



## Global Impact of Indian Dairy Industrial Growth

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### Introduction

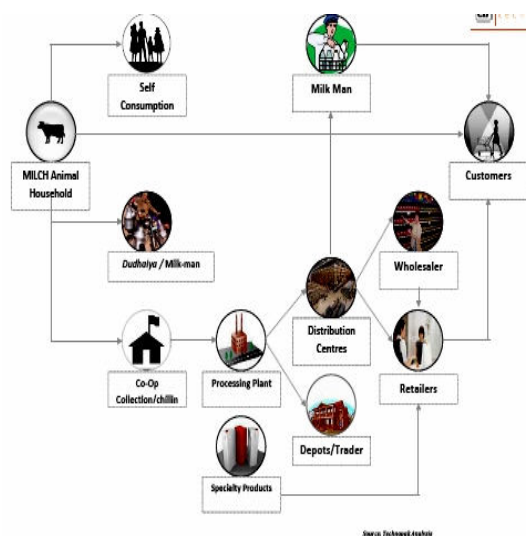
India is 'The Oyster' of the global dairy industry. It offers opportunities galore to entrepreneurs worldwide, who wish to capitalize on one of the world's largest and fastest growing markets for milk and milk products. A bagful of 'pearls' awaits the international dairy processor in India. The Indian dairy industry is rapidly growing, trying to keep pace with the galloping progress around the world. The liberalization of the Indian economy beckons to MNC's and foreign investors alike. India's dairy sector is expected to triple its production in the next 10 years in view of expanding potential for export to Europe and the West. Moreover with WTO regulations expected to come into force in coming years all the developed countries which are among big exporters today would have to withdraw the support and subsidy to their domestic milk products sector.

### Major Players in India

The packaged milk segment is dominated by the dairy cooperatives. Gujarat Co-operative Milk Marketing Federation (GCMMF) is the largest player. All other local dairy cooperatives have their local brands (For e.g. Gokul, Warana in Maharashtra, Saras in Rajasthan, Verka in Punjab, Vijaya in Andhra Pradesh, Aavin in Tamil Nadu, etc). Other private players include more than 2500 companies in India such as J K Dairy, Heritage Foods, Indiana Dairy, Dairy Specialties, Hutson Dairy etc. The major players are Amul, Britannia, and Dabon International dominating the market. Other major brands were Vijaya, Verka and Nandini (all brands of various regional dairy cooperatives) and Vadilal. The heavy advertising and promotions being undertaken by these new entrants is expected to lead to strong 20% growth in the segment. Amul has also become more aggressive with launch of new variants such as Mozzarella cheese (used in Pizza), cheese powder, etc. Milk Powder/Dairy Whiteners: Major skimmed milk brands are Sagar (GCMMF) and Nandini (Karnataka Milk Federation), Amul Full Cream milk powder is a whole milk powder brand. Leading brands in the dairy whitener segment are Nestle's Everyday, GCMMF's Amulya, Dalmia Industry's Sapan, Kwaliti Dairy India's KreamKountry, Wockhardt's Farm Fresh and Britannia's MilkMan Dairy Whitener.

### Emerging Dairy Markets

- Food service institutional market
- Defense market
- Ingredients market
- Parlour market



### Dairy Products

The term Indian Dairy Products refers to those milk products, which originated in undivided India. Flow chart of conversion of milk into traditional Indian dairy products-

MILK		
<b>Cultured</b>	<b>Condensed Acid</b>	<b>Precipitation</b>
<ul style="list-style-type: none"> <li>▪ Shrikhand</li> <li>▪ Ