-known Danish beer brands to new brands, even if these have higher prices. Moreover, at the same time, government changed taxes on beer and on packages in a way, which have made imported beer and carbonated soft drinks more competitive.

In Norway, there are two return and deposit systems. One, Resirk, for plastic bottles and cans, and the other, Bryggeri- og minneralvannforeningens, who handles glass containers. The industry runs both systems.

All the Nordic systems are well functioning as far as they have high levels of recycling. Nevertheless, the systems have not solved all the environmental problems with empty beer and soft drink containers. Moreover, all the systems are organised and administered on a national basis. This creates problems for market integration.

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92 Pant och retur, Konkurrenseffekter av pant- och retursystem för dryckevare packningar, Konkurrensverkets rapportserie 2003:3

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The problems come from different kinds of returnable bottles and lack of cooperation between the systems when it comes to one-way containers. Nordic consumers have grown accustomed to buy beer and cola in their neighbour-countries, because there are large differences in consumer prices mostly due to different tax rates.

The packages from this private import are not allowed to enter the national recycling systems on the same terms as the national containers. It is thus not possible for a Swedish consumer to get his deposit back in Sweden, when he returns the beer can, he has bought in a Danish supermarket. More alarming is the fact that the Danish consumers have no economic incitement to return the 375 million cans they buy in German shops each year neither in Denmark nor in Germany.

A return and deposit system in the Northern part of Germany is, however, to be implemented soon by the Schleswig-Holstein government as the Bundestag has put through the necessary laws for the local governments. But for now, the problem is increasing also in Sweden as the Swedes lately have started to buy more beer from German shops.<sup>93</sup>

However, even if there is deposit on the container, long distance to the nearest RVM<sup>94</sup> or shop can make it too troublesome for the consumer to return the bottle rather than to drop it in the dustbin. Deposits represent a relative low value to the consumers, so it must not be too difficult to get rid of the empty container<sup>95</sup>. Successful recycling of beverage containers depends on how easy it is for the consumers to get their deposit back. If private cross border trade with beer and soft drinks continues to be high – and everything suggest it will – this will mean still more pollution from empty beverage packing.

Failure of market integration can thus also represent an environmental problem.

The Danish Competition Council have – due to the mentioned cross border trade problems, which also give problems for the small Danish providers – recommended to the Danish minister of the environment to work for the establishment of a common EU return and deposit system.

It would seem natural for the Nordic countries to start cooperation on creating a common system. All the countries have well functioning systems and long expertise in handling empty packaging and deposits. A number of companies in the brewery sector and the soft drink trade are present in several of the Nordic states. This could facilitate a joint Nordic approach to the problems. Such experiences could be exported to Germany, the Baltic's and other member states in the EU.

A simple start would be to ensure cooperation between the national systems in order to make it possible to clear deposits and bottles for non-refillable containers. Next, the environmental authorities could ask industry and trade to consider a common Nordic system with a clearing system including returnable bottles and deposits.

Such cooperation would have to include solutions to some problems.

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93 The EU Commission threatened to bring the German government to court if it did not change the rules in the German packing law for one way packing for beer and soft drinks. The Commission found that the functioning of the German deposit and return system constituted a disproportionate barrier to the free movement of packaged beverages from other member states. Press release IP/04/504 from the EU Commission The German government has now put through the necessary legislation to live up the Commission's demands.

94 Reverse Vending Machines; machines where you return empty containers and get your deposit back.

95 The correct level for the deposit depends on many things; it must be high enough to get the consumers to return the containers. Moreover, deposit on refillable containers must be at a balance with the price on new refillable containers. If they are not, suppliers will prefer either to buy new containers or to acquire the old ones. The result will be that there will be too many or too few containers circulating. Still more, it will influence trade patterns if deposits on one-way containers are not the same as on refillable containers.

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The expenses of paying back deposits are held by another return and deposit system than the one the consumers have paid the deposit to. The used bottles and cans represent a value that might have been calculated into industry's price for using the systems. The systems that collect the used containers have expenses by doing so, and the recycling value of the used containers can be part of this payment.

Technically, the RVM's should be able to identify which system is responsible for the container and pay back the same deposit as the consumer has paid. The consumers can risk getting less money back than they have paid as deposit. This is the case when the container is returned in a country with lower deposits as in the country where the container is bought.

