THE CONSEQUENCES OF CHANGING CONDITIONS OF THE EUROPEAN DAIRY SECTOR FOR THE STRATEGIES OF DAIRY COMPANIES

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Received June 10, 2004, accepted October 29, 2004.

ABSTRACT

This contribution deals with the consequences of changing conditions of the European dairy sector. Important influences discussed are the decisions of the Mid-Term-Review of the Common Agricultural Policy, the enlargement of the European Union to include the countries of Central and Eastern Europe and the concentration and globalisation of the food trade. Based on these changes, the dairy industry has to adjust their strategies. Of great importance for future competitiveness is the size of dairy companies and plants, as large enterprises and plants have several economic advantages, if an optimal size corresponds with a good job performed by the management of the company. Important alternative strategies like the cost leadership strategy, the differentiation strategy, the focus strategy and internationalisation are discussed and assessed with respect to their possible contribution to retain respectively to improve competitiveness of dairy enterprises. It is concluded that within a period of ten years the face of the European dairy sector will change quite extensively. Only those enterprises will survive which in time actively implement strategies, which are a suitable answer to the changing conditions.

Key words: milk production / dairy sector / conditions / EU enlargement / globalisation / strategies / competitiveness

INTRODUCTION

In order to analyse the future competitiveness of the dairy sector Porters diamond is most helpful to be used as a framework (Porter, 1998, Pitts and Lagnevik, 1998, Weindlmaier, 2000). This approach identifies six sources of comparative advantage, i.e. the factor conditions, firm
strategy, structure and rivalry, demand conditions, related and supporting industries, government and chance.

In this contribution, the analysis is limited to changes in the economic environment of the European dairy sector which are of specific current relevance. First of all, the changes in the Common Agricultural Policy according to the decisions of the Mid Term Review (MTR) of June 26th, 2003 are discussed. Then the enlargement of the European Union to include the countries of Central and Eastern Europe and developments in food retail trade are presented and analysed. The second part discusses the main strategic options which are at the disposal of the dairy industry as a reaction to these changes. In this connection, the main emphasis is given to structural changes in the dairy processing sector.

THE CHANGING CONDITIONS FOR THE EU DAIRY INDUSTRY

Forthcoming changes in the common market order for the dairy sector and its implications

With respect to the changing policy environment affecting the dairy industry the decisions of the MTR of the Common Agricultural Policy of June 26th, 2003 have to be taken into account. Referring to the dairy sector, the following decisions are of specific importance:

First of all, the dairy quota system was prolonged until 2014/15. The start of the general quota increase of 1.5% decided within the Agenda 2000 was postponed until 2006 (0.5% per year). Secondly, starting in 2004, the intervention prices of butter will be cut by 25% (3×7% and 1×4%) and the intervention price of skimmed milk powder by 15% (over three years, 5% each). The third important decision refers to limitations of the intervention of butter: Intervention purchases of butter will be suspended above a limit of 70,000 tons per year in 2005/06. This amount will be reduced by further 10,000 tons per year until 2008/09 (30,000 tons thereafter). Furthermore, butter intervention will be restricted to the period March 1st to September 1st.

A new element for the EU dairy policy is the introduction of direct payments to at least partly compensate the price reduction of intervention prices. Direct payments to dairy farmers will be introduced, starting in 2004/05 with 1.18 Cent/kg and increasing to 3.55 Cent/kg in 2006/07 and after. In connection with the introduction of direct payments it has been decided that these so called Single Farm Payments will be decoupled from the volume and kind of production. This decoupling is expected to reduce output by EU dairy farmers. However, member states may choose to maintain a limited link between subsidy and production under well defined conditions and within clear limits. Furthermore, the principle of Cross Compliance has been introduced, which means that direct payments are conditional on compliance of production with environmental, food safety, animal welfare and occupational safety standards.

The implications of the MTR for milk producers (for milk production)

For milk producers because of falling intervention prices and the extension of quotas a significant drop in producer milk prices is expected. Fig. 1 shows that over time the producer milk prices followed quite closely the support prices by intervention. Therefore, if these support prices decrease from about 28 Cent/kg in 2003 to 22 Cent/kg in 2007, a significant drop in producer milk prices is likely. This drop in producer milk prices will only be partly compensated by direct payments to the farmers.
Figure 1. Development of the average producer milk prices in the EU and of the EU support price by intervention.

Slika 1. Razvoj povprečnih stroškov proizvajalcev mleka v ES in podpornih cen z intervencijami ES.

Figure 2. Costs of Milk Production and Producer Milk Price.

