

# GLOBAL TRENDS IN MILK PRODUCTION AND TRADE: THE IMPACT ON THE EUROPEAN MILK MARKET

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**Abstract:** The extremely instable milk price development in the last decade has changed the production, investment volume and the trade positions in milk sector in many countries. The price growth on 30% in 2007 and fall in 2008, increased the risk especially for the producers with low technology, making small business in this sector unprofitable. This instability hardly affects European milk producers during the reduction of the EU protection of milk market. The goals of this paper are to eliminate the major reasons for the price instability on the global milk market, and to show how the changes in the global prices, production and trade impact the milk market in the European Union.

**Key words:** global trends, milk production, milk market

## Introduction

By September 2008, the FAO index of dairy product prices (base 1998=100) had fallen to 218, down almost 28 percent from its all time high of 302 in November 2007 (FAO, 2008). After the years of relative stabile development of global supply and demand on milk, the unexpected price fluctuations in 2007 and 2008 caused sufficient changing both in the world demand and in the production of milk, creating big gaps, which, in their turn, increased price instability. Since mid-1990<sup>th</sup> the world milk consumption is growing in average 10-15 million t milk per year, based on the population growth and increasing income in many countries (IFCN, 2008). Since 1980 the demand for the dairy products grew especially in Asian region from 32 kg per capita in 1981 to 64 kg per capita in 2007, the Asian consumers presented almost a half of the world demand for milk and milk products. Growing income and change in food composition in China, India and other Asian countries are the factors of the increasing demand (Table 1). The governmental support of milk consumption like school milk programs and new diary products supported this expansion (FAO, 2009). This growing demand and

higher prices created market opportunities for the local producers and in 2005 Asia became the world largest milk producer with grows 35% in 1997-2007.

**Table 1. Per capita milk consumption, milk equivalents, 1981 – 2007**

	1981	1990	2000	2007
World	86	80	104	113
Developed	222	180	235	248
Developing	35	40	56	68
China	3	6	11	22
India	50	63	79	
US	271	274	287	295
EU	Na	363	469	382

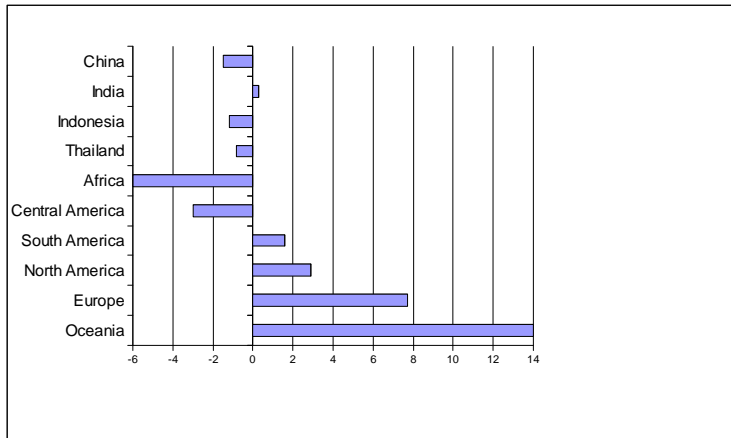
*Source: FAO (2009)*

The sufficient demand growth was the most important factor of the price increasing in 2007. Another factor was the price growth for crops in 2007, which reduced the milk production in the world and increased prices, since the consumers were not prepared in a short run to reduce their consumption reacting of higher price. The later reduction of the world consumption in 2008 was, however, the evidence of the high price elasticity of the global milk demand. The private consumers buy less milk and especially milk products because of the higher price, the industrial consumers switch to the substitutes, for example the milk fat could be replaced by plat oil.

The high prices in 2008 increased the global supply of milk. Both factors of the milk supply, as the number of caws and the milk yield, have been increasing during 2007 and 2008. In many developing countries during this time the investment in the milk production have been supported by local governments and because of this rapid grow it was even possible to increase a yield in a short time. One important factor of the supply growth in late 2007-beginning of 2008 was the export of the European intervention funds for milk and butter, which increased supply on the world market. In the terms of the liberalization of the world milk market it appears that the price elasticity of milk supply in the short-run is very high.