The return and deposit systems in countries with private export of beer will lose money, as they will have to pay back deposits for bottles or cans returned in another country. However, this is a consequence of the intended environmental solution (that all bottles and cans are to be handed back for recycling).

The exchange of deposits among the national return and deposit systems must thus include an agreement on the clearing of empty containers but also the payment for services, clearing of deposits and agreement of the value of deposits in the involved countries and currencies.

A common deposit system including Germany would make it more profitable for private consumers to buy beer and soft drinks abroad. This is especially the case when the government of Schlesweig-Holstein implements the new German law on deposits. It would solve environmental problems, which is increasing, and promote market integration. Thus, with a common European deposit system, it would be easier for supermarkets to search for their supplies abroad as their suppliers in other countries will not be obliged to register their bottles and cans in more than one country in order to secure deposit and waste handling.

## **6.6 Conclusions**

Concentration is high on the Nordic food industry markets. They tend to be national often with a strong market leader, although recent years have seen an opening of markets and increasing imports.

Concentration is highest in the dairy and beverage sector, while it is a bit lower in the meat sector. The lowest concentration is in the bread sector, with many small bakers' shops. Even though the markets can be considered as national some Nordic food companies are active in some or all of the Nordic countries. Several Nordic food companies have important positions in more than one of the other Nordic food markets.

When a company establishes separate divisions in each country it might limit trade as the local division supplies its own territory. However, there might also be trade enhancing effects, for instance if the national divisions specialises and exchange output. Anyway, since 1999, trade in food articles in the Nordic countries has grown significantly. This reflects the integration as well as the growing influence from multinational retail chains.

The growing power of the retailers can be beneficial for the consumers if there is a high degree of competition at the shop level, and there are no limits in the chains' access to buy goods.

This chapter has focused on obstacles to market integration. Whether these are import regulations, programmes for control of diseases and other health issues, environmental issues such as policies on packaging and return systems, they make barriers to cross border trade.



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A high level of disease and health control and of environmental protection is in the best interest of all consumers, but these goals are realised differently in the Nordic countries. Country-specific food regulation may hinder trade between countries and therefore limit competition. The governments in the Nordic countries should therefore carefully balance the gains of such regulation against the loss for consumers in terms of higher prices and a more limited choice.

Concentration does generally not harm competition, if there are no entry barriers to a market. Under such conditions, the companies will have to act as if they are exposed to competition.

In some Nordic food markets this is still not the case. In a number of cases, the markets are national, there are barriers to entry and the markets are concentrated. Under such conditions the companies may have appreciable market power. In these markets the competition authorities must be careful when allowing mergers and take-overs. Barriers to markets can also lead to situations where the large companies abuse their dominant market position. Moreover, concentrated markets and barriers to entry may facilitate collusion between competitors.

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## Appendix 1. International price comparisons

The **Consumer Price Index (CPI)** shows the price development on goods and services consumed in one country. The index shows the change in the cost of buying a fixed basket of goods, composed from household's consumption of goods and services, on a month-to-month basis. The goods included in the index are chosen against a background of detailed information on the division of household consumption of goods and services in the particular country, i.e. the goods are representative for the consumption pattern in the country in question.

The Consumer Price Index is computed as an index of fixed weights of the Laspeyres type and includes 70 different consumption groups. For each group, a further division is carried out by using the detailed information on the division of household consumption, stemming from the consumer survey.

The prices included in the CPI are the actual prices paid by consumers, i.e. incl. VAT and duties and excl. possible subsidies. The only exception is rent expenditures, where possible housing benefits are included.

The CPI shows the purchasing power in one country and how this purchasing power is developing in time. I.e. every third or fourth year the basket of goods and the consumption weight might change in order to give a representative picture of the demand pattern in the country. This makes the index less suitable for comparisons of prices across countries for chosen points in time because the basket of goods might differ considerable.

The **HICP** is the EU harmonized consumer price index which is used to illustrate the development of prices over time across countries, i.e. for inflation measurements. HICP is based on CPI, but the way to estimate CPI is harmonised between the countries. However, owner-occupied dwelling is not included in the HICP. HICP has been applied since 1995.