Slika 2. Cena proizvodnje mleka in cena mleka.
A second outcome for dairy farmers will be the fact that a comprehensive coverage of the costs of milk production by the returns received for milk will further decline. Subsequently, the consequences are most probably significant decreases in farmer incomes. Fig. 2 indicates that already in 2002 in some European countries the total costs of milk production are not covered entirely by the returns received for milk. Therefore, if prices will decline as shown, this coverage of full economic costs will further decrease. In this figure, the opportunity costs refer to costs for own production factors inside the enterprise (own land, family labour, own capital), the abbreviations below the bars refer to farm codes, i.e. DE-35 means a German 35-cow farm.

From this, the third consequence is quite likely: In regions with high production costs and low competitiveness for milk production, like for instance in mountainous regions of Southern Germany, France and Austria, milk production will be significantly reduced in the long run. This furthermore means that a universal coverage of grassland management, which has been an objective for agricultural policy for a long time, cannot be continued.

The implications of the MTR for the dairies

If the MTR is realised, dairies potentially have an advantage because of the fact that producer milk prices will decrease. Consequently, the production costs of the dairies will decrease, too. A growing international competitiveness could be the outcome. This indeed is one of the most important aims of the EU commission for changing Common Agricultural Policy for the dairy sector.

However, in regions with a low profitability of milk production, e.g. if small farms are prevailing, the density of milk production will probably be cut dramatically as a consequence, leading to a corresponding loss of raw milk for the dairies. A relocation of dairy plants connected with the need for regional disinvestment programs will probably be the logical consequence. As an effect of the decisions of the MTR, the need for structural change in the dairy sector will furthermore be intensified.

The accession of the Central and Eastern European Countries to the European Union

The European Union realised its biggest enlargement ever in terms of scope and diversity. 13 countries have applied to become new members. Ten of these countries including Slovenia joined the EU on May 1st, 2004.

In order to join the EU, the new countries need to fulfill the economic and political conditions known as the “Copenhagen criteria”. The dairy sector of the new member states will have full and immediate access to CAP market measures, such as export refunds and skimmed milk powder and butter intervention, which will contribute to stabilising the markets.

Of great importance are the decisions concerning the milk quotas for the new member states in relation to the consumption expectations and the decision concerning the quality of products and the hygienic standards (table 1). The table shows that the CEEC accession countries got a milk quota of 18.3 million tons. This quota can be extended by a reserve to a maximum of 19.0 million tons in 2006. If this amount is compared with the estimates concerning the demand of dairy products, this decision means that there is a potential need for imports of 1.2 million tons in 2004.1

Of similar importance are the decisions concerning quality and hygienic standards, as with the admission into the EU all EU-quality and hygienic standards are relevant and have to be fulfilled. Exports to EU- and other countries are only allowed for processors with an export license.

In most of the CEEC-countries intensive activities are performed to increase quality standards and to get export licenses. However, from the experience Germany made with the integration of the German Democratic Republic we know that this is a rather long and expensive process. This
is especially true for Poland, the largest milk producing country of the accession countries. In 2003, out of the 330 dairies in Poland only 49 had an export licence to EU-countries (Pieniadz, 2004).

Table 1. Relevant decisions concerning EU-extension to the CEEC-countries

<table>
<thead>
<tr>
<th>(1) Decisions concerning milk quotas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Milk quota after 2004</td>
</tr>
<tr>
<td>Milk quota inclusive reserve after 2006</td>
</tr>
<tr>
<td>Actual dairy production in access countries</td>
</tr>
<tr>
<td>Estimated demand of the CEEC-countries</td>
</tr>
<tr>
<td>Potential need for imports 2004</td>
</tr>
</tbody>
</table>

(2) Decisions concerning milk quality

- With the admission into the EU all rules concerning quality and hygienic standard are relevant –however only a small part of the dairies has licenses for exports.
- Special quality and hygienic arrangements until 2006, but for national markets only.


From this situation several consequences for the dairies are expected. First of all, the degree of competition in the markets for dairy products in the CEEC countries will increase quite extensively. Dairy companies in the accession countries which are not able to adjust to the hygienic standards set by the EU and to increase the quality of their products very fast, will not be competitive in the common European market. It is expected, that many dairy companies in the accession countries will get out of business during the next few years.

The EU enlargement will also have consequences for the trade flows within Europe. At the one hand it is likely that the CEEC countries will increase the export of basic dairy products like cheese and milk powder to the countries of Western Europe. In the adjacent regions to Western European countries even raw milk might be transported for processing in processing plants of the West. At the other hand it is quite likely that Western European dairy companies will increase the export of branded dairy products and specialities to the CEEC countries. In addition, the number of joint ventures and direct investments will further rise.

Concentration and globalisation in the food trade

During the last few decades significant changes took place within the global food trade. Table 2 illustrates first of all the enormous, border-spreading concentration processes in the food trade. The largest food trade company world-wide, Wal-Mart, has a yearly turnover of 243 billion Euros. In addition to this huge, US based enterprise with several affiliates in Europe, we note very large European companies like Carrefour, ITM Enterprises, and Auchan in France, Ahold in the Netherlands, Metro, Rewe, Aldi, Edeka, and Tengelmann in Germany, Tesco and Sainsbury in Great-Britain.