Reduction of global demand and growing supply of milk in 2008 created a sufficient gap between production and consumption and therefore led to decreasing of prices for milk since summer 2008. During period of higher prices in 2007 many countries used the new built capacities in dairy production especially for the export, with lower prices it became less attractive in 2008 to export, the part of the production returned on the domestic markets and additional lowered the prices. In 2008 the positions of the major exporters have been returned to the traditional exporters like Australia, New Zealand and USA. Asian market has imported in 2008 about 19 million tones dairy products, concentrated near by half

of the global milk trade. The net export position of Oceania is 14 mill t and of the EU is 7.8 mill t (FAO, 2009), which shows the dependency of the EU from the consumption and import demand in the Asian countries (Figure 1).



Source: FAO (2009)

**Figure 1. Trade Positions in Milk Trade, mill t**

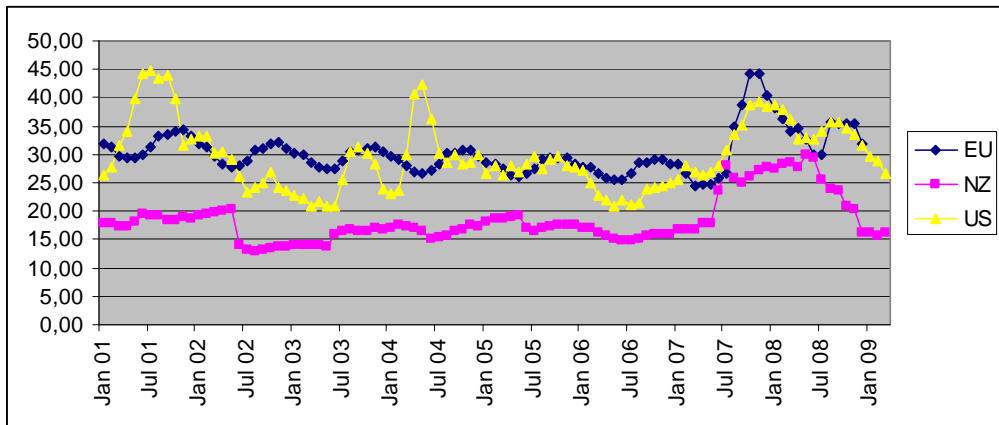
In spite of the temporary supply overhang, the world market is still not able to cover growing demand for milk and dairy products because of low productivity. For example, the average yield in Asia is still 0.91 tones per animal per year, while in North America in 2007 it was 9,01 tones. Asia has 52% of global livestock, but only 34% of the world production. Nearly 80 percent of overall milk production gains over the past decade were supplied by producers with two to five cows (FAO, 2009). Therefore it is to expect that the middle- and big sized farms would have he cost advantages for the next years and would be the major exporters of milk.

The costs of milk production differ within regions and between regions, the last research of IFCN shows significant cost advantages of larger dairy farms compared to smaller ones (IFCN, 2008). However, the crop and energy price growth in 2007 and 2008 contribute more to the costs of the larger farms then that in smaller farms and in some developing and transitional countries the smaller farms with self - production of feed became more attractive. This could decline the amount of milk production in the future in these regions and increase export chances for dairy producers in developed countries.

The political protection of the milk producers during the past five years in the EU and USA kept in 1990th domestic prices on a high level and created over-production in that regions. The liberalization of the milk market according to WTO agreements since 2000 increased the instability of prices, and pressure from

imported milk and dairy products. The milk production quota with guarantee price in the EU will end in the EU by 2015, continuously growing in the previous years in order to adjust the producers to the new market conditions. The result is sufficient overproduction in all EU-countries, because especially big companies tried to use the new expanded production rights, hoping on the high market prices for milk. The constant or in some of EU countries declining demand for milk is the reason for the fast growing overproduction and price decreasing. The higher prices in 2007 allowed for the EU to cut the export subsidies for milk, which was planned according to WTO obligations. As a result the European milk producers were facing in 2008 stronger overproduction and demand cutting, having no possibility to sell this overproduction on the world markets, because the world prices were still lower then that in the EU.