The **Eurostats price index** is based on Purchasing Power Parities (PPP), and compares the price on a basket of comparable goods in one country with an EU average price. The Eurostat prices are collected from 31 countries, which have taken part in the European Comparison Programme for the last 30 years. Thus, Eurostat has a long experience in price investigations. Eurostat's price index gives a snapshot of the relative prices in one year. The basket of comparable good might change over time, which makes the index less suitable for comparisons of prices over time.

The price collection is based on Eurostat "Guidelines for conducting price surveys relating to private household consumption". According to these guidelines, the goods and services on which prices are collected must be comparable across all of the included countries and be representative of the general consumption pattern. If the same product is not avail-

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able in all of the countries, it must be replaced by a good with the same technical characteristics.

The products included are divided into branded goods and generically products. The generically products are identified from their technical characteristics. Thus, the countries who participate in the investigation collect prices of comparable products - not identical products.

Also, the price observations should represent a random selection of different comparable shops. Promotion sales and discounts are included in the price collection only if the discount has duration of more than four weeks. Eurostat's prices are market prices, including VAT and taxes.

On food products, the Eurostat's investigation includes approximately 2,000 prices on 500 different food- and beverage products.

There are some problems related to Eurostat's price index which should be taken into account when evaluating the figures. For example, the way each country selects the stores from which they observe prices on the chosen basket of goods might differ between countries. The stores are chosen by national statistics agencies, and some of these have a lower propensity to choose e.g. discount stores than other, which may cause an imbalance between the countries. Also, the Eurostat figures are primarily based on price levels in the capitals. However, some countries have chosen to adjust their prices with respect to the possibility of prices being higher in the capital, while other countries have not. Another problem is that some countries report actual prices, where coupons and discounts are adjusted for, while others do not.

The basket of goods represents another problem in the Eurostat data base. It is difficult to find goods which are fully comparable across all countries, and furthermore, different consumption patterns may cause an imbalance between the countries as some goods, which may have great influence in a few countries but not in others, are not included. There may also be a difference in the prevalence of national branded goods. Finally, organic products which are more expensive than ordinary food products and which have a high market share in some countries, are not included in the comparisons. However, for some food categories like milk, the demand for organic products is very high in some countries.

If a country produces a large number of popular branded products, this may put pressure on the prices of other goods. Finally, differences in package sizes may influence the data. Countries with a tradition for larger package sizes may experience lower prices per kilo of the purchased goods.

The **DG Markts price index** (with reference to the one from July 2004) compares prices on 82 different products in supermarkets in EU15. The price index is based on market prices, including taxes and VAT. For each product, the prices for up to four different brands are collected. Within these four brands, wherever possible, the data set includes information on both Pan European brands and generic brands. Pan European brands are defined as brands which can be found in at least four out of the five big counties (Germany, UK, Spain, France and Italy) plus in five other countries. Generic brands are brands which do not fulfil this criterion. DG Markts price index gives a snapshot of the situation in one year.

A large share of the 82 products is heavily branded products, like beer and soft drinks. Branded products are usually more expensive and particularly when taxes are imposed, the supply of cheap non-branded (private labels) will be relatively high in these countries. Thus, the price index is influenced by the mix of all branded and non- branded goods on sale in a given country.

DG Markt uses their comparison as an indicator on how the common market works, and should not be interpreted as a price level indicator.

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## Appendix 2. What explains price variations

### Modelling the price decision

A number of empirical studies have focused on the price decision of grocery stores in order to explain the competitiveness of the stores. According to these studies one way to employ a price function takes the following form:

$$P = MC + \text{markup}$$

$$= \frac{\delta TC}{\delta Q} + \gamma_1 + \gamma_2 \text{store characteristics} + \gamma_3 \text{market structure} + \gamma_4 \text{demand} + \varepsilon^P$$

where

$$\text{store characteristics} = \begin{bmatrix} Q \\ \text{rent} \\ \text{cooperat} \\ \text{Service} \end{bmatrix} \quad \text{and} \quad \text{market structure} = \begin{bmatrix} H_{\text{store}} \\ H_{\text{groups}} \\ \text{share} \\ \# \text{stores} \end{bmatrix}$$

The price function consists of the marginal cost, where cost function (TC) is a function of the quantity sold by the store (Q), the number of stores belonging to the retail group (#stores), and the interaction terms between quantity sold, number of stores and time.

The variables potentially affecting the mark-up of a store are divided into three groups: store characteristics, structure of the market area and demand conditions in the market. The variables describing store characteristics are the quantity sold, rental costs of the store (proxy for good location), cooperative indicator, and a service level indicator. The intuitive reason for these variables is that stores do not offer physical products only but distribution services as well.

The variable describing the market structure are the Herfindahl index among stores, the Herfindahl index among groups and the capacity share of the retail group of stores (share). The parameter estimates of all these variables are usually either positive or zero.

The variable describing the demand conditions in the market are the income and the time trend. These variables do not explain the competitiveness of the stores, but they are needed in the pricing equation to ensure that the parameters of the variables explaining competitiveness are unbiased.

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## Factors which affects the relative price level

When looking at the price variation among countries it depends on a number of macroeconomic factors and other factors.

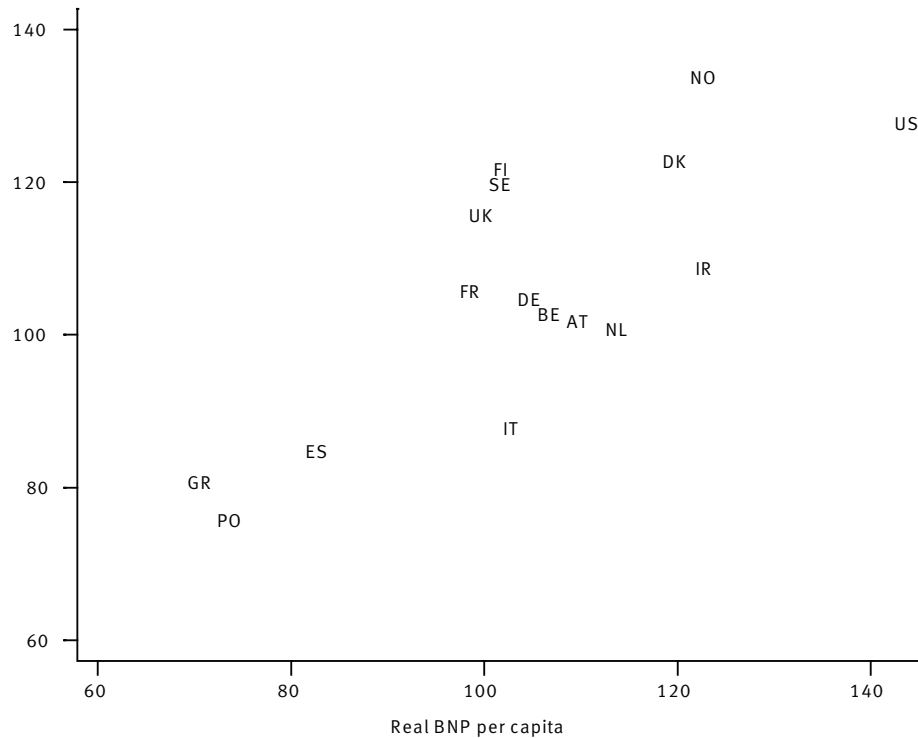
The price of the currency naturally affects the relative price level for private consumption. The reason is that national prices fluctuate much more slowly than exchange rates. It is obvious that the short-term variations in exchange rates may have a large effect. The long-term structural price level differences, however, hinges upon other factors.

Exchange rates, which basically are the price of a currency, affect directly the results of a price level comparison between countries. For various reasons, exchange rates can stay for prolonged periods on levels that are not in equilibrium. In Sweden for example, the krona has for a considerable time been considered undervalued by the Riksbank. This means that, *ceteris paribus*, should the price of the krona increase to its “true” level, the price level in Sweden compared to other countries would be even higher. The Swedish exchange rate does fluctuate compared to other exchange rates, like the Danish. Since the beginning of 2005 the exchange rate has declined by 3-4 pct point. There are many reasons for deviations from equilibrium exchange rates, including trade balance and interest rates differentials, as well as expectations of future changes in fundamentals.

