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The EU Dairy Market – Real Opportunities for Ukraine?

Sebastian Hess, Bernhard Vogt and Mariya Ryzhkova

Kyiv, 09.2008
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About the Project “German-Ukrainian Policy Dialogue in Agriculture”

The German-Ukrainian Policy Dialogue in Agriculture is advising Ukrainian state authorities and business associations on reforming agricultural policy and legislation, taking into account international experience of Germany and other countries as well as international practice (EU, WTO), in accordance with principles of market economy. The project is funded by the German Federal Ministry of Food, Agriculture and Consumer Protection under its Cooperation Program and by the German Centre for International Migration.

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The EU Dairy Market – Real Opportunities for Ukraine?

Executive Summary

1. The dairy sector in the European Union (EU) is characterized by its high productivity and the longstanding application of tools of government intervention in agriculture. In recent years, however, regulation of the dairy sector under the regime of the Common Agricultural Policy (CAP) has undergone various structural reforms. These reforms are gradually exposing dairy farms to global market conditions and will continue to do so in future.

2. The output quota is a prominent measure of the CAP with regard to dairy policy, but the quota is not its core element. Instead, EU dairy policy is based on an economically inefficient system of intervention prices and import tariffs. The quota is set above EU consumption and excess production can only be sold on the world markets by making use of publicly funded export subsidies.

3. The EU exports its dairy products to almost the entire world. On the contrary, only a comparatively small amount of cheese, butter and whole milk powder (WMP) from selected destinations is being imported into the European Union and a large share of these imports qualifies as intra-industry trade, e.g. with Switzerland. Although the EU has granted wide ranging tariff preferences to a reasonable number of countries, currently only very few match EU standards with regard to dairy product quality. Therefore, the EU Commission encourages countries to work towards those standards and offers assistance.

4. European consumers and policy makers are very much concerned about food safety and food quality. In Western Europe, there is an increasing demand for highly processed products based on milk, such as special cheese varieties or yogurts. At the same time, rising income and changing consumption preferences in the new member states absorb more and more of the excess milk production.

5. Recently, harsh weather conditions and soaring costs for farm inputs have dampened European dairy production. Hence, farmers do not seem to fully benefit from rising milk prices and therefore supply response to expected price increases in the short and medium run may be slow.

6. World market conditions in general are currently shaped by high volatility. In the medium term, the most important international agencies with regard to dairy market forecasts expect global supply to grow slower than global demand. Especially the demand for dairy products in Russia and in the newly industrializing countries (NICs), such as China, India, Thailand, Indonesia and Malaysia is projected to increase.

7. Dairy exports from developed countries, however, are expected to remain constant around current levels, while Ukraine and countries in South America are expected to become major exporters. Therefore, the EU market clearly constitutes an interesting destination for Ukrainian dairy products if they match the rigid EU quality standards. The EU provides clear guidelines in this regard but is not going to make any exemptions from current rules.

8. For these reasons, Ukraine should work towards the implementation of EU standards for its dairy products in order to gain access to the European market. But at the same time, Ukrainian producers should not miss to explore other emerging export destinations especially in South-East Asia. Most likely, these are fast-growing markets for dairy products in the near future.

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1 Major bottlenecks of the dairy sector in Ukraine

**Export structure**

Ukraine has a good potential to become a player on dairy export markets. However, today there are various bottlenecks in the dairy value chain to increase efficiency and sector performance. Russia and the CIS countries remain the main importers of Ukrainian dairy products. In 2005 66% of Ukrainian dairy products were exported to Russia\(^1\). The Russian import ban on dairy products caused decreasing of this share to 32% in 2006 and constituted 51,150 t. The amount of dairy products export to Russia increased in 2007 again up to 57,330 t. The share remained 32% in 2007.

**Figure 1** Export of Dairy Products from Ukraine in 2006; 166,000 t

Source: *State Committee of Statistics, 2007*

**Figure 2** Export of Dairy Products from Ukraine in 2007; 178,000 t

Source: *State Committee of Statistics, 2008*

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In particular, the restriction of exports to Russia had an extremely negative impact on cheese and butter production in Ukraine in 2006/2007. Before the ban introduction Russia accounted for 98% of the Ukrainian hard cheese export volume. In 2006 the share of hard-cheese exports reduced to 82%. In the first half of 2008 hard cheese exports to Russia are 83.3% of the exports. Therefore, it seems to be obvious that Ukraine has to develop other market opportunities including the EU to broaden the export structure and to lower export risks. This implies adaptations on the company level as well as on the level of the Government.

By now dairy products are not allowed to be exported into the EU because of unsatisfactory veterinary standards and residue monitoring. To promote dairy exports to the EU the Government is increasing its efforts to adapt its veterinary standards. Recently, residue monitoring plan for milk submitted by Ukraine was officially approved by the EU Commission – an approved residue plan is one of the prerequisites for dairy exports to the EU. In July 2008 an EU delegation of sanitary inspectors from the Food and Veterinary Office was visiting selected Ukrainian dairy farms and milk processing enterprises whose aim is to receive approval from the EU for export of dairy products in the EU. A positive outcome of this mission would allow Ukrainian dairy companies to apply for dairy exports to the EU in the nearest future.

**Production structure**

In total Ukraine has been officially producing 13-14 m tons of raw milk annually over the last years (see Table 1). Great majority of it is produced by households. The share of households in the total raw milk volume increased from 24% in 1990 to 81% in 2006. Such a rapid contraction of the farms’ share was a result of transformation from the Soviet planned to the market economy (Zorya and von Cramon-Taubadel, 1999). This led to the relatively rapid increase of the households’ share in total raw milk production. The generally underemployed members of rural areas used subsistence production of milk as a ‘social buffer’ during difficult times of transformation.

---


3 Meeting the relevant animal and public health conditions is another prerequisite. If a country meets these criteria it can obtain a third country status that allows it to export dairy products to the EU. You can find the list of such countries on [https://sanco.ec.europa.eu/traces/output/listsPerActivity_en.htm](https://sanco.ec.europa.eu/traces/output/listsPerActivity_en.htm). See also point 3.1 of this paper.

4 Dairy processing companies are questioning official figures because of the high share of household production.
Table 1 Raw Milk Production

<table>
<thead>
<tr>
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</tr>
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<tbody>
<tr>
<td>Cows in milk, m head:</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dairy farms</td>
<td>6.2</td>
<td>4.6</td>
<td>1.7</td>
<td>1.4</td>
<td>1.1</td>
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<td>0.9</td>
<td>0.8</td>
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<td>2.2</td>
<td>2.9</td>
<td>3.2</td>
<td>3.3</td>
<td>3.2</td>
<td>3.0</td>
<td>2.8</td>
<td>2.7</td>
</tr>
<tr>
<td>Total</td>
<td>8.4</td>
<td>7.5</td>
<td>4.9</td>
<td>4.7</td>
<td>4.3</td>
<td>3.9</td>
<td>3.6</td>
<td>3.4</td>
</tr>
<tr>
<td>Fluid Milk, m t:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dairy farms</td>
<td>18.6</td>
<td>9.4</td>
<td>3.6</td>
<td>3.5</td>
<td>2.7</td>
<td>2.5</td>
<td>2.6</td>
<td>2.5</td>
</tr>
<tr>
<td>Households</td>
<td>5.9</td>
<td>7.8</td>
<td>9.8</td>
<td>10.7</td>
<td>11.0</td>
<td>11.2</td>
<td>11.1</td>
<td>10.8</td>
</tr>
<tr>
<td>Total</td>
<td>24.5</td>
<td>17.3</td>
<td>13.4</td>
<td>14.1</td>
<td>13.7</td>
<td>13.7</td>
<td>13.7</td>
<td>13.3</td>
</tr>
<tr>
<td>Yield, t/cow:</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dairy farms</td>
<td>3.0</td>
<td>1.9</td>
<td>2.1</td>
<td>2.2</td>
<td>2.1</td>
<td>2.5</td>
<td>2.9</td>
<td>3.2</td>
</tr>
<tr>
<td>Households</td>
<td>2.7</td>
<td>2.7</td>
<td>3.1</td>
<td>3.2</td>
<td>3.2</td>
<td>3.4</td>
<td>3.6</td>
<td>3.9</td>
</tr>
<tr>
<td>Total</td>
<td>2.9</td>
<td>2.2</td>
<td>2.7</td>
<td>2.9</td>
<td>2.9</td>
<td>3.2</td>
<td>3.5</td>
<td>3.6</td>
</tr>
</tbody>
</table>

Source: State Statistic Committee of Ukraine, 2008

The dominance of households’ in the total raw milk supply poses a significant challenge for the future development of the dairy sector. Households cannot capture economies of scale in production. This adds costs to the dairy sector, making it less competitive. For example, individual households cannot guarantee large volumes to input suppliers. Thus, either they cannot receive a discount on volumes and have higher production costs, or purchase cheaper, often of worse quality inputs.

The production of raw milk follows a seasonal pattern. Prices also follow the pattern of supply and demand forces on the market. This has a big impact on dairy processors’ strategies and costs. In summer time there seems to be enough supply and quality of this milk could be reasonably controlled. However in winter-time the supply falls dramatically, so processors are ready to pay more even for milk of worse quality, just to ensure enough raw material supply. This certainly adds to processors’ costs.

Moreover, households in great extent contribute to supply fluctuations compared to dairy farms. The reason is that households cannot guarantee a stable supply all the year round as they do not have enough herd size to plan with. Another reason is the lack of managerial skills on farms. That means that farmers do not have enough proficiency to organize unwavering supply of milk during the year.

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**Investments**

Investments into dairy farming are characterized by long pay back periods. It is about 10 years under current price ratios and capital markets in Ukraine\(^6\), far too long to stimulate significant flows of investment.

The Government puts a lot of emphasis on the promotion of the livestock sector, e.g. in its National Rural Development Support Program up to 2015 the sectoral dairy livestock development objectives have been defined. The main tasks of the program are: dairy livestock increasing up to 4,400,000 heads, in particular, in dairy farms from 700,000 to 1,800,000 heads; cows' productivity raising up to 4,300 to 4,500 kg of milk per cow; milk production increasing up to 20 million t per year; production quality improvement.

Among the means of the implementation of the government livestock promotion, the program mentions investment mechanisms improvement as well as development and creation of modern dairy farms. For this purpose, the government intends to provide some budget funds for dairy farms for reconstruction, technical re-equipment and introduction of modern processing technologies in dairy enterprises.