At the moment the marginal price covering the costs in the EU is about 25 Ct/kg, while in South America, Oceania, Poland it is below 17 US-\$/100 kg milk, in Argentina, India and Poland the larger farms can produce milk below 15 US-\$ per 100 kg milk (IFCN, 2009).



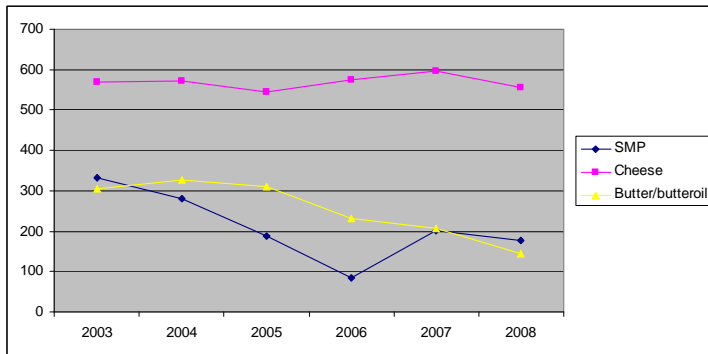
Source: LTO (2009)

**Figure 2. Milk price in the EU, New Zealand, USA, 2001 – 2009, monthly prices, Euro/100kg**

The milk prices in the EU in 2001-2007 had seasonal fluctuations with the general declining trend, showing the adjusting to the world milk prices. Since mid.-2007 the EU prices grew mostly and in August 2008 declined more then in two other main producing countries. So the price instability seems to be higher in the EU then that in other producing countries (Figure 2).

The bad economical situation due to lower prices for milk in 2008/2009 will affect primarily the small producers, which can not reduce the costs. The

European politicians have decided in 2009 after the protests of milk farmers in many EU countries to increase the direct support of the production, which obviously will increase the milk prices in the EU market. This would have similar effect as the protection policy in 1990<sup>th</sup>, when the overproduction has been sold on the world markets with export subsidy. The possible scenario for milk production in the EU is that under increased price uncertainty the investor confidence in the milk production will be lower and that the smaller farmers, having lower yield and fewer chances for the reduction of cost production will disappear from the market. At the same time, it is to expect the import grow, the investment in milk production made during the price shock of 2007 will allow the developing countries to produce more milk for export. The EU has lost already some positions in export in 2004 – 2008 (Figure 3).



Source: FAO (2009)

**Figure 3. EU25 and EU27 dairy product exports, 2003 – 2008, '000t**

German milk producers in February 2009 got only 24,4 Ct/kg, it is the lowest price since 1980. The world finance crisis weakens the milk product sector in the EU, because consumers in especially developing countries were not able to pay for the relative expensive European dairy products. The forecast of ZMP is that the milk production in 2009 would not grow, even if the producers' quotas will expand (ZMP, 2009). However, in the long run the growing demand for the dairy products would be the major factor of the price increasing; the FAO and the OECD estimated that prices of skim and whole milk powder between US\$3 000 and \$3 700 per tone over the next decade, which is 50- 90 percent higher than the previous five years' average (FAO, 2009).

It is to expect that the quality of milk in combination with low prices will be the most important factors of the global competitiveness of milk producers. The differences in the technology and market infrastructure in the EU countries will be

critical for the covering the milk demand with domestic supply and for the possibility to gain from the milk export.

## **Globalni trendovi u proizvodnji i prometu mleka: Uticaj na evropsko tržište mleka**

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### **Rezime**

Izuzetno nestabilne cene mleka u poslednjoj deceniji su dovele do promena u proizvodnji mleka, obimu investicija i poziciji ovog sektora industrije u mnogim zemljama. Porast cena za 30% u 2007. godini i pad u 2008. godini, su uticali na povećanje rizika pogotovo za proizvođače sa niskim nivoom tehnologije, čineći da mala gazdinstva ili preduzeća postaju neprofitabilna. Ova nestabilnost utiče i na evropske proizvođače tokom smanjenja zaštite ovog tržišta od strane EU. Cilj ovog rada je da utvrdi glavne razloge nestabilnosti cena na globalnom tržištu mleka, i pokaže kako promene u ceni, proizvodnji i prometu u svetu utiču na tržište mleka u Evropskoj Uniji.

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