Fluctuating exchange rates and different exchange rates across countries are connected with high costs. The introduction of a join exchange rate (like the €) would save the cost of exchange and guarantees for the firms. This might stimulate the competition, because the international trade will be less complicated. By increased competition the prices will decline in the long run. Finnish investigations and investigations from EU can confirm this development. The investigations show that the immediate reaction on the consumer prices from introducing the euro in Finland was a rise in the prices, but after a year the prices fell down again. Today, the Finnish prices have stabilised on the normal CPI from before Finland joined the EU, the food prices are even a little below the normal CPI.

Richer countries usually have higher prices. This relationship is consistent with economic theory and is confirmed in Figure A.2.1. As is evident in the figure, the Nordic countries have GDP per capita rates close to or above the EU average and price levels which are even higher. Norway and Denmark have higher gross domestic product growth rates than Finland and Sweden. Compared with EU15, Finland and Sweden are in relative terms mean-income and high-price countries. A number of countries including Germany, Netherlands, Austria, Ireland, Italy, and Belgium have lower prices but higher gross domestic product compared to Finland and Sweden. No country within the EU exhibits higher prices and lower GDP per capita than Sweden and Finland for this year.

**Figure A.2.1. Price level and real GDP per capita (EU15=100), 2001**



Source: SCB and OECD (2002a).

The economic rationale for a positive relation as confirmed in Figure A.2.1 is simply that richer countries exhibit higher productivity in the tradable sector, due to higher levels of education and R&D, which increases labour productivity and hence wages. The wage-effect in the tradable sector spills over into non-tradable sector, putting an upward pressure on wages there as well. Danish surveys show that wage differences overall may account for up to 3.5 % of the price difference between Denmark and EU9 . However, several service sectors, which are not subject to competition from abroad, weigh heavily in this comparison. In chapter 4.4 it is argued that when it comes to the food sector the impact on prices from wage differences is equalled out by the differences in productivity and the different retail structure between countries.

Does lack of competition explain the price variation?

The debate on prices often becomes confusing since a judgement must be made as to whether such factors explain the full price difference between one country and its neighbours or just a part of it.

A report by the Swedish Competition Authority (2001) attempts to address this question by analysing the relative consumer price levels of OECD members during the 1990s using panel regression techniques. The price indices were modelled in terms of variables chosen with inspiration from the literature on purchasing power parities, including gross domestic product, the level of taxes, labour costs, changes in private consumption and exchange rates and also population density (to capture variations in transportation costs). The results indicate that about half of the Swedish price difference, which amounts to approximately 20 percent as an average for the 1990s, can be explained by these variables. The remaining half constitutes a “fixed effect” and is not due to these factors. The open question is: to what extent does lack of competition in Swedish markets explain the residual?

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Unfortunately, no variable describing the efficiency of competition was available for inclusion in the model, which would have enabled us to test this factor directly. However, a somewhat rudimentary variable of industry concentration was derived for a number of sectors in the EU for a few years in the 1990s, which shows that Sweden exhibits comparably high levels of concentration in most cases. The variable was included in the analysis of a restricted sample and the results indicate that it is strongly significant as a determinant for price levels in Europe.

These findings, together with general experiences gained during the last ten years, led the Authority to conclude that weak competition in Sweden represents up to half the price difference between Sweden and the EU. This conclusion led to an intensive debate during the 2001 and 2002 in Sweden. Lately, criticism has been aired that the impact of competition was exaggerated (Bergman 2005).

A number of empirical studies, most of them applied to US data, have confirmed a positive relationship with concentration and prices using conventional multivariate regression techniques. As a high concentration rate is the most commonly adopted indicator of competition, it is concluded that competition matters – poor competition leads to higher prices. The price-concentration methodology has been employed by the Swedish Competition Authority (2002), revealing substantial regional price differences for the food retail sector. A basket of 1000 food items costs 7 percent less in West Sweden compared to the county of Stockholm. The estimations reveal that competition clearly affects price formation. Physical distance has an influence - prices become lower the smaller the distance to the nearest competitor.

However, it is complicated to establish robust models, which compare food prices across countries and reveals the competition condition. Even though it is possible to identify parameters and variable which are similar in all countries there will be some differences which should be modelling individual for each countries. Thus, it is individual markets which are working on each individual premises.

In general, we can conclude that the intensity of competition does play a role in explaining food price differences, along with a number of other factors.