**Subsidies to dairy farms: VAT regime**

There exists a zero-rate VAT regime for the dairy processing industry in Ukraine. The total amount of VAT to be paid to the budget by agricultural enterprises of all types of ownership for sale of milk, cattle, poultry, wool, dairy and meat products produced by their own processing facilities remains at their disposal for livestock and poultry production support. VAT received by food processing enterprises from selling dairy and meat products is saved on a special account and paid to agricultural producers selling their unprocessed milk to processing enterprises. The second subsidy element is a premium for milk of certain quality sold to dairy processors.

It should be noted that these subsidies do not comply with WTO requirements as for the domestic support measures\(^7\). This is an ‘amber box’ policy measure (according to WTO terms) and is classified as domestic support provided under non-exempted from reduction commitments policies. Total Aggregate Measurement of Support (Total AMS) is the basis for the reduction commitments and defined as the sum of expenditures on non-exempted domestic support, aggregated across all commodities and policies. That means that WTO provides no commodities – or policy-specific but only Total AMS reduction commitments. So in case Ukraine exceeds its total AMS obligation it will have to reduce some of its non-exempted domestic support expenditures and subsidies considered in this paper might be one of them\(^8\).

Moreover, as Ukraine became a WTO member, the existing VAT regime for dairy producers should be changed as discriminating relative to imports. Currently, the parliament of Ukraine considers a draft law that proposes to cancel zero-rate VAT regime for dairy producers. Instead, it is suggested to introduce privileged VAT rates for agricultural products (particularly, 12 % for dairy products). It should be said that there exists a practice of privileged taxation of agriculture in many European countries. Different rates (from 55 to 25 %) are applied to different agricultural products\(^9\).

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\(^6\) Insider information from dairy business operators.


\(^9\) In Germany standard VAT rate constitutes 19 % and privileged – 7%. In Finland the rates are 22% and 17%, in Italy – 20% and 4.5 % (10 %), in Poland – 22% and 7 % (3%) correspondingly.
Assuming that the Ukrainian dairy sector overcomes current bottlenecks and increases productivity by rising investments, it has the potential to become an important player on export markets. It is therefore interesting to look at the specific opportunities of the EU and beyond to broaden the actual export structure.
2 The dairy sector in the EU

With 20-25% of total world supply, the European Union (EU) is the largest milk producer worldwide. Cows are milked in every single member state of the EU, and dairying is one of the most profitable branches of EU agriculture. More specifically, the dairy sector is the EU’s number one single product sector in terms of value at approximately 14% of agricultural output. At farm level, EU milk production was worth about EUR 43 billion in 2004 whereas the EU’s dairy processing sector has an annual turnover of ca. EUR 117 billion (EUROPEAN COMMUNITIES, 2006). Thus, dairying plays a key role in the EU’s agricultural sector with enormous impact on both farm households and the food industry.

Figure 1-1: Products made from dairy cows’ milk

Besides fresh cows’ milk as key input, the dairy sector deals with three different product categories, namely primary final products, secondary final products and intermediate products. These are depicted in Figure 1-1, which schematically illustrates the general production processes and workflows. In this respect it is worth mentioning that nearly 40% of EU milk is consumed as cheese and that more than 75% of EU cheese is produced in Germany, France, Italy and the Netherlands.

An important feature of the EU dairy sector is the relevant regime of the Common Agricultural Policy (CAP). It stands for large-scale market intervention. Since 1984, e.g., the EU operates a milk quota scheme as a supply control measure to limit the volume of milk produced.

Allocations are fixed at individual producer level and there is a difference in quotas for deliveries to processors and direct sales from the farm. The quantities of milk up to the individual farmer’s specific quota benefit from full market price support whereas over-quota volumes will be penalized by a so called “super levy”. Generally speaking, the overall amount of quota for 2007 for the EU-27 (142 million tons) exceeds total EU-27 deliveries (~133 million tons) to dairy processors. But even when factoring the quotas for direct sales from the farm into the equation, there is a huge difference. The 2006/07 quota year saw an undershoot of almost 2 million tons, and the 2007/08 quota year could end with an even higher level of significant net underutilization for EU deliveries ranging between 2-3 million tons (EUROPEAN COMMISSION, 2008a: 27). Nonetheless, even if the quota margins allow for no direct limitation effect on cumulated output quantities throughout the EU, this policy instrument can be rather harmful to individual farmers in particular member states. After all, it puts additional costs (to purchase additional quota) on those who intend to increase their output. From a macro-economic perspective, this implies that the quota system impedes structural change. Moreover, it encourages rent-seeking behavior and weakens competitiveness. This means that despite positive market price incentives, individual farmers might not be able to increase their production. Consequently, this circumstance can impact milk supply and dairy commodity markets. It also explains why individual member states might not fulfill their respective quotas.

But besides agricultural policy measures, however, herd size, management decisions as well as geographic or climatic factors also impact final production figures on the farm level. Milk yields per cow increase steadily in every member state and overall EU dairy production continues to follow a trend towards greater intensification. Since the introduction of the milk quota, the number of dairy farms has declined by 72% but individual production units have become larger and more specialized. Today, the EU-25’s 1.6 million full-time dairy farmers face a growing urge to invest into new technologies in order to increase their scales. This is accompanied by the need for cost-cutting larger sized units, both in the plant and livestock area (VAN DEN HAM and DE HOOP, 2006).

The EU’s milk producers form a rather heterogeneous group with regard to size and output. Figure 1-2 offers a snapshot perspective with regard to farm structures in the dairy sector throughout the EU.

Given that year-to-year changes are more or less gradual, the illustration underlines that there are significant differences between the individual member states. In the upper right corner of the scatter plot we find those countries whose dairy farms are on average the most productive ones. They show a high number of animals per farm as well as a high output level per cow. It also becomes clear, however, that the two EU member states with the highest production volume of cows’ milk, namely Germany and France (cf. Figure 1-4), obviously do not have the most productive dairy farms on average.
A general survey regarding the development of the dairy sector in the EU is given in Table 1. Relatively high delivery ratios (89.6 % in 2005, 92.1 % in 2014) for milk point out that the main income on EU dairy farms is generated from supplying milk to a dairy processor (farmer-owned cooperatives as well as private companies). Of course, there also are dairy farmers, who sell their milk and farm-made dairy products directly to consumers (ca. 1.8 million tons of raw milk). In addition, on-farm milk consumption accounts for ca. 22% of total production in the member states of the EU from May 1st, 2004 (EU-10) and more than 73 % of total production in Romania and Bulgaria (EU-2), whose agri-food sectors still cope with subsistence farming to a certain extent (EUROPEAN COMMISSION, 2008a: 27).
Table 1-1  Milk production, deliveries and dairy herd in the EU-27, 2005-2014

<table>
<thead>
<tr>
<th>Year</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total production (mio t)</td>
<td>148.9</td>
<td>147.5</td>
<td>147.2</td>
<td>147.3</td>
<td>147.5</td>
<td>147.5</td>
<td>147.4</td>
<td>147.3</td>
<td>147.3</td>
<td>147.3</td>
</tr>
<tr>
<td>of which EU-15</td>
<td>120.7</td>
<td>119.7</td>
<td>119.6</td>
<td>119.8</td>
<td>120.2</td>
<td>120.2</td>
<td>120.2</td>
<td>120.2</td>
<td>120.2</td>
<td>120.2</td>
</tr>
<tr>
<td>EU-10</td>
<td>21.9</td>
<td>21.7</td>
<td>21.7</td>
<td>21.7</td>
<td>21.7</td>
<td>21.6</td>
<td>21.6</td>
<td>21.6</td>
<td>21.6</td>
<td>21.6</td>
</tr>
<tr>
<td>EU-2</td>
<td>6.3</td>
<td>6.0</td>
<td>5.9</td>
<td>5.8</td>
<td>5.7</td>
<td>5.7</td>
<td>5.6</td>
<td>5.6</td>
<td>5.6</td>
<td>5.6</td>
</tr>
<tr>
<td>Deliveries (mio t)</td>
<td>133.5</td>
<td>132.7</td>
<td>132.9</td>
<td>133.6</td>
<td>134.4</td>
<td>134.7</td>
<td>135.0</td>
<td>135.3</td>
<td>135.5</td>
<td>135.6</td>
</tr>
<tr>
<td>Delivery ratio (in %)</td>
<td>89.6</td>
<td>90.0</td>
<td>90.3</td>
<td>90.7</td>
<td>91.1</td>
<td>91.4</td>
<td>91.6</td>
<td>91.8</td>
<td>92.0</td>
<td>92.1</td>
</tr>
<tr>
<td>Fat content (in %)</td>
<td>4.04</td>
<td>4.04</td>
<td>4.04</td>
<td>4.04</td>
<td>4.04</td>
<td>4.05</td>
<td>4.05</td>
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<tr>
<td>Protein content (in %)</td>
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<td>3.36</td>
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<td>6161</td>
<td>6259</td>
<td>6351</td>
<td>6445</td>
<td>6531</td>
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<td>of which EU-15</td>
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<td>6734</td>
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<td>6927</td>
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<td>7080</td>
<td>7130</td>
<td>7185</td>
<td>7194</td>
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<td>4985</td>
<td>5015</td>
<td>5255</td>
<td>5465</td>
<td>5606</td>
<td>5752</td>
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<td>3011</td>
<td>3056</td>
<td>3102</td>
<td>3150</td>
<td>3193</td>
</tr>
<tr>
<td>Dairy cows (mio heads)</td>
<td>24.3</td>
<td>24.2</td>
<td>23.9</td>
<td>23.5</td>
<td>23.2</td>
<td>22.9</td>
<td>22.6</td>
<td>22.3</td>
<td>22.1</td>
<td>21.9</td>
</tr>
<tr>
<td>of which EU-15</td>
<td>18.4</td>
<td>17.9</td>
<td>17.6</td>
<td>17.5</td>
<td>17.4</td>
<td>17.1</td>
<td>17.0</td>
<td>16.9</td>
<td>16.8</td>
<td>16.7</td>
</tr>
<tr>
<td>EU-10</td>
<td>4.5</td>
<td>4.3</td>
<td>4.3</td>
<td>4.1</td>
<td>4.0</td>
<td>3.9</td>
<td>3.8</td>
<td>3.7</td>
<td>3.6</td>
<td>3.5</td>
</tr>
<tr>
<td>EU-2</td>
<td>2.0</td>
<td>2.0</td>
<td>2.0</td>
<td>1.9</td>
<td>1.9</td>
<td>1.9</td>
<td>1.8</td>
<td>1.8</td>
<td>1.8</td>
<td>1.7</td>
</tr>
</tbody>
</table>

Note: Dairy cow numbers refer to the end of the year (historical figures from the December cattle survey).
EU-10: Member States of the European Union from May, 1st 2004
EU-2: Bulgaria and Romania

Source: EUROPEAN COMMISSION, 2008a: 40.