Based on strong bargaining power, the food retail trade is more or less fixing purchase prices for the products delivered by the dairy industry. In addition, the food trade forces suppliers to
accept increasing price deductions to support the advertising expenses of the food trade and to perform specific payments for including articles of the company into the assortment of outlets.

Table 2. The Top-20 food trade companies world-wide in 2002
Preglednica 2. Vodilnih 20 prehranskih trgovskih podjetij na svetu v letu 2002

<table>
<thead>
<tr>
<th>Company</th>
<th>Country</th>
<th>Turnover 2001, million EUR</th>
<th>Share of food, %</th>
<th>Foreign sales, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Wal-Mart</td>
<td>USA</td>
<td>243,281</td>
<td>40.0</td>
<td>18.0</td>
</tr>
<tr>
<td>2 Carrefour</td>
<td>France</td>
<td>69,486</td>
<td>70.5</td>
<td>50.6</td>
</tr>
<tr>
<td>3 Ahold</td>
<td>Netherlands</td>
<td>66,593</td>
<td>92.0</td>
<td>86.5</td>
</tr>
<tr>
<td>4 Kroger</td>
<td>USA</td>
<td>55,959</td>
<td>92.0</td>
<td>86.5</td>
</tr>
<tr>
<td>5 Metro</td>
<td>Germany/CG</td>
<td>49,522</td>
<td>49.7</td>
<td>44.0</td>
</tr>
<tr>
<td>6 Albertson’s</td>
<td>USA</td>
<td>42,781</td>
<td>90.0</td>
<td>0.0</td>
</tr>
<tr>
<td>7 Kmart</td>
<td>USA</td>
<td>38,655</td>
<td>37.0</td>
<td>0.0</td>
</tr>
<tr>
<td>8 Safeway</td>
<td>USA</td>
<td>48,314</td>
<td>92.0</td>
<td>10.1</td>
</tr>
<tr>
<td>9 Costco</td>
<td>USA</td>
<td>38,131</td>
<td>41.0</td>
<td>18.0</td>
</tr>
<tr>
<td>10 Tesco</td>
<td>Great-Britain</td>
<td>38,059</td>
<td>90.0</td>
<td>15.0</td>
</tr>
<tr>
<td>11 Rewe</td>
<td>Germany</td>
<td>37,540</td>
<td>70.3</td>
<td>20.5</td>
</tr>
<tr>
<td>12 Aldi</td>
<td>Germany</td>
<td>32,400*</td>
<td>84.0</td>
<td>39.4</td>
</tr>
<tr>
<td>13 ITM Enterprises</td>
<td>France</td>
<td>31,900*</td>
<td>82.4</td>
<td>25.5</td>
</tr>
<tr>
<td>14 J. Sainsbury</td>
<td>Great-Britain</td>
<td>29,743</td>
<td>90.0</td>
<td>15.0</td>
</tr>
<tr>
<td>15 Ito-Yokado</td>
<td>Japan</td>
<td>29,624</td>
<td>47.0</td>
<td>36.0</td>
</tr>
<tr>
<td>16 Edeka/AVA</td>
<td>Germany</td>
<td>28,035*</td>
<td>84.0</td>
<td>8.6</td>
</tr>
<tr>
<td>17 Aeon (Jusco)</td>
<td>Japan</td>
<td>26,680</td>
<td>44.0</td>
<td>11.8</td>
</tr>
<tr>
<td>18 Tengelmann</td>
<td>Germany</td>
<td>25,670*</td>
<td>74.6</td>
<td>57.6</td>
</tr>
<tr>
<td>19 Auchan</td>
<td>France</td>
<td>25,500*</td>
<td>70.0</td>
<td>35.0</td>
</tr>
<tr>
<td>20 Supervalu</td>
<td>USA</td>
<td>23,243</td>
<td>76.0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

* = Estimate; Source: M+M Planet retail, www.planetretail.net

Table 2 shows that a high percentage of the turnover of these companies is not realised by outlets in the home country of the respective company but by their foreign subsidiaries. For example, Metro, the largest German food trade enterprise, has affiliates in 18 European countries. As a consequence of the national and international concentration processes only large suppliers are adequate partners for these food trade companies. Purchasing activities of these food trade giants are continually centralised which means that large quantities are needed for the great number of outlets. In the future, international sourcing will gain importance.

A second important development refers to changes in retailing food products. The typical supermarket lost market shares while large self-service department stores and low-price discount stores quickly gained importance. In addition, the establishment and penetration of private labels has become a preferred sales strategy. The fast growing introduction of private labels by the food trade consequently forced even leading suppliers of brands to produce private labels in spite of the risks associated with such activities. Fig. 3 illustrates the fast growth of discount stores in different European countries.