## Appendix 3. Estimation of the promotion effect

The EuroStat PPP price indices are based on general prices. It is the Competition Authorities experience that these prices do not at least in some cases take fully into account the impact from short term price cuts. In some countries, characterized by a relatively large promotion activity, the Euro-Stat PPP may therefore overestimate the price level. This appendix describe the approach which the Competition Authorities find most appropriate to estimate the impact from short term price cut, where these are not captured by the Eurostat indices. However, it is important to notice that it is complicated to provide an accurate estimate of the effect of short term price cuts on PPP-price indices.

AC Nielsen has collected data regarding the promotion activity in a number of countries in 2004. Data have been collected on the food products: beer, butter, soft drinks, cold cuts and milk. There has only been very limited data on other food products. The AC Nielsen data show how large a share of the total volume sold that was sold under promotion and how large the average price reductions were.

Using these data (taken into account the limitation of data), the effect of promotion on net prices faced by the consumers has been calculated via the steps outlined in the tables below.

**Table A.3.1. Share sold under promotion, percent ( $\Omega$ )**

	DK	SF	IS	N	S	F	D
Beer	49	40	n.a.	n.a.	31	23	17
Butter	31	10	n.a.	6	16	8	10
Soft drinks	44	31	n.a.	34	37	24	21
Cold cuts	23	n.a.	n.a.	8	13	20	7
Milk	11	n.a.	n.a.	n.a.	1	10	4

**Table A.3.2. Weight in food index ( $\Sigma$ )**

	DK	SF	IS	N	S	F	D
Beer	6.046	10.200	6.986	6.279	5.204	1.190	5.651
Butter	1.479	0.698	0.677	0.327	0.119	1.089	0.546
Soft drinks	5.285	3.334	9.477	7.166	4.022	1.580	1.744
Cold cuts	3.952	4.349	1.546	7.261	1.238	5.170	5.390
Milk	3.791	3.959	3.652	4.879	3.722	2.338	2.989



**Table A.3.3 Average discount ( $\Delta$ )**

	DK	SF	F	D	IS	N	S
Beer	21.1 %	25.2 %	18.6 %	-2.0 %	n.a.	N.a.	23.3 %
Butter/Margarine	16.6 %	21.4 %	2.5 %	7.1 %	n.a.	15.0 %	18.2 %
Carbonated soft drinks	22.8 %	39.6 %	12.4 %	-1.9 %	n.a.	39.7 %	14.0 %
Cold cuts	-9.0 %	n.a.	10.6 %	15.2 %	n.a.	21.9 %	5.1 %
Milk	9.5 %	n.a.	-2.0 %	8.1 %	n.a.	n.a.	2.7 %

**Table A.3.4 Net price index 2003, EU15=100 (P)**

	DK	SF	F	D	IS	N	S
Beer	106.9	122.9	134.9	97.1	206.7	198.5	146.4
Butter	100.0	89.1	107.6	80.9	87.6	84.0	95.7
Carbonated soft drinks	138.8	138.5	116.1	83.3	143.4	196.4	134.1
Cold cuts	106.6	98.5	103.0	97.7	141.4	159.6	117.2
Milk	83.9	82.9	118.5	95.9	109.1	135.0	93.7
Food, total	111.5	110.4	107.7	96.6	146.1	149.3	111.3

**Table A.3.5 New net price index ( $\Pi$ )**

	DK	SF	F	D	IS	N	S
Beer	95.9	110.5	129.1	97.1	206.7	198.5	135.8
Butter	94.9	87.2	107.4	80.3	87.6	83.3	92.9
Carbonated soft drinks	124.9	121.5	112.6	83.3	143.4	169.9	127.1
Cold cuts	106.6	98.5	100.8	96.6	141.4	156.8	116.4
Milk	83.0	82.9	118.5	95.6	109.1	135.0	93.7

**Table A.3.6 Adjusted food price index ( $\psi_{t+1}$ )**

	DK	SF	F	D	IS	N	S
Original index	109.6	106.9	95.9	145.0	148.1	110.4	110.6
Adj., beer	110.0	108.3	106.8	95.9	145.0	148.1	109.9
Adj., beer and butter	109.9	108.3	106.8	95.9	145.0	148.1	109.9
Adj., beer, butter, and soft drinks	109.2	107.7	106.8	95.9	145.0	146.2	109.6
Adj., beer, butter, soft drinks, and cold cuts	109.2	107.7	106.7	95.8	145.0	146.0	109.6
Adj., beer, butter, soft drinks, cold cuts, milk	109.1	107.7	106.7	95.8	145.0	146.0	109.6