An expected decline in subsistence milk production might go hand in hand with a slight reduction of total milk production over the medium term. In 2014, projected milk production of the EU-10 would reach 21.6 million tons and the EU-2’s output would be 5.5 million tons.

Furthermore, Table 1-1 shows that the number of dairy cows is being reduced throughout the EU. The EU-27 dairy herd is projected to decline from ca. 24 million heads in 2007 to roughly 22 million animals by 2014. This is mainly driven by strong cutbacks in the EU-12 as a result of continued restructuring of the local dairy sectors. However, milk yield per cow increases steadily with the Friesian-Holstein being the most prevalent breed in the EU. Figure 1-3 offers further exemplification. In general, the developments indicate that farmers' practices change towards specialization and intensification of dairy production rather than towards an increase in herd size.

Taking advantages of larger units is not only unavoidable on the farm level. As processors observe a certain polarization on the dairy markets, further concentration as well as mergers and acquisitions all are key issues for EU dairies as well.

They represent ca. 15 % of the turnover of the food and drinks industry in Europe and employ about 13 % of the total workforce. In 2007, the European dairy industry has processed approximately 133 million tons of raw milk. Its output is used for human consumption and for the production of a broad range of food, feed and even pharmaceutical products.

The EU dairy industry is well-known for the quality of its products. Besides an ample variety of cheeses there is also a wide range of creams, yoghurts and other specialties. However, most internationally traded milk products are standardized mass goods, whose prices depend to a large extent on raw material input costs. For this part of the market, a good number of dairies follow a strategy which is to offer homogeneous products with a quality far above average, while achieving cost leadership by minimizing collection, production and marketing expenses.
On the other side, market shares for specialty products have been successfully obtained by EU processors which follow a clear differentiation strategy. This involves meeting the highly assorted demand of rather affluent buyers. It can be achieved through market segmentation and by making use of a responsive marketing concept. This aims at the gain of supplier competence through special product characteristics and production processes.

**Figure 1-3: Outlook for the EU milk production, deliveries and dairy herd, 1991-2014**

![Graph showing milk production and deliveries in EU regions from 1991 to 2014.](source: EUROPEAN COMMISSION, 2008a: 28.)

Consequently, the majority of cow milk in the EU is produced on an industrial scale by commercial dairy farms using automated milking equipment and following a strict total quality management. This is required not only by legally binding regulations on the EU and national levels (see chapter 2) but also as a consequence of specific supply contracts offered by most dairies and other processors that act increasingly multinational.

Figure 1-4 depicts the regional distribution of milk production in the EU from 1995 to 2006. The diagram indicates that the quantity of produced milk remains more or less stable in any of the individual member states – with Poland being the only exception. The overall effect is due to the milk quota system, which has effectively limited the amount of milk EU dairy farmers produce each year. Among the largest producers, only Poland has managed to receive significant expansions of its national quota volume compared to pre-EU accession production levels. Most new member states from Central and Eastern Europe have received quotas according to their production volumes in the years before accession (in case of Romania the increase is due to missing data before EU accession 2004).
Compared to its geographical size, the Netherlands are especially powerful milk producers with a slightly larger production than Italy. According to the European Commission’s Directorate-General for Agriculture and Rural Development “[t]he United Kingdom, Sweden, Finland and Hungary continue to show a production pattern which is structurally below quota. In France restrictions on quota reallocation have been relaxed in order to encourage a better use of production quotas.” (EUROPEAN COMMISSION, 2008a: 27)

On the processing side, along with the stabilization of raw milk supply there has been a constant shift towards products with a higher value added and away from bulk commodities over the last years. Due to the reduction of intervention prices of butter there is less incentive for the industry to get involved with this product. Despite a preceding reduction of intervention prices of SMP, 2007 has seen a notable increase in the production levels of SMP which were triggered by rather strong price movements. An increased demand for cheese has led to an expansion of capacities in this business area. As can be seen in Figure 1-1, this automatically has lead to a reduction of WMP production. Lower casein production has also made alternative use of proteins possible.

Starting from this overview on European dairy production, the following chapter will closely examine the EU’s dairy market policy with regard to prices, quantities, and quality regulations. In addition, quality measures introduced by the food industry are summarized. Chapter 3 then analyzes current market trends within the EU, especially with regard to the vertical integration from farm level production to the retail store. Chapter 4 presents short- and long term forecasts for world dairy markets; chapter 5 concludes with regard to potential market opportunities for Ukraine in the EU and elsewhere.

3 Dairy markets, policies and regulations in the EU

3.1 European imports and exports of dairy products

The EU is the largest single market in the world and at the same time qualifies as one of the largest agricultural exporters in the world. Due to the growing liberalization of world markets and the continuing European integration, agriculture in the EU is undergoing constant restructuring in order to meet the demands of global competition. The competitiveness of market participants is dependent on efficient production and marketing processes. Apart from
that, it is also determined by process efficiency on the input supplying (farm), and output demanding (retail) level to a large extent.

The EU is a net exporter of all dairy product categories that are included in the so called Harmonized System (HS). But even at the HS6 level, intra-industry trade plays an important role, especially for the cheese, buttermilk, milk, and cream categories. Here, import volumes sum up to roughly EUR 1 billion. The values displayed in Figure 2-1 represent averages of the years 2000-2007 in order to control for yearly fluctuations in trade volumes.

Figure 2-1 shows imports and exports of various dairy products (HS6 categories) of the EU in million EUR value. According to this graph, cheese is by far the most important source of EU imports.

**Figure 2-1: EU imports and exports in million EUR**

![Graph showing EU imports and exports in million EUR.](source: Own presentation. Data: EUROSTAT.)

Therefore, Figure 2-2 and Figure 2-3 break cheese exports and imports of the EU further down. To be able to compare the volatility of exports and imports without having to plot entire time series, we use the coefficient of variation as a simple measure. The coefficient of variation is defined as follows:

\[ \text{Coefficient of Variation} = \frac{\text{Standard Deviation}}{\text{Arithmetic Average}}. \]

The respective vertical axis in Figures 2-2 and 2-3 uses the coefficient of variation to compare the volatility of different streams of EU cheese imports and exports.

Figure 2-2 presents EU exports of cheese during the period 2000-2007. Surveyed in detail, Figure 2-2 underlines the fact that the EU truly is a global player on world dairy markets. As such, the EU heavily protects its own markets. The only exception would be a few specialized imports from a small number of destinations: Figure 2-3 shows that the EU buys cheese from a comparatively small source of import destinations- 15 countries account for 99% of all EU cheese imports during the time period from 2000 to 2007. The remaining 1% of cheese imports origins from 55 other countries that occasionally export only small amounts of cheese to the EU.
The EU received stable streams of cheese imports from few destinations, namely Switzerland, New Zealand, Australia, and Norway during the last seven years. In this regard, the larger coefficient of variation demonstrates that the annual quantities of other countries’ imports have been subject to much stronger fluctuation.

**Figure 2-2: Cheese imports by the EU in million EUR**

Source: Own presentation. Data: EUROSTAT.
On the other hand, considering cheese exports out of the EU, the Union’s most important trading partners are depicted in Figure 2-3. The 20 countries displayed in Figure 2-3 only account for 88% of EU exports. This implies that EU exports also satisfy the comparatively stable and constant domestic demand from a number of significant nations. At the same time the EU exports cheese to almost all other countries, in total 200 export destinations.

**Figure 2-3: Structure of EU cheese exports**

![Graph showing structure of EU cheese exports](image)

*Source: Own presentation. Data: EUROSTAT.*

Trade with non-EU Countries is subject to the so called Most Favoured Nation (MFN) tariff unless other, bilateral agreements apply. These import tariff rates as well as all other tariff-related taxations at EU-27 borders are common for all member states and cannot be changed by them individually. In addition, individual member states have no right to add further tariffs on top of the existing ones. And of course, all these regulations have to be in line with the agriculture agreement of the World Trade Organization (WTO).

Various countries have received tariff rate quotas for the export of dairy products into the EU. Once these quotas have been negotiated, e.g. as part of FTA negotiations between two countries, the EU issues these quotas (e.g. first come/first served principle) and practical implementation then happens through each country’s border and trade administration: Individual member states issue import or export licenses that are administered through their respective customs agencies that function as point of contact for importing companies.

Despite a wide range of tariff preferences that have been granted to non-EU countries, the actual list of importers that are allowed to deliver dairy products to the EU is small (see Figure 2-4) - and the Ukraine is currently not part of it.
Figure 2-4: List of countries currently permitted to export dairy products into the EU:

<table>
<thead>
<tr>
<th>Argentina</th>
<th>Australia</th>
<th>Canada</th>
<th>Chile</th>
<th>China</th>
<th>Croatia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iceland</td>
<td>Israel</td>
<td>Kenya</td>
<td>Macedonia</td>
<td>Mexico</td>
<td></td>
</tr>
<tr>
<td>Netherlands Antilles</td>
<td>New Zealand</td>
<td>Russian Federation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Singapore</td>
<td>South Africa</td>
<td>United States</td>
<td>Uruguay</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


Figure 2-5 illustrates the procedure that is involved when a non-EU country is exporting products of animal origin to the EU: the competent national authority, e.g. the Ministry of Agriculture, establishes a formal contact to the European Commission and requests approval. In the next step, the EU Commission visits the country and inspects whether hygiene standards comply with EU standards. Given that the country’s trade request is approved, the next crucial step is the inspection of products at the EU border through an official Veterinary Surgeon. This measure aims to determine whether the product can enter the EU market or has to be re-exported or destroyed.

The EU Commission has published an easily accessible user guide for the import of live animals and animal products from non-EU countries. This document provides guidance to the national authorities in those countries that are interested in exporting say domestic dairy products to the EU. It is emphasized in this document that interested parties should contact the European Commission under the contact details provided in section 14 of the user guide. It can be downloaded at:


The preceding explanations underline that the EU is open for and interested in receiving imports from non-EU countries. Imports to the EU require that a consumer or a company within the EU is willing to buy the relevant goods and that the various quality criteria are matched. Especially in times of high international food prices, exports to the EU are likely to become easier than in times of low prices. On the other hand, exporters of dairy products from non-EU countries should anticipate that market conditions within the EU reflect the market situation outside the EU only partially. This is due to the system of the CAP. Understanding markets for agricultural products and especially for dairy products within the EU therefore requires understanding the goals, instruments, and future directions of the CAP.
3.2 A guide to price and quantity restrictions of EU dairy products

3.2.1 Development and principles of EU agricultural policy

The initial goal of the CAP dairy market regulation has been to ensure “a fair standard of living” for farmers through stabilization of milk prices. This stabilization was meant to comprise fluctuations in terms of the absolute level of milk prices as well as in terms of variations over time that could potentially harm individual milk producers.

The EU milk and dairy policy is often associated with the quota system that controls output of raw milk at the farm level. Despite being important for farmers, however, this regulation is by far not the only important regulation of EU dairy markets. Furthermore, economic analysis suggests that output quotas are effective if consumption and production are limited in order to keep the market price up.

An analysis of the system of EU dairy markets shows, however, that the market price for milk at the farm level is not primarily induced by to the output quota system because the quota level...
has been set well above domestic consumption. In fact, the main reason for the introduction of the quota system in the year 1984 has been the political goal to limit surplus production. Moreover, the quota system has not primarily been introduced in order to raise prices. The following paragraphs explain the complicated system of EU dairy and milk market regulations.

Due to the fact that milk itself is tradable only within limited ranges of distance, but products made out of milk are easily tradable and storable, EU regulations had to control trade with the latter in order to reach to their goal of protecting markets that are directly relevant for farmers. The EU milk and dairy policies therefore cover a wide range of products and apply individual measures to each. The legal framework is established in the Council Regulation (EC) on the common organization of the market (CMO) in milk and milk products. It covers:

1. milk and creams;
2. buttermilk, yoghurt and kephir;
3. whey;
4. butter and other fats;
5. cheese and curd;
6. lactose and lactose syrups;
7. preparations used as animal feed.

3.2.2 The system of price interventions

The CMO provides a system of EU market interventions. Figure 2-5 illustrates this system for any given dairy product: The EU buys quantities of a certain product until a specific target price is reached. This ensures that the domestic EU price is artificially kept above the world market price. Thus, EU exports have to be supported by tax-funded export subsidies in order to be competitive on extra-EU markets. At the same time, imports are regulated through tariffs. However, if internal markets are tight, the EU Commission may reduce or even completely eliminate import tariffs. In the past, the Commission even has occasionally charged export taxes in order to stabilize intra-EU markets.

Out of the set of common policy measures typically applied to support an industry, there is proof that price interventions have seriously negative effects: Other things being equal, price interventions are welfare-distorting, potentially terms-of-trade affecting, and the most expensive agricultural policy measures of all typically applied by governments. However, farmers tend to favour price interventions because these measures create an illusion of being independently working in a market economy, yet without having to bear the downsides such as price fluctuations and import competition. But consumers are facing higher prices than under free trade. In the end, and because of the subsidies, it is the taxpayer who pays the bill for this.
All measures described refer to EU law that is executed by individual member states. In addition, EU law provides the common denominator for all regulations. But to certain extend, individual member states are free to add their own regulations. Following is a list of individual specifications for key dairy products.

- **Butter**
  Agencies buy up butter at 90% of the intervention price during the period 1 March to 31 August of any year. In addition, private storage is subsidized if salted or unsalted butter produced from cream or milk is bought. The amount of aid is not fixed but varies according to storage costs and price trends.

- **Skimmed Milk Powder (SMP)**
  Agencies buy in at the intervention price between 1 March and 31 August. The Commission may suspend intervention if the quantities offered exceed 109,000 tonnes.

- **Cheese**
  The EU subsidizes private storage of special varieties of cheese, such as *Grana Padano*, *Parmigiano Reggiano*, *Provolone*, sheep's and goat's milk cheese, as well as long-keeping cheeses. The aid amount is determined in the light of storage costs and probable price trends. On the other hand, the Commission may decide to sell the stored cheeses if prices are reasonably high.

Due to the fact that the intervention system creates excess supply and the output quota has been set above EU consumption levels, the EU has introduced additional laws in order to increase the domestic use of milk or to facilitate sales of milk at EU market:

- **Special marketing aid**
  There is a special marketing aid for producers of skimmed milk and SMP used for animals, casein, and purchase of cream, butter and concentrated butter by non-profit bodies, by manufacturers of certain food products and for direct consumption.

- **School milk**
In order to increase the amount of milk consumed by children in schools there is a financial aid package for the distribution of school milk. Recently, the commission has proposed to extend the system of subsidized school meals on fruit and vegetables in order to increase domestic consumption and in order to have children benefit from it.

In addition, **safeguard measures** may be taken if the EU market is threatened with serious disturbance by reason of imports or exports.

### 3.2.3 Ongoing and future reforms: “Mid-Term-Review” 2004 and “Health Check” 2008

Although it can be assumed that CAP measures in connection with the dairy sector will be subject to further reforms in the future, currently it does not seem that the EU will completely eliminate its milk market intervention policy. In addition, the various regulations with regard to veterinary standards, animal welfare and cross compliance are likely to persist and to be extended - following consumer demand.

**Figure 2-7: Market price interventions for butter since the Agenda 2000**

![Market price interventions for butter since the Agenda 2000](image)

*Source: Own presentation based on EUROPEAN COMMISSION 2007b.*

Coinciding with the start of the dairy reform in 2004, 10 new member states joined the EU. This increased the EU base quota by 18.5 million tons and added 80 million consumers. Furthermore, in accordance with the accession agreements, a restructuring reserve of 0.67 million tons was established for eight of the new member states. This additional reserve was added to their national quotas on 1 April 2006. The next enlargement round in 2007 brought two new member states with a total quota of 4 million tons into the Union. This led to a total amount of quota for the EU-27 of 142 million tons. Thus, by 1 April 2008, further to 103 million consumers, 24.5 million tons of additional quota will have been added to the EU total since 2003.

The aim of the 2003 dairy reform was to increase competitiveness and market orientation. Reducing the guaranteed price for butter (see Figure 2-7) and SMP aimed at triggering a decrease of production in order to stimulate a switch of factor allocation into more value added products like cheese and fresh dairy products. By increasing the quota at the same time the Commission tried to foster additional production, which was meant to facilitate a restructuring of the sector and to encourage young farmers to enter the sector (*EUROPEAN COMMISSION*, 2007).
The ongoing and future political reforms of the CMO after 2003 (“Health Check”) currently look as follows:

After Mid Term review 2003:

1. Reduction in intervention prices:
   - 25% for butter (from 328.20 to 246.39 €/100 kg), and
   - 15% for SMP (from 205.52€/100 kg to 174.69 €/100 kg);
2. Compensation for intervention price cuts:
   Dairy farmers receive a direct payment of ca. 35.5€/100 kg of quota up to the national quota in each member state in the years 1999/2000. But no later than 2007 payments had to be decoupled from production;
3. Butter intervention not beyond 30,000 tons at fixed prices;
4. Gradual quota increase of 1.5% in three steps of 0.5% for 11 member states, corresponding to 1.4 million tons of milk;
5. Reduction of the super levy for production exceeding quota levels:
   - four steps from 35.63€/100 kg in 2003/04 to 27.83€/100 kg from 2007/08 onwards.

3.2.4 What is in the “Health Check”? 

It seems that traditional CAP spending through price interventions and direct transfers (“first pillar”) has become unpopular among voters in Western Europe. So currently there even is no need for the WTO to pedal the EU to induce further CAP reforms. These reforms will not phase out spending on agriculture but shift payments towards the so-called second pillar of the CAP - a budget largely flexible with regard to local initiatives and not tied to agricultural output.

The EU Commission is constantly increasing market orientation of farm policy and currently proposes the removal of most of the remaining production control mechanisms. In this line, it has been suggested to abolish dairy quotas in 2015. For instance, the Commission is currently proposing a 1% increase in quotas for each of the next 5 years on top of a 2% increase already agreed upon for 2008.

Besides other reforms that all target towards market orientation but are not explicitly related to the dairy sector, the Commission is also proposing to cut higher total sums of subsidies per farm (“modulation”) above EUR 100,000 in order to address taxpayer concerns. This will likely be done through a progressive rate starting from 3% per EUR 100,000.

3.3 EU-regulations: Milk quality, hygiene and veterinary issues

3.3.1 Legally binding regulations: National and EU

In the previous chapters, CAP market regulations and political price interventions have been described as main elements shaping the protectionist face of the CAP. In addition to these regulations there are several quality regulations that apply to milk which is marketed or processed within the EU. These regulations can only partially be considered as protectionist with regard to imports. Instead, these regulations merely reflect the growing concern of EU policy makers to protect consumers from any harmful effect that may arise from the consumption of food produced internally or externally.

When these regulations became legally binding in the EU, a number of farms stopped production and left the sector as it would have been too costly for them to introduce sufficient technology to match the new standards. In other words: the current milk market in the EU has already been through a long period of quality adjustments and tightening of quality measures.
Documentation of all actions and tasks during the production process nowadays constitutes an important and inevitable task for professional dairy operations in the EU.

Table 2-1: Regulations with regard to raw milk being produced on German farms

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Analyzed times/month</th>
<th>Maximum/ml</th>
<th>Penalty Cent/kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bakteria</td>
<td>2</td>
<td>not more than 100,000 for milk class 1; above milk is downgraded to class 2</td>
<td>at least 2</td>
</tr>
<tr>
<td>No. of somatic cells</td>
<td>2</td>
<td>Up to 400,000</td>
<td>at least 1.5</td>
</tr>
<tr>
<td>Fat content</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Protein content</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Freezing point</td>
<td>1</td>
<td>-0.515 °C</td>
<td>according to dairy company</td>
</tr>
<tr>
<td>Residuals from Antibiotics, etc.</td>
<td>2</td>
<td>if found, company does not buy milk from this farm for one month, and until the farm can prove that the problem does not exist any more</td>
<td>5</td>
</tr>
</tbody>
</table>


Regulations with regard to the quality of raw milk may vary slightly between member states. The following example presents the regulations for Germany as framed by the Milk Quality Act ("Milch-Güteverordnung"). This directive regulates the veterinary and sanitary measures that apply to raw milk being produced on German farms. Table 2-1 presents the tests that dairy companies have to enforce on a regular basis if they receive milk deliveries from farms. If a farm fails to comply with any of the standards set by the Quality Act, the dairy company can refuse acceptance of further supplies.

3.3.2 Industry standards to control dairy product quality

In addition to governmental regulations within the EU, the quality of dairy products is also closely monitored by the food processing industry and the large retail chains that sell most EU dairy products directly to the consumer. Decades ago the food processing industry has started to control the supply chain of high value products through certification schemes. These schemes either document the production process or certify that specific standards and regulations are matched. Due to market pressured by retail chains and by the requirements of extra-EU markets for high quality food products, e.g. the USA, the Western European food industry has introduced such standards a long time ago.

In this regard, the enlargement of the EU towards Central and Eastern Europe enables useful comparisons for Ukraine because it shows how the food industry within the EU has introduced standards that comply with legal EU requirements and match the preferences of retail chains and consumers on the one hand, while dealing with the specific transitional situation of formerly planned economies on the other.

For instance, certification schemes are gaining more and more importance in Central and Eastern Europe. It has to be emphasized that these schemes are by no means legally binding requirements but often fully embrace the legal framework issued by the EU as well as the regulations added to that of the member states. Instead, certification schemes are voluntary
schemes used by the food processing industry in order to give quality signals to retail chains and consumers.

The most prevalent schemes that have been introduced especially in Central- and Eastern European countries after their EU accession are described below.

**ISO 9001:2000:** ISO 9001 is a private standard developed by the International Organization for Standardization (ISO). It is a business-to-consumer (B2C) standard focusing on the management system and covering all the steps in the agrifood chain except for agricultural production. ISO 9001 is a global standard with about 900,000 certificates conferred worldwide (ISO, 2006). As an industry-neutral standard also adopted in the agrifood sector, ISO 9001 does not include any sector specific aspects, such as hygiene rules (HACCP concept, for instance), sensory tests, etc.

**GlobalGAP:** The GlobalGAP standard was developed in 1997 by retailers organized in the so-called Euro-Retailer Produce Working Group. It is a private business-to-business (B2B) standard whose main objective is the improvement of food safety by guaranteeing compliance with minimum standards. GlobalGAP focuses only on agricultural production. Just like ISO 9001, it is a quality management system audit. All in all, ISO 9001 has issued 71,125 certificates around the world (GLOBALGAP, 2008).

**Q&S:** In response to the BSE-crisis in the year 2000, in 2001 the private Q&S GmbH established their Q&S System to guarantee compliance with minimum standards and, in this way, signal food safety to processors, retailers (B2B) and the final consumer (B2C). Q&S focuses on the quality management system and covers the whole supply chain from agriculture to the final consumer. Most participants are still located in Germany but the number of certified farms and firms outside Germany is growing quickly; nevertheless, it can still be considered a national system (Q&S, 2008).

**BRC Global Standard:** Similar to some of the schemes mentioned above, the BRC Global Standard grew out of the initiative of British private label retailers. The British Retail Consortium (BRC) is the leading trading organization in the UK. The BRC Global Standard is a B2B standard guaranteeing minimum standards. It includes quality management system audits in food processing companies. It is an international scheme with about 6,000 certificates issued in Europe and about 7,300 in the rest of the world (BRC, 2008).

**International Food Standard (IFS):** In 2002, German retailers cooperating in the quality assurance board of the EHI Retail Institute developed the IFS. Like the BRC Global Standard, the IFS tends to cover minimum standards and addresses food processors and retailers. One main objective was the reduction of the number of audits and, therefore, certification costs. The focus is on food processors’ quality management systems. As an international scheme, it has conferred about 8,500 certificates throughout Europe (TROMP et al., 2007; BUHLMANN et al., 2004; IFS, 2008).
Figure 2-8: Certification schemes currently in place in Central and Eastern Europe

Source: Own presentation based on Gawron and Theuven (2008).

Figure 2-9 shows that the total number of certificates in the Central and Eastern European countries (CEEC) is still small compared to Germany, Europe and the world industry in total.

**PDO/PGI/TSG:** With the support of the EU, the introduction of three different systems, namely the Protected Designation of Origin (PDO) system, the Protected Geographical Indication (PGI) system, and the Traditional Speciality Guaranteed (TSG) system, started in 1992. The main objective was to differentiate food products by particular guarantees. Consumers are informed by product labels. Unlike the schemes mentioned above, the focus here is on product quality. All in all, there are 785 PDOs, PGIs and TSGs in the EU (EU, 2008c; Belletti et al., 2007).

**Demeter:** In 1994 Demeter became one of the first private ecological associations to adopt guidelines regarding the production of organic products. Similar to the PDO, PGI and TSG systems, product differentiation is its main objective. Demeter is a B2C standard and is communicated to the final consumer by a product label. Demeter mainly addresses the production process in agriculture. Certificates are conferred on producers and processors in many countries, including Hungary, Slovenia and Turkey (Demeter 2008).

Figure 2-8 summarizes how certification schemes of the industry have gained importance in Central and Eastern Europe after EU enlargement.
On the other hand, it can be seen in figure 2-9 that slightly more than half of the world’s industry certification schemes are issued in Europe, with Germany alone exhibiting more than twice as many certificates as CEEC in total.

4 Current dairy market trends

Some of the world’s leading dairy processors are located in the EU and carefully react towards consumer demand in order to defend or increase their market shares. These companies are confronted with fierce competition but also have a lot of know-how and many years of experience with the business.

Figure 3-1 gives an overview of the most important dairies in the world.
Since the start of the 2003 CAP reform, the internal market has seen a continuous reduction of raw milk prices in the EU. However, limited global supply along with strong demand for dairy products resulted in unanticipated price increases for all dairy products during 2007 (see Figure 3-2). As a consequence there was strong competition for raw milk among the dairy producers within the EU.
According to the EUROPEAN COMMUNITIES, (2006: 14), producer prices for EU dairy farmers are determined by a broad range of parameters, among them:

- supply and demand on the internal EU market,
- world market prices for dairy products,
- currency exchange rate fluctuations,
- quality requirements and industry standards, as well as
- policy interference and CAP measures.

Throughout 2007, domestic prices for butter, WMP and SMP remained well above the intervention buying-in price. Only cheese prices remained relatively stable during the first two quarters before starting to increase in the third quarter of 2007.

Due to this unique market environment the intervention stocks for butter have been eliminated, and export refunds for all dairy products were lowered. Additionally, all disposal aids for casein production, butter, and animal feed have been set to zero. According to the EU Commission’s latest market estimates “the EU-27 butter and SMP markets are expected to remain balanced in 2008 as further increases in cheese and fresh dairy product output would absorb any additional milk fat and protein available from a possible increase in milk production (leading to a decline in both butter and SMP production). As a consequence intervention stocks for both products are expected to remain empty throughout 2008.” (EUROPEAN COMMISSION, 2007: 25).

Besides these current developments, some broad trends with regard to dairy products can be identified:

- Throughout the EU, consumption of drinking milk decreases.
- Consumption of butter in the EU has been continuously declining for many years.
- Milk powder consumption slowly decreases.
- Between 1995 and 2004 per capita consumption of cheese has been growing at an average rate of 1.5 % per year. Cheese consumption will continue to grow.
• Following increasing demand there is rapid growth on the markets for fresh fermented dairy products such as cream, specialized milk proteins for the food industry, and other dairy ingredients.

**Figure 1-5: Per-capita consumption of selected dairy products in Germany**

![Graph showing per-capita consumption of dairy products in Germany](image)

*Source: ZMP, 2007.*

Interestingly, Figure 1-5 shows that Germany as the largest single market within the EU only follows these trends with some delay. So far, consumption levels for aggregated products remain relatively constant. But since 2000, there was a 3.1% increase in per capita consumption of yoghurt and buttermilk products that also include processed fresh drinks. Today, aggregate consumption of these dairy foods is at 95.1 kg per capita and year (ZMP, 2007).

However, future market developments are also influenced by social factors. These lead to the following trends:

• In Western markets producers have to deal with a growing awareness of consumers with regard to health and wellness issues („light“).

• There is a growing market for less fat and low-calorie products.

• The retail store concept constantly gains importance for selling food products.

• Convenience products (e.g. cheese sticks, frozen deep-fried Camembert, Pizza etc.) are gaining market shares due to a growing number of single households and the vanishing of traditional family roles.

• Ecologically farmed and produced products are booming. E.g., the German bio-milk turnovers were 24% higher in 2005 than in 2004.

• There is a growing demand for functional foods, such as probiotic dairy products or ACE drinks (e.g. *Actimel*, *Yakult*).
In summary, EU markets currently witness a polarization with two opposite lines of development:

1. Low-priced generics, that are **retailers’ own branded products** (= private commercial labels PCL), emerge as a major market factor.
2. Expensive **premium products** emerge as a major market factor.

In this respect, Table 3-1 shows the market shares of own branded products (private commercial labels) in some EU member states.

**Table 3-1: Private commercial labels (PCL) in large EU countries**

<table>
<thead>
<tr>
<th>Country</th>
<th>Share of PCL (% of overall 2007 turnover)</th>
<th>Difference in prices PCL compared to manufacturer brands (in %, 2005)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>35</td>
<td>-46</td>
</tr>
<tr>
<td>Spain</td>
<td>28</td>
<td>-44</td>
</tr>
<tr>
<td>France</td>
<td>27</td>
<td>-40</td>
</tr>
<tr>
<td>UK</td>
<td>26</td>
<td>-36</td>
</tr>
<tr>
<td>The Netherlands</td>
<td>24</td>
<td>-26</td>
</tr>
<tr>
<td>Italy</td>
<td>13</td>
<td>-26</td>
</tr>
</tbody>
</table>

*Source: IRI, 2007.*

Throughout the EU, food retailing shows a high concentration (e.g. *Carrefour, Tesco, Metro, Ahold, Rewe, Schwarz-Gruppe, Aldi*). But this also is an issue on a global scale. Urbanization and a deepening distribution drive sales. Following is a chart (Table 3-2) of the largest global food retailers that have a third of their sales from food (sales figures are for the latest financial year and companies with their headquarters in the EU are printed in bold).
<table>
<thead>
<tr>
<th>Rank</th>
<th>Company</th>
<th>Headquarters</th>
<th>Sales in Billions USD</th>
<th>No. of Stores</th>
<th>Countries of Operation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Wal-Mart Stores</td>
<td>U.S.</td>
<td>312.40</td>
<td>6,380</td>
<td>Argentina, Brazil, Canada, China, Costa Rica, El Salvador, Germany, Guatemala, Honduras, Japan, South Korea, Mexico, Nicaragua, Puerto Rico, United Kingdom, United States</td>
</tr>
<tr>
<td>2</td>
<td>Carrefour</td>
<td>France</td>
<td>92.6</td>
<td>12,179</td>
<td>Argentina, Bahrain, Belgium, Brazil, China, Colombia, Cyprus, Czech Republic, Dominican Republic, Egypt, France, French Polynesia, Greece, Guadeloupe, Indonesia, Italy, Malaysia, Martinique, New Caledonia, Oman, Poland, Portugal, Qatar, Reunion, Romania, Saudi Arabia, Singapore, Slovakia, Spain, South Korea, Switzerland, Taiwan, Thailand, Tunisia, Turkey, United Arab Emirates</td>
</tr>
<tr>
<td>3</td>
<td>Tesco</td>
<td>U.K.</td>
<td>69.6</td>
<td>2,365</td>
<td>China, Czech Republic, France, Hungary, Ireland, Japan, South Korea, Malaysia, Poland, Slovakia, Taiwan, Thailand, Turkey, United Kingdom</td>
</tr>
<tr>
<td>4</td>
<td>Metro Group</td>
<td>Germany</td>
<td>69.3</td>
<td>2,458</td>
<td>Austria, Belgium, Bulgaria, China, Czech Republic, Denmark, France, Germany, Greece, Hungary, India, Italy, Japan, Moldova, Morocco, Netherlands, Poland, Portugal, Romania, Russia, Serbia and Montenegro, Slovakia, Spain, Turkey, United Kingdom, Vietnam</td>
</tr>
<tr>
<td>5</td>
<td>Kroger</td>
<td>U.S.</td>
<td>60.6</td>
<td>3,726</td>
<td>United States</td>
</tr>
<tr>
<td>6</td>
<td>Ahold</td>
<td>Netherlands</td>
<td>55.3</td>
<td>6,422</td>
<td>Czech Republic, Denmark, Estonia, Latvia, Lithuania, Netherlands, Norway, Poland, Slovakia, Sweden, United States</td>
</tr>
<tr>
<td>7</td>
<td>Costco</td>
<td>U.S.</td>
<td>52.9</td>
<td>460</td>
<td>Canada, Japan, South Korea, Mexico, Puerto Rico, Taiwan, United Kingdom, United States</td>
</tr>
<tr>
<td>8</td>
<td>Rewe</td>
<td>Germany</td>
<td>51.8</td>
<td>11,242</td>
<td>Austria, Bulgaria, Croatia, Czech Republic, France, Germany, Hungary, Italy, Poland, Romania, Russia, Slovakia, Switzerland, Ukraine</td>
</tr>
<tr>
<td>9</td>
<td>Schwarz Group</td>
<td>Germany</td>
<td>45.8e</td>
<td>7,299</td>
<td>Austria, Belgium, Croatia, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Spain, Sweden, UK</td>
</tr>
<tr>
<td>10</td>
<td>Aldi</td>
<td>Germany</td>
<td>45.0e</td>
<td>7,788</td>
<td>Australia, Austria, Belgium, Denmark, France, Germany, Ireland, Luxembourg, Netherlands, Russia, Spain, Switzerland, United Kingdom, United States</td>
</tr>
<tr>
<td>11</td>
<td>Walgreens</td>
<td>U.S.</td>
<td>42.2</td>
<td>4,953</td>
<td>Puerto Rico, United States</td>
</tr>
<tr>
<td>12</td>
<td>Auchan</td>
<td>France</td>
<td>41.8</td>
<td>2,686</td>
<td>Angola, China, France, Hungary, Italy, Luxembourg, Morocco, Poland, Portugal, Russia, Spain, Taiwan</td>
</tr>
<tr>
<td>13</td>
<td>Edeka</td>
<td>Germany</td>
<td>41.3e</td>
<td>19,001</td>
<td>Austria, Czech Republic, Denmark, Germany, Russia</td>
</tr>
<tr>
<td>14</td>
<td>Albertsons</td>
<td>U.S.</td>
<td>40.4</td>
<td>2,541</td>
<td>United States</td>
</tr>
<tr>
<td>15</td>
<td>AEON</td>
<td>Japan</td>
<td>40.2</td>
<td>10,132</td>
<td>Canada, China, Hong Kong, Japan, South Korea, Malaysia, Philippines, Taiwan, Thailand, United Kingdom, United States</td>
</tr>
<tr>
<td>16</td>
<td>Safeway (USA)</td>
<td>U.S.</td>
<td>38.4</td>
<td>1,914</td>
<td>Canada, Mexico, United States</td>
</tr>
<tr>
<td>17</td>
<td>ITM (Intermarché)</td>
<td>France</td>
<td>37.7</td>
<td>3,932</td>
<td>Belgium, Bosnia and Herzegovina, France, Poland, Portugal, Romania, Spain, Serbia and Montenegro</td>
</tr>
<tr>
<td>18</td>
<td>Leclerc</td>
<td>France</td>
<td>35.4</td>
<td>581</td>
<td>France, Italy, Poland, Portugal, Slovenia, Spain</td>
</tr>
<tr>
<td>19</td>
<td>Seven &amp; I</td>
<td>Japan</td>
<td>35.3</td>
<td>21,136</td>
<td>Australia, Canada, China, Denmark, Guam, Hong Kong, Indonesia, Japan, South Korea, Malaysia, Mexico, Norway, Puerto Rico, Singapore, Sweden, Taiwan, Thailand, Turkey, United States</td>
</tr>
<tr>
<td>20</td>
<td>Tengelmann</td>
<td>Germany</td>
<td>29.8e</td>
<td>7,730</td>
<td>Austria, Bosnia and Herzegovina, Czech Republic, Germany, Hungary, Italy, Poland, Portugal, Romania, Russia, Slovenia, Spain, Switzerland, United States</td>
</tr>
</tbody>
</table>
Table 3-3 summarizes some ongoing trends within global retailing companies. It becomes clear that these companies are targeting consumers in developed and emerging markets of high purchasing power. Expansion strategies of these companies include considerations of demand, but also of supply within countries: If the local food processing industry is not able to meet standards and logistical requirements of these companies and transports are too costly, entering a specific country is not attractive for a large retailing corporation.

Obviously, an analysis of the EU dairy market cannot stop at the farm gate. Instead, the vertical linkages from dairy farms via dairy processing companies to the retailing stores have to be included into any analysis of the overall market situation because future trends with regard to consumption patterns and safety/quality preferences will require farmers and dairy companies to react to these trends. Retailing companies are likely to bundle consumers’ preferences with regard to dairy products and can be expected to pass these preferences on to dairy companies and farmers. Given the large concentration of global retailing companies and their strategies for expansion (compare Table 3-2 and 3-3), only large dairy companies, if any, will be left with bargaining power if prices and product quality is negotiated.
Table 3-3: Global Retailing companies: Ongoing Trends

<table>
<thead>
<tr>
<th>Company</th>
<th>Ongoing Trends</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Carrefour</strong></td>
<td>Includes franchises; in 2005, sold Japan, Mexico operations, split with franchise partner Norges Gruppen in Norway; in 2006, will exit Czech R. and Slovakia (agreed in 2005 to asset swap with Tesco, pending approval), plans to sell S. Korean operation, enter Algeria.</td>
</tr>
<tr>
<td><strong>Metro</strong></td>
<td>Held 40.5% stake in Praktiker DIY, 2005; sales, stores and countries exclude Praktiker; entry planned for Pakistan.</td>
</tr>
<tr>
<td><strong>Ahold</strong></td>
<td>2005 market exits from Costa Rica, Guatemala, Honduras, El Salvador, Nicaragua.</td>
</tr>
<tr>
<td><strong>Costco</strong></td>
<td>Exploring entry in Australia.</td>
</tr>
<tr>
<td><strong>Rewe</strong></td>
<td>Sold French, Swiss retail operations, 2005; focusing on food service.</td>
</tr>
<tr>
<td><strong>Schwartz Group</strong></td>
<td>Entry expected in Bulgaria, Cyprus, Estonia, Latvia, Lithuania, Slovenia, Switzerland, Ukraine.</td>
</tr>
<tr>
<td><strong>Aldi</strong></td>
<td>Entry expected in Greece, Hungary, Poland, New Zealand, Portugal.</td>
</tr>
<tr>
<td><strong>Albertsons</strong></td>
<td>Sale pending to SuperValu, investment consortium, 2006.</td>
</tr>
<tr>
<td><strong>Safeway USA</strong></td>
<td>Stores include Mexican chain Casa Ley.</td>
</tr>
<tr>
<td><strong>Auchan</strong></td>
<td>Exited Argentina, 2005; entry in Romania planned, 2006.</td>
</tr>
<tr>
<td><strong>ITM</strong></td>
<td>Exit Germany, 2005.</td>
</tr>
<tr>
<td><strong>Seven &amp; I</strong></td>
<td>Stores exclude franchises in Europe, Hong Kong, S. Korea, Singapore, Taiwan, Thailand; plans to franchise stores in Germany.</td>
</tr>
<tr>
<td><strong>Tengelmann</strong></td>
<td>Left Canada, late 2005, and China.</td>
</tr>
<tr>
<td><strong>Casino</strong></td>
<td>Planned 2006 entry in Czech R.; 2005, opened stores in UAE (franchise partnership with Fu-Com), Latvia, Lithuania (with IKI), Switzerland (with Magro) and Leader Price operations in Togo, Cameroon, Belgium, etc., through acquisition of stake in Geimex.</td>
</tr>
<tr>
<td><strong>Woolworths</strong></td>
<td>Entry into India imminent.</td>
</tr>
</tbody>
</table>

**Source:** SN RESEARCH, 2008. **Data:** M+M PLANET RETAIL, 2008.

With regard to Ukraine, dairy companies that are willing to export dairy products to the EU should be aware of these trends of vertical integration within the dairy industry; these trends are typical for high income countries. For Ukraine, producing and selling raw products alone would mean to forgive opportunities with regard special dairy products of a high level of processing. In other words: exporting products that would go directly to the retail stores in Europe or elsewhere would enable Ukraine to catch a large share of the value that is added to these products during the processing stage.

At the same time, Ukrainian consumers, especially in the Kiev metropolitan area, can be expected to further develop their preferences for processed food products, organic food, animal welfare, and food safety in a similar way as consumers within the EU. The role of retailing companies can be expected to become increasingly important for the domestic market of Ukraine as well as with regard to export destinations in high income countries, and this is likely going to have similar effects with regard to price negotiations, introduction of quality certification schemes and milk quality standards as it is happening in the EU.
5 World dairy markets: Outlook
5.1 Projections of world dairy markets: Caveat

The following chapter compares and discusses actual forecasts of the most well known independent institutions that frequently issue long term dairy market projections. These institutions are the Organisation for Economic Co-operation and Development (OECD), the Food and Agriculture Organization (FAO) of the United Nations, and the Food and Agricultural Policy Research Institute (FAPRI). In addition, the EU Commission and the United States Department of Agriculture (USDA) frequently issue forecasts, too. However, these institutions may not be completely independent and therefore their forecasts could be biased in order to support their own positions.

Predictions and projections should never be considered as measurements. Even market projections issued by the best economic institutes and international organizations have frequently been turned out to be wrong with regard to future events. But taking this into account, why should it be useful to look at these projections? The reason is clearly that long term market projections incorporate and condense a large amount of information about historic and ongoing market trends. Projections therefore provide a summary of what leading experts currently think about future developments. Projections therefore provide guidance on how to think systematically about likely future developments; projections should not be seen as 1:1 forecasts of reality: On the one hand, it is impossible to foresee global events, such as natural disasters, or political crisis, such as 9/11. On the other hand, it is extremely difficult to correctly forecast global gross domestic product (GDP) and population growth. However, since most long term market projections have to incorporate these forecasts as well, small deviations from reality may cause a projection to deviate significantly from what is actually going to happen in reality.

Serious predictions at best can ask “what can be expected to happen given the information we have and the assumptions we have to make”. If these elements of a projection are presented in a transparent way, the projection can already be useful no matter how simple it looks because any predicted scenario should not only provide insights but also stipulate the way a reader thinks of future market trends.

The following questions should always be asked when looking at market projections:

- What is projected?
- On which assumptions is this projection based?
- Which information may not have been incorporated?
- Who executed the projection and authored the study?
- Could the initiators be motivated to influence public opinion in a certain way?

Projecting the future of world dairy markets cannot do more than assessing those factors that typically determine prices and quantities traded at national and international markets. These factors are supply and demand. It has to be clearly distinguished whether supply and demand are analyzed for dairy products in aggregate or for specific products because this determines to what extend substitution due to rising prices has to be taken into account. In general, there are few substitutes for fresh milk and processed dairy products as an aggregate, however, fat and protein derived from milk can relatively easy be generated from vegetables, e.g. soybeans. The crucial question for any forecast thus is the question to what extend quantities of demand and supply will react to price changes, and to what extend demand will be influenced by substitution effects of specific products.
With regard to the supply of dairy products, short run supply has always been limited due to the fact that a cow’s daily and yearly milk yield is naturally limited. Changing the ratios and amount of feedstuff for cows is typically complicated and risky with regard to animal wellbeing. Pasture quality and feedgrain prices therefore tend to have a rather inelastic impact on European dairy production. At the same time, average herd yield gradually increases as a result of constant growth of productivity per cow due to breeding. Beyond these factors, supply increases in the EU only happen gradually through the number of heifers that are added to the herd.

Since it typically requires at least 1/3 of a year’s heifers to replace herd dropouts, the maximum supply response from one year to the next would theoretically be about 66%. This would certainly be a very fast expansion that may never be reached in reality. On the other hand, it shows that natural conditions prevent dairy supply from infinite elasticities in the short run. Of course this implies the assumption that current production is technically efficient. Otherwise, efficiency improvements can increase supply response at any time.

Farmers will base their decision on the number of heifers to be retained in the herd on expectations about future market development, opportunity cost for heifers, and farm level output restrictions due to land, labour and milk quota.

5.2 Starting projections: Situation in the years 2007/2008

With regard to the world market for dairy products, WMP plays by far the most important role and is exported mostly by the EU, New Zealand, Australia and Argentina. WMP is used to blend fresh drinking milk, but also constitutes an important input to processed food products. Butter and Cheese are mainly exported by the EU, Canada, Japan and the USA. World trade of these products remained fairly constant during recent years.

Other dairy products of a higher order of processing include much more value added than WMP, SMP, cheese and butter. These products, however, are largely traded within firms and between firms and retail stores. Comparatively small amounts of traded goods in this category can be of extremely high value. Their demand depends highly on income levels. Especially for Russia, India and China, future demand for highly processed dairy food products or products that contain a high share of milk is therefore difficult to forecast because it is not clear how the distribution of income will change along with GDP growth.

World market prices for dairy products and domestic prices in many countries have been at an all time high in mid and late 2007 and early 2008. However, trends during spring 2008 indicate that at least within the EU this development has not continued at the same pace but rather shows signs of having been reversed. In recent months, world market prices for grains and oilseeds have risen dramatically. Since grains and oilseeds represent a major cost component in livestock production, and input prices as a whole have also risen sharply, farmers’ profit margins were eroded. This potentially slowed down investment into the dairy sector.

Several shocks around the globe are now seen to have created the recent shortage of milk. First, stocks had been low. These shocks have mainly been due to adverse weather conditions in major areas of production. In addition, production may have declined in some countries in favor of a shift towards arable land and crop production, partly stipulated by the demand for biofuels that are by many experts believed to have partly caused prices for feed grains to soar.

With a total output of about 670 million metric tons in 2007, global milk production is rising at moderate speed.

The leading exporting countries, Argentina, Australia, EU 27, USA, New Zealand and Ukraine currently produce about 40 percent of global milk and account for about 80 percent of global
exports. Therefore, the current world market situation in the short run is dominated by supply response and exports of these countries.

However, extrapolating from currently emerging trends, the FAO identifies Asia as the dairy market that is currently growing most dynamically in terms of production expansion, but also in terms of import demand due to rising purchasing power of consumers in China, India, Indonesia, Malaysia and the Philippines.

While Ukraine - currently a major exporter of dairy products - has recently failed to expand its production along FAO expectations, the Chinese dairy industry continues to grow much faster than anticipated by FAO experts in the past.

In South America, dairy production has been expanding in recent years but has recently been severely affected by adverse weather conditions. The FAO and the EU Commission partly attribute the rise in world dairy prices to these adverse shocks in South America and it remains uncertain how fast Argentina’s dairy industry is going to recover.

Africa is currently a subsistence producer of dairy products, neither exporting nor importing large amounts. South Africa and Kenya are exceptions in this regard and may increasingly produce for the emerging markets in urban areas on the African continent, while northern Africa, especially Algeria and Egypt, are expected to remain importers of dairy products now and in future and may, due to rising purchasing power, in the near future constitute an export destination for dairy products from Ukraine, but also from the EU.

On the other hand, especially for Africa the development of domestic policies has to be monitored closely because some countries have launched programs to increase domestic productivity of their dairy sectors, while others, especially least developed countries, may consider subsidization of their food imports in the near future and will thus create occasional export opportunities.

In the short run, world markets for dairy products will not only be determined by how much leading exporters may increase their quantities but also by the production levels in major importing countries. The FAO foresees a firm growth of Russian dairy production due to domestic programs that increase investment into dairy production. Exchange rates may play a crucial role in this regard because currencies effectively pegged or moving close to the US Dollar may continue to experience favorable export conditions. For these reasons, market and policy conditions are currently especially favorable for US dairy farmers, in absolute and in relative terms.

### 5.3 Projections of EU dairy markets

For dairy products, the EU commission, as well as the FAO and FAPRI, all project favourable conditions on world markets for the medium term. However, besides weather conditions that have recently decreased the quality of EU pasture, policy is perhaps the most important determinant of supply response: Output expansion due to favourable price incentives may be slowed in the short run due to output quotas. The EU has entered a gradual process of quota abolishment through quota expansion as a result of the CAP “Health Check” 2008. In the short run, intra-EU prices will therefore come down from high 2007 levels due to this quota expansion. However, according to forecasts of the Commission, this increase will, easily be absorbed by growing demand on intra-EU markets as well as rising extra-EU shipments. The Commission expects a boost especially in the production of cheese and SMP, while production of butter is expected to remain fairly constant.

Furthermore, the EU Commission expects European dairy farms to become more competitive through a gradual quota abolishment. It is likely that in fact many small farms will step out of
production after the quota does not generate a rent any more. This may decrease the demand for agricultural land thus helping full-time dairy farms to cut their costs for land-lease and to become more competitive. Contrary to the Commission’s view, however, there is evidence that the existence of the quota is not the only reason for slow structural change, e.g. in South West Germany or in France. Many dairy producers in these areas are already part time farmers and operate their farms based on sunk cost calculations. They do not plan to invest but at the same time do also not intend to step out of business before reaching the retirement age. According to estimates (e.g. see MORO, NARDELLA and SCKOKAI, 2005), about 25% of German milk production comes from such farms. But it is hard to predict whether and to what extend their structural change really follows rational economic decision-making rather than being shaped by persistent personal views and path dependencies interconnected with parameters set by the family farm household.

On the other hand, competitive farmers have mobilized large sums for buying additional quota in recent years. So with regard to future investments, they are not too flexible any more since this has tied up their capital. These farmers typically operate large dairy farms with modern technology, but also have to deal with a much larger level of debt than family farms with diversified income portfolios. Recent strikes of dairy farmers can be an indication that in times of both high input and high output prices, liquidity is a concern especially for farms with a low share of equity. This leads to the conclusion that overall European dairy supply will likely grow slower than potentially rising prices may indicate.