By far the highest percentage of discount stores we find in Germany, as shown in Fig. 4. Meanwhile more than 50% of dairy products are sold in stores of Aldi, Lidl, Penny, etc. This development is particularly important insofar as low prices represent important sales arguments of these discount stores. Intense price struggles are performed between some of the low-price
chains. Important for the dairy industry is the fact that these competitors attempt to realise their low price strategy primarily by low purchasing prices of the products supplied by the dairies.

Figure 3. Development of market share of discount stores in Europe.

Slika 3. Razvoj tržnega deleža veletrgovin v Evropi.

Figure 4. Percentage of dairy products sold in low price discount stores in Germany

Slika 4. Odstotek mlečnih izdelkov prodanih v veletrgovinah znizkimi cenami v Nemčiji
A third development is the ongoing reorganisation of the relationship between the food trade and the dairy industry. One aspect of this process is the establishment of ECR (Efficient Consumer Response) to optimise the supply chain. Dairy companies are asked to introduce such systems together with the food trade companies. Behind this development stands the demand for closer co-operation in the ranges product development, assortment optimisation, logistics and storage.

Another aspect is a reaction of the diverse food scandals in the 90ies: To improve the safety of the food products sold, the food trade companies nowadays demand from the suppliers the implementation of quality management standards. Food safety systems of the manufacturers, e.g. IFS or BRC, are more or less presupposed and aspects of food security are becoming increasingly important (Schiefer, 2003; Weindlmaier, 2003).

**STRATEGIES OF THE DAIRY INDUSTRY TO IMPROVE COMPETITIVENESS UNDER THE GIVEN CONDITIONS**

**Structural change and concentration in the dairy industry**

Past structural changes and concentration in the dairy industry on the one hand are an important issue for the present conditions of the dairy sector today. However, the growth of companies is on the other hand an important strategy to retain and improve competitiveness.

Past developments of the dairy structure

In general a strong decline in the number of companies and plants in the dairy industry in almost all countries of the Western World can be observed. Table 3 illustrates the structural change in the dairy industry of selected countries between 1983 and 1997 in terms of milk collection by dairy firms. During this period the number of companies decreased in all countries quite extensively, i.e. between 25% in Ireland and 52% in Germany. The right side of the table shows that at the same time the volume of milk collected increased by up to 156% in the United States. These data also illustrate that there are big differences concerning the size of dairies. While average milk collection in French companies has been 30.2 million litres only, in the Netherlands nearly 500 million litres have been collected per average company.

<table>
<thead>
<tr>
<th>No. of fiems in milk collection</th>
<th>Average volume collected, mio. lit.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1983</td>
</tr>
<tr>
<td>Germany</td>
<td>528</td>
</tr>
<tr>
<td>France</td>
<td>1570</td>
</tr>
<tr>
<td>Netherlands</td>
<td>42</td>
</tr>
<tr>
<td>Ireland</td>
<td>51</td>
</tr>
<tr>
<td>United States</td>
<td>435</td>
</tr>
<tr>
<td>Canada</td>
<td>250</td>
</tr>
</tbody>
</table>

Table 4 shows Europe’s major milk processors in 2001/2002 in terms of milk purchases per year. The largest companies like *Arla Foods* and *Group Lactalis* process more than seven billion litres per year, that means more than 15 times the milk deliveries of 461 million litres to all dairy
companies in Slovenia in 2001 (ZMP, 2003). Out of the Top-15 companies about half are Co-op’s and half are private dairy enterprises.

From Fig. 5 we can derive that the largest dairy producers worldwide are at the one hand multinational companies like Nestlé, Danone, Kraft Foods and Unilever. Several very large companies are operating in the United States, but also in some of the European countries, in which the concentration processes progressed very far. Examples are the Scandinavian countries like Denmark and Sweden with the largest European dairy company Arla Foods or the Netherlands with Friesland Coberco and Campina.

Table 4. Europe’s major milk processors in 2001/2002*

<table>
<thead>
<tr>
<th>Rank</th>
<th>Company</th>
<th>Co-op (C) or Private (P)</th>
<th>Country of origin</th>
<th>Milk purchases million lit./year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Arla Foods</td>
<td>C</td>
<td>Denmark/Sweden</td>
<td>7,200</td>
</tr>
<tr>
<td>2</td>
<td>Group Lactalis</td>
<td>P</td>
<td>France</td>
<td>7,000</td>
</tr>
<tr>
<td>3</td>
<td>Campina</td>
<td>C</td>
<td>Netherlands</td>
<td>5,750</td>
</tr>
<tr>
<td>4</td>
<td>Friesland Coberco</td>
<td>C</td>
<td>Netherlands</td>
<td>5,600</td>
</tr>
<tr>
<td>5</td>
<td>Nordmilch</td>
<td>C</td>
<td>Germany</td>
<td>4,200</td>
</tr>
<tr>
<td>6</td>
<td>Bongrain/CLE</td>
<td>P</td>
<td>France</td>
<td>4,100</td>
</tr>
<tr>
<td>7</td>
<td>Nestlé</td>
<td>P</td>
<td>Switzerland</td>
<td>2,800</td>
</tr>
<tr>
<td>8</td>
<td>Dairy Crest</td>
<td>P</td>
<td>UK</td>
<td>2,700</td>
</tr>
<tr>
<td>9</td>
<td>Humana Milchunion</td>
<td>C</td>
<td>Germany</td>
<td>2,460</td>
</tr>
<tr>
<td>10</td>
<td>Glanbia</td>
<td>C/P</td>
<td>Ireland</td>
<td>2,450</td>
</tr>
<tr>
<td>11</td>
<td>Danone</td>
<td>P</td>
<td>France</td>
<td>2,430</td>
</tr>
<tr>
<td>12</td>
<td>Sodiaal</td>
<td>C</td>
<td>France</td>
<td>2,300</td>
</tr>
<tr>
<td>13</td>
<td>Entremont</td>
<td>P</td>
<td>France</td>
<td>1,950</td>
</tr>
<tr>
<td>14</td>
<td>Müller</td>
<td>P</td>
<td>Germany</td>
<td>1,850</td>
</tr>
<tr>
<td>15</td>
<td>Laita Group</td>
<td>C</td>
<td>France</td>
<td>1,730</td>
</tr>
</tbody>
</table>


Typical for the recent concentration processes is the fact that those are not only characterised by takeovers of small or medium sized companies by the large ones. In addition, mergers and takeovers of very big enterprises are at the agenda. Examples are the merger between MD foods and Arla in 2000 and the takeover of the English Express Dairies by Arla Foods and of the German dairy part of Unilever by the French giant Bongrain in 2003.

Another characteristic of recent concentration processes is the fact of transnational mergers, acquisitions, joint ventures, takeovers and strategic alliances. Recent examples of transnational alliances are the transnational strategic alliance between the French Lactalis and the Danish Tholstrup Cheese in 2001 and the alliance between Nestlé and the New Zealand Dairy Group (Fonterra) for the American market in 2002.

If these developments in concentration are analysed, the question about the future development of concentration arises. There are indeed no signs that the speed of these concentration processes have diminished in recent years. For 2000 to 2003 the Danish Dairy Board (2004) has listed 37 mergers, acquisitions, takeovers, joint ventures and alliances in the global dairy industry.
The driving forces of the concentration process/potential advantages of large enterprises and/or plants

In the management literature many driving forces, but also some limitations of the concentration process are mentioned and discussed (Schmidt, 1995, Weindlmaier 1999 and 2001).

A first important advantage of large enterprises is the chance to realise economies of scale, respectively lower average costs. These cost reductions can have several origins. A first reason is technical economies as for example large dairy companies can use expensive modern technology and equipment. Secondly, managerial economies can occur in the administration of a large firm by splitting up management jobs and employing specialist accountants, salesmen, IT specialists, etc. Thirdly, financial economies frequently are realised by borrowing money at lower rates of interest than smaller firms. Fourthly, marketing economies are very important nowadays. These are achieved by spreading the high costs of advertising on television and in national newspapers across a large level of output. In Western Europe, today for a national TV-campaign at least 10 million Euros are required if a significant effect and growing sales can be expected. Commercial economies can be made when buying supplies in bulk and therefore gaining a larger discount. As an example, price deductions when buying large quantities of packing material, processed fruits or bacteria cultures can be named. Last but not least, research and development economies are important when developing new and better products. Investigations show that only large enterprises are able to invest in technical equipment and to employ the necessary specialists for an efficient R&D. Furthermore, the high cost of introducing product innovations to the market (e.g. listing fees) presupposes a good financial basis of the company.

Fig. 6 shows as an example the long run cost curve for the production of UHT-milk (excluding raw-material costs). If only 10 million packages of UHT-milk are produced per year, costs of more than 20 Cent per package accrue. In case of a yearly production of more than 180 million packages, the relevant costs are only 14.5 Cent per package, equal to a cost reduction of

Figure 5. The Top-20 dairy processing companies in 2002/2003.
nearly 30 per cent. Of course, such a cost difference will be decisive for the competitiveness of a producer of UHT-milk.

![Figure 6](image.png)

**Figure 6.** Average long run costs of the production of UHT-milk (except raw milk).

In the 1960's, management consultants at The Boston Consulting Group observed a consistent relationship between the costs of production and the cumulative production quantity, which is called the effect of Experience Curves (Wikipedia, 2004). Data revealed that the value-added costs decline by 15 to 25 percent each time cumulative volume doubles. The Experience Curve suggests a possibility that systematic cost differences might arise between competitors because increased activity leads to increased learning, which leads to lower costs. The experience curve has important strategic implications. If an enterprise is able to gain market share over its competitors, it can develop a cost advantage. Penetration pricing strategies and a significant investment in advertising, sales personnel, production capacity, etc. can be justified to increase market share and gain a competitive advantage.

A further important driver of concentration is the advantage of large companies by realising long run strategies (Maucher, 1993). The point made is that only large enterprises have the opportunity to compensate the risks of different operations. An example is internationalisation of dairy companies, which frequently leads for several years to losses in the newly integrated markets. Only large companies are able to compensate these losses by the profits made in other countries.

Large, diversified dairy companies can more easily adjust their production program to the actual market situation and the development of actual profit margins. That this flexibility can be advantageous could be observed in 1998/99: The sharp tumble of the prices for butter and standard cheese in the EU mainly affected those specialised dairies which had no production alternatives.

A further very important driver for concentration of dairy companies is the high concentration and internationalisation of the food retail trade, which has been discussed before. Only large
dairy enterprises with a high production potential are able to deliver the large quantities of products required by these trade giants.

Limitations of structural changes/potential disadvantages of large enterprises and/or plants

Internal Diseconomies of Scale might be a consequence when the firm has become too large and inefficient. This might be due to the fact that management becomes out of touch with the shop floor and some machinery becomes over-staffed. Also, sometimes decisions are not taken quickly and there is too much form filling. Further more, lack of communication in a large firm is quite frequent, which means that management tasks sometimes get done twice. Finally, poor labour relations may develop in large companies.

External Diseconomies of Scale might occur because of the increasing collection area for milk with the consequence of rising transport costs. In model calculations we performed recently we investigated to what extent collection cost of milk would increase if very large dairy processing plants (with up to 7 billion litres per plant) would be established. An important outcome is that in case of cost efficient milk collection (e.g. collection around the clock, collection per farm only every second day, collection based on route planning) this increase in collection costs is to a high percentage offset by the decrease in processing costs in larger processing plants (Weindlmaier and Huber, 2003).

An important further limitation is psychological and emotional resistance of the full-time and honorary management (e.g. in dairy co-operatives) against the concentration process. It has its origin in the fact that one frequent and necessary consequence of a merger is the reduction of management positions. Therefore, the persons taking the decisions for merger quite often eliminate their own position in the enterprise.

Closely connected with this argument is the fact that the potential advantages of concentration can be realised only if consequently major internal adjustments are performed. These include the shutdown of plants and possibly investments in new, modern processing facilities, the reduction of personnel leading to high expenses for compensation payments, etc. Generally, nowadays the financing of such processes becomes an increasing obstacle.

Summarizing and evaluating these different driving forces and limitations, it seems that the advantages outperform the limitations. Therefore, further growth of dairy plants and enterprises is very likely. In the future, dairy plants of several billion litres per plant are a realistic vision.

Porter’s Generic Competitive Strategies

In his famous book “Competitive Strategy” MICHAEL PORTER of the Harvard Business School has argued that a firm’s strengths ultimately fall into one of two headings: cost advantage and differentiation (Porter, 1998a; QuickMBA, 2003). By applying these strengths in either a broad or narrow scope, three generic strategies result: cost leadership, differentiation and the focus strategy. These strategies present an ideal vehicle to discuss the options dairy companies have to stabilise respectively increase competitiveness.

Cost leadership strategy

The cost leadership strategy focuses for being the low cost producer for a given level of quality. There are several prerequisites to carry out such a strategy. A cost leader must focus on having a high market share in the respective market and improving process efficiencies by increasing the size of operations and by optimal outsourcing of non core activities. Furthermore, the access to materials and production factors at low costs is important: In the case of the dairy industry cost components of specific importance are low raw milk costs and low costs for packaging materials. A strict cost management and the avoidance of small, marginal customers
are also decisive. In addition, cost leaders tend to minimise the costs in the areas R&D, service, promotion, etc.

If we take into account the changed conditions of the European dairy industry, the importance of the strategy of cost leadership increased remarkably in recent years. It is expected that in the future the production of standard dairy products, of private labels and products for the discount stores will be a domain of large companies able to perform cost leadership for the respective product group. In a recent strategy plan for the Irish Dairy Processing Sector for instance one of the main proposals has been to reduce the number of plants for the production of butter, powder and casein from eleven to four plants to improve cost efficiency (Prospectus and promar International, 2003).

Because of increasing competition even producers of value added products, of brands and specialities nowadays must focus on cost management. The developments on the markets emphasize that in the future the expectable price premium for brands and specialities will allow rather small extra costs only.

Differentiation strategy

A differentiation strategy calls for the development of products that offer unique attributes. Customers perceive that the products offer features that are better than or different from the products of the competitors. The value added by the uniqueness of the products may allow the company to charge a premium price for it. An economic prerequisite is that the price differences between conventional and premium products exceed the relevant cost differences.

![Figure 7. Actual areas for product innovations in the dairy sector.](source)

Looking at dairy products, there are several possibilities to offer additional benefits. Important examples are the differentiation of the basic characteristics of the products itself, for instance by use of specific recipes or ripening cultures, by utilising specific raw materials and ingredients or
by employing special processing techniques, allowing a longer shelf life. Fig. 7 illustrates some areas for product innovation in the dairy sector. Actually, there are three main trends in consumer behaviour to be considered if new products are developed: Product innovations have to be healthy and wellness oriented, they are of high quality and incorporate the promise of pleasure and enjoyment by eating them, and last but not least, one of their features is convenience.

However, table 5 demonstrates that consumer attitudes differ extremely between countries. According to a recent survey, convenience for instance is very important in UK, while in France and Italy this characteristic of innovations is less significant. The health aspect is a very important characteristic of new products in Italy, Spain and UK, but it is less essential in France and Germany.

Table 5. Variations in consumer behaviour in different EU-countries

<table>
<thead>
<tr>
<th>6 FOOD LOGICS</th>
<th>%</th>
<th>FRANCE</th>
<th>GERMANY</th>
<th>ITALY</th>
<th>SPAIN</th>
<th>U.K.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>12501</td>
<td>2452</td>
<td>3295</td>
<td>2560</td>
<td>1696</td>
</tr>
<tr>
<td>HEALTH</td>
<td>44</td>
<td>39</td>
<td>40</td>
<td>48</td>
<td>47</td>
<td>46</td>
</tr>
<tr>
<td>QUALITY</td>
<td>17</td>
<td>20</td>
<td>11</td>
<td>22</td>
<td>18</td>
<td>14</td>
</tr>
<tr>
<td>CULTURE</td>
<td>26</td>
<td>36</td>
<td>24</td>
<td>28</td>
<td>26</td>
<td>18</td>
</tr>
<tr>
<td>CONVENIENCE</td>
<td>24</td>
<td>35</td>
<td>43</td>
<td>39</td>
<td>44</td>
<td>61</td>
</tr>
<tr>
<td>INDULGENCE</td>
<td>13</td>
<td>11</td>
<td>13</td>
<td>14</td>
<td>9</td>
<td>16</td>
</tr>
<tr>
<td>CONTINUITY</td>
<td>45</td>
<td>47</td>
<td>48</td>
<td>48</td>
<td>43</td>
<td>37</td>
</tr>
</tbody>
</table>

Index calculated upon European average

- High over-representation: Index > 120
- Significant over-representation: 105 > Index < 120
- Close to European average: 90 > Index < 105
- Significant under-representation: Index < 90

* = Own presentation based on Hasson and Dofour, 2002

A further fundamental approach to reach uniqueness is branding. Brands deliver key signals to the consumers and simplify the buying process. They allow to equip the product with a “unique selling proposition” and to differentiate it from the many varieties of dairy products being more or less exchangeable. However, to develop such a USP nowadays, functional properties of the product have to be supplemented by emotional properties and extensive advertisement.

A third important prerequisite of differentiation are widespread promotional activities. Besides classical advertisement by TV, radio, print and posters, “below-the-Line” promotion by sponsoring, event marketing and marketing via internet is of growing importance, also for dairy brands.

The basic problem associated with a differentiation policy is the fact that product innovation, branding and promotion are very costly. The big players in the dairy sector like Nestlé and Danone have huge yearly budgets for R&D and promotion. For example, the average yearly
budget for R&D of Nestlé during the years 2000–2002 has been more than 770 million Euros. Furthermore, because of the described developments in the food retail trade and its introduction of own labels, the conditions for a branding policy by the dairy industry have deteriorated.

Consequently, a differentiation strategy is for sure a very important option for the large, concentrated enterprises in the dairy sector. The risks associated with it include the growing speed of imitation by competitors and the fast changes in customer tastes leading to short life cycles of the products. For the many small and medium sized companies a differentiation strategy offers only limited or no perspectives. For this group of enterprises, the next strategy discussed, the focus strategy, might achieve better results.

Focus strategy

The focus strategy concentrates on market niches and within those it attempts to achieve either a cost advantage or differentiation. A firm using a focus strategy often enjoys a high degree of customer loyalty, and this entrenched loyalty discourages other firms from competing directly.

A focus strategy might be successful, if it succeeds to offer suitable products focusing on the special needs of the group served. Examples are organic dairy products and special regional cheese varieties. Such cheese varieties are particularly frequently offered in the Southern member countries of the EU, like in France, in Spain and in Italy.

In addition, regional brands of dairy products, based on traditional production processes with a high portion of manual work or environmental advantages in the production region might form the basis for a focus strategy. Such regional brands benefit from the recently intensified preference for products from the home region, having the advantage of special freshness and short distribution distances. An example is the market for dairy products in Austria after the accession to the EU in 1995. The Austrian dairy sector has managed it to a large extent to convince the Austrian consumers that Austrian dairy products are better because of the sound environmental conditions under which Austrian milk production is carried out. Fig. 8 shows that dairy products made in Austria still have a high market share in their home country in spite of the fact that they are frequently sold at higher prices than imported products.

This leads to an important requirement of a focus strategy: Because of their narrow market focus, firms pursuing a focus strategy normally have lower volumes and therefore higher costs. Hence, they must be able to charge higher prices for their products. Taking into account the present market conditions and the increasing competition on the dairy markets, this becomes increasingly difficult. An example is the market for biological dairy products: Recently, we can observe a growing discrepancy between the high costs of production and distribution and the prices accepted by consumers.

In spite of these drawbacks, for a limited number of SME’s a focus strategy might even in the long run guarantee the survival in competition to large enterprises. Still, this only will happen if the specific advantages forming the focus strategy can be preserved and if the price differences to conventional dairy products cover the additional cost (Burchardi and Thiele, 2003).

Internationalisation

There is a widespread view that an intensified internationalisation of the dairy industry is among the most important strategies to improve competitiveness. A first important argument in favour of this strategy is the growing internationalisation and globalisation of the markets for dairy products: Even companies, which in the past mainly sold their products regionally or nationally, are confronted with a growing number of competitors in their market area.

Further important drivers are the preferences of European consumers, favouring a broad assortment of products from different countries and the already mentioned concentration and
internationalisation of the European food retail trade. Last but not least the excess supply of dairy products in most of the European countries has to be considered. In spite of the European quota system it is a fact that the degree of self sufficiency for dairy products in the EU is about 108 per cent. Fig. 9 shows that in some of the European countries like Ireland, the Netherlands and Denmark high percentages of excess supply exist which is seeking for markets in other countries.

Figure 8. Market shares of Austrian dairy products sold at the Austrian Market.
Slika 8. Tržni delež avstrijskih mlečnih izdelkov, prodanih na avstrijskem trgu.

The necessity of export exists even in countries in which domestic supply and demand is more or less equal. In Germany, the degree of self sufficiency for dairy products amounts to only 102%. However, there is a remarkable excess supply as high imports add to the production of German enterprises. In 2002 Germany imported 444,600 tonnes of cheese and 137,700 tonnes of butter. As a consequence, the German dairy enterprises are forced to export growing quantities to countries within and outside the EU.

Furthermore, internationalisation is quite often necessary to allow further growth and specialisation of dairy enterprises. For dairy companies specialising their production aiming at the realisation of economies of scale, the homeland market is frequently not large enough. In addition, foreign markets, for example the markets of the CEEC-countries or of Russia, often are characterised by much higher growth rates.

Last but not least: The Western European countries suffer high costs of raw milk, of labour, of energy, etc. Dairy products which are calculated based on these costs offer opportunities for exporting only in case of specialities and premium products. If a dairy company would like to be present with basic products also in low price countries, foreign direct investments are indispensable. Foreign direct investments will be a big challenge for many European dairy
companies in the future. This is especially true for dairy co-operatives which have severe deficits in this connection.

Figure 9. Degree of self-sufficiency for dairy products in European countries in 2002.


To optimise the internationalisation strategy, many details like the selection of the optimal markets, the market entry strategy, the optimal time for the market entrance and the selection of suitable marketing measures have to be clarified.

CONCLUDING REMARKS

The economic environment of the European dairy sector is changing with high speed and intensity. The decisions of the Mid-Term-Review of the Common Agricultural Policy, the enlargement of the European Union to include the countries of Central and Eastern Europe and the concentration and globalisation of the food trade are the most important current influences. The whole sector, milk producers and dairy enterprises, is confronted with great challenges to retain respectively improve competitiveness. Structural changes towards larger units will continue or even accelerate in dairy farming as well as in dairy processing.

In order to strengthen competitiveness dairy processing enterprises have to seriously reconsider their business strategies. Of specific importance is the further growth of enterprises and processing plants. The other strategies discussed in this contribution are options which can be realised, but they are no guarantee for success. Success can be expected only if on the basis of appropriate external and internal conditions the management of the enterprise selects the correct strategy and implements it with high knowledge, continuity and conviction.

REFERENCES