**Table A.3.7 Stepwise change in net food price index**

	DK	SF	F	D	IS	N	S
	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Adj., beer	0.7	1.3	0.1	0.0	0.0	0.0	0.6
Adj., beer and butter	0.7	1.3	0.1	0.0	0.0	0.0	0.6
Adj., beer, butter, and soft drinks	1.5	1.8	0.1	0.0	0.0	1.9	0.8
Adj., beer, butter, soft drinks, and cold cuts	1.5	1.8	0.2	0.1	0.0	2.1	0.8
Adj., beer, butter, soft drinks, cold cuts, milk	1.5	1.8	0.2	0.1	0.0	2.1	0.8

### Method of calculation:

The new net price index in table A.3.5 is calculated using the formula below:

$$\Pi = P(1 - \frac{\Omega}{100}) + P \times (\frac{\Omega}{100}) \times (1 - \Lambda)$$

For an example (Denmark, beer):

$$\Pi = 106.9(1 - \frac{49}{100}) + 106.9 \times (\frac{49}{100}) \times (1 - 0.211) = 95.9$$

The adjustment in the overall net food price index in table A.3.6 is gradually calculated using the following formula, where  $\Psi$  is continuously changing as adjustments are made for each of the food products:

$$\Psi_{t+1} = \Psi - (\frac{\Sigma}{100}) \times P + (\frac{\Sigma}{100}) \times \Pi$$

For example (Denmark, beer):

$$110.6 - (\frac{6.046}{100}) \times 106.9 + (\frac{6.046}{100}) \times 95.9 = 110.0 \text{ (decimals cause a deviation)}$$

The change in the overall food price index caused by short term price reductions on beer in Denmark is thus  $110.6 - 100.0 = 0.7$  (decimals cause a deviation), c.f. table A.3.7.

### Result

After having adjusted the overall food price index for the change in the price index of all 5 food products, the change in the Danish food price index is 1.5 per cent point, c.f. table A.3.7. This expresses the overestimation of the Danish price level, given that no adjustment should be made for all other countries.

Finland, Sweden and Norway take short term price reductions into account when prices are reported to EuroStat. Therefore, the estimated effects of promotion in these countries are irrelevant. However, the effect on the Danish price level must be interpreted in the view of the effect in all other EU15 countries. It seems reasonable to assume that the effect in the countries not included in the survey is approximately the same as in Germany and France, or somewhere between these two countries. France and Germany represent two very different retail structure. Therefore, the net effect on the Danish price level ends up being approximately a good 1 per cent point, which is the extent to which promotion has a larger effect on the Danish price level than the price levels of other countries.

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## Assumptions and uncertainties

It is important to notice that it is complicated to calculate the impact on price indices from promotion, and the approach applied by the Competition Authorities have some methodical weaknesses.

A number of assumptions have been required in order to estimate the effect of promotion as it is done in this appendix. First of all, the gradual adjustments in table A.3.6 are based on an assumption that there are no changes in the price indices in other countries, which would potentially change the EU15=100 point of reference.

Next, the AC Nielsen survey does not include all of the countries belonging to EU15. Therefore, when estimating the effect on the Danish price level to approximately 1 per cent point, it is assumed that the promotion activity and the effect thereof is similar to that of Germany and France in all countries not included in the survey.

There are also a number of uncertainties related to the calculations. First of all, only 5 product groups are included in the AC Nielsen data. However, these are expected to be some of the food products characterized by the highest degree of promotion activity.

Second, the discount in table 3 is based on average prices. Thereby, a situation with negative average discount may arise, for instance when a relatively expensive product like ecologic butter is on sale. Even though it is on sale it may still be more expensive than regular butter and this could cause a negative discount. In the calculations above, negative average discounts have not been taken into account. However, this uncertainty is properly almost the same across the countries which make it likely that they are almost evened out when comparing across the countries.

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ISBN 87-7029-345-7



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