5.4 World dairy market outlook

Figure 4-1 summarizes various long term price projections issued by FAPRI and the OECD. The graph shows that these long term forecasts are all within a similar range and indicate a stable expected path of growing world market prices in the future. Within the next 2-3 years however, world prices are expected to decline compared to relatively high 2007 levels.

The fundamental assumptions behind these projections can be summarized as follows: The ongoing global ‘food crisis’ is expected to be solved soon after supply will have responded (e.g. weather in Argentina and Australia clears) and new 2008 harvests will take pressure from the market for feedstock. In addition, high prices for dairy products will trigger efforts of the food processing industry to substitute away from dairy products.

But in the long run, both institutions, the OECD as well as FAPRI, expect global demand for dairy products to grow slightly faster than global supply. Therefore, increasing price levels are projected. The FAO World Food Outlook is also in line with this reasoning, although this report does not present long term price projections itself. Instead, the FAO is rather concerned with changes of trade flows and quantities supplied and demanded in each region. The projected quantity changes, however, also correspond to the general conclusion that due to rising incomes and changing consumer preferences global demand is going to grow faster than global supply in the medium term.
The most important independent international organizations that monitor world dairy markets thus conclude today that in the medium term market conditions for dairy production will be favourable. But their projections differ on the projected length of the current peak price period. However, it is worthwhile to consider various trends in international dairy markets in more detail in order to understand where potential opportunities and potential competitors for Ukraine are likely to emerge.

Figures 4-2a and 4-2b: Projected trade in milk powder

Source: Own presentation. Data: OECD-FAO OUTLOOK.

Figures 4-2a and 4-2b shows that developed- and developing countries’ markets are projected to develop in opposite directions: The vertical axis on the left side depicts trade quantities between developing countries. The scale of the vertical axis on the right side of the graph presents projected trade for developed countries. This scale is roughly 1/10 of the trade volume for developing countries, implying that in comparison to the southern hemisphere, developed countries trade much smaller amounts of milk powder on the northern hemisphere. At the same time, the graphs show that trade for milk powder between developing countries is expected to
grow steadily, while developed countries’ trade will stagnate. Developing countries are going to trade about 10 times more milk powder than developed countries in the future with ever rising volumes (note different scales at vertical axis), while developed countries show a projected declining trade with WMP and constant quantities for SMP.

Figures 4-3a and 4-3b plot similar projections for the trade of butter and cheese. These figures reveal that butter trade among OECD countries is projected to remain fairly constant while trade with cheese will constantly grow. Within the next ten years, trade of cheese between developing countries is estimated to reach about the same volume as cheese trade among developed (OCED) countries. For butter, developed trade is also expected to grow at about the same pace as cheese trade.

**Figure 4-3a and 4-3b: Projected trade in cheese and butter**

Source: Own presentation. Data: OECD-FAO OUTLOOK.

Please note that these trade projections do not allow for a differentiation between individual product specifications. The projections cover quantities measured in metric tons, but do not take quality differences into account. With regard to butter and milk powder this does not play a role, but considering the cheese trade, distinctions should be made between high quality gourmet cheese brands and cheese used for pizza or other processed food products. This can alter the volume flow of cheese trade quite significantly and may have potential impact on the terms of trade between two countries with regard to import and export of products from the heterogeneous aggregate “cheese”.

In summary, current projections for dairy products expect a decline of peak prices after 2007 and a slow but constant recovery in the years afterwards. These medium term trend rests on the assumptions of growing income in many developing countries and an increase of world milk supply that is not quite as dynamic as the growth in demand. This is mainly due to the fact that growth in developing countries is projected to be much more pronounced in relative as well as in absolute terms. On the other hand, if growth in China or India would slow down or a wide range of consumers would increasingly become disconnected from rising income, these forecasts would turn into the opposite: A steadily growing supply slightly above the growth of demand.

Furthermore, it is interesting to anticipate where major growth opportunities are expected to emerge. Looking only at the largest importers and exporters in absolute terms may distract the view from emerging markets that may provide very attractive export destinations especially for Ukraine. In this context, chapter 2 has revealed that the EU trades cheese with a comparatively small number of countries, but has managed to deliver exports to almost any country in the world. Therefore, even for dairy products of low processing level and/or low unit value the EU
market must be considered a premium market with high entrance barriers due to policy, market competition and quality regulations.

**Figure 4-4a and 4-4b:** Projected changes of WMP trade volumes relative to the year 2007

![Projected Growth in the Volume of Whole Milk Powder Exports and Imports](image1)


On the other hand, especially emerging, fast growing markets are still open for new suppliers, even if the total quantity demanded by these markets might be small. In the following, the projections issued by FAPRI are utilized in order to gain understanding of the future development of world dairy markets in relative terms. The FAPRI projections have already been mentioned and it has been shown that FAPRI’s overall assumptions are in line with those undertaken by the FAO, the OECD and the EU commission. In order to understand, which markets might offer interesting export prospects, these FAPRI projections are set in relation to quantities traded in the year 2007. Figures 4-4, 4-5 and 4-6 therefore provide insight into the potential dynamics of regional dairy markets. Contrary to figures 4-1, 4-2 and 4-3, however, these figures do not take into account that absolute trade volumes of the countries displayed vary within a wide range and large countries in terms of GDP are not necessarily associated with large trade volumes.

**Figure 4-5a and 4-5b:** Projected changes of butter trade volumes relative to the year 2007

![Projected Growth in the Volume of Butter Exports and Imports](image2)


It has to be emphasized that there is a clear distinction between the growth prospects of a market and its overall size. The EU has frequently subsidized exports and therefore “bought” part of its market share on export markets. The moderate competitiveness of European dairy
farms in comparison to dairy farms located in countries such as Australia and New Zealand on the one hand and the huge demand on the internal EU market on the other, will likely cause EU dairy exports to stagnate or even decrease, especially since an elimination of European export subsidies is almost certain after 2013. Overall, the projections show that a number of transitional and developing countries only are just emerging as buyers and sellers for dairy products. Despite small size in absolute terms - the fast pace of projected growth for some of these importing markets will provide opportunities for emerging suppliers such as Ukraine. Compared to the current situation, the EU is even likely to become less of a competitor. According to the projections and contrary to the foreseen developments in the EU, the USA are expected to extend imports for cheese and milk powder. With regard to butter, the USA will remain an exporter in the short run. But this position is expected to turn around 2012. By then, the USA will likely be in a net import situation for butter although import quantities are expected to remain small.

The countries presented in Figures 4-4 to 4-6 constitute a selection of the ten to fifteen most important exporters and importers in the year 2017 according to FAPRI projections. Figure 4-4a presents the projected relative increase in milk powder exports, Figure 4-4b the corresponding graph for the most important importers expressed in relative terms. Figures 4-5a, 4-5b, 4-6a and 4-6b show exports and imports of butter and cheese, respectively.

Ukraine is projected to almost double its exports of milk powder and cheese within the next ten years, and exports of butter according to Figure 4-5a will be four times larger than in the year 2007. On the other hand, EU exports of milk powder, cheese and butter will remain fairly constant within the next ten years, with even a slightly declining trend for butter and cheese. Similar trends can be observed for other well established exporters of dairy products such as New Zealand and Australia. These countries are still expected to expand their exports; however, the projected pace of their export expansion is slower than export growth for Argentina, Canada and Uruguay.

**Figure 4-6a and 4-6b: Projected changes of cheese trade volumes relative to the year 2007**


On the import side, China is expected to be the market that will develop most dynamically within the next ten years. China’s demand for butter will grow at steady pace, while imports of milk powder and cheese are not expected to take off before the year 2012. Certainly, the quantities of dairy products demanded by China are also large (not displayed in Figure 4/4 to 4/6), but will for instance in the year 2017 only be about 1/3 of Japan’s total cheese imports and close to 1/4 of Russia’s cheese imports by then. Demand for dairy products in Russia will be growing at a much slower pace than China’s import demand. However, with regard to butter,
cheese and milk powder, the total Russian import demand in any year of the upcoming decade will be 3 to 4 times larger than China’s imports.
6 Catching potential opportunities: Ukraine as an exporter of dairy products

The analysis has shown that most long term projections currently are quite optimistic with regard to world dairy market developments. This is because demand is projected to grow faster than supply, especially in developing countries. With regard to EU policy, a further exposure of European farmers to world market conditions is under way. This, however, does not imply that the EU is likely to buy any shipment of dairy products of low price. Instead, the European dairy industry has been through a long period of restructuring and investments into quality standards that are supposed to protect consumers. Therefore, the EU dairy industry can be regarded as highly productive and highly competitive especially with regard to exports of processed dairy products and high value specialties. In the short run, however, the EUR/USD exchange rate as well as high prices for production inputs squeeze profit margin for farmers and may slow response to high prices. In addition, it is not clear, how fast structural change will react to policy changes in the EU after the “Health Check”. This may also imply that EU dairy production is not going to grow very fast in the near future.

With regard to Ukraine, all forecasts currently consider its dairy industry as a potential global player for all important dairy products. However, a closer analysis reveals that at least in recent years Ukraine has failed to match optimistic assumptions about growth in its dairy sector. At the same time, the Ukrainian dairy sector has currently no access to the EU market and may even face severe competition on foreign export destinations, e.g. from South American suppliers as soon as weather conditions there become more favourable again.

The EU as the largest single market in the world with policy makers and consumers being extremely concerned about food quality and food safety will under no circumstances and with no other non-EU country make any concessions with regard to the quality of its dairy product standards. This is even more the case since the EU dairy sector in principle is able to supply more milk than is currently consumed in the EU.

On the other hand, the EU will increasingly be interested in dairy product imports that fit into the supply and processing chain due to low price, or that constitute a special variety that is appreciated by EU consumers. Therefore, there is a high chance that the EU commission would support Ukrainian efforts to match EU import standards of dairy quality. The EU has published easy to follow guidelines (see chapter 2). In addition, EU food processing companies and retailers may demand additional certificates, as the experience with the new EU member states from Central and Eastern Europe has shown. This, however, can be expected to be solved on the commercial level and should be less of a concern for policy makers.

At the same time, Ukraine may find it profitable to diversify the structure of its exports. Asian markets are expected to grow fast in the near future. Especially China, Indonesia, and Malaysia offer interesting alternatives for Ukrainian dairy exports and are less demanding in terms of food security and quality issues.
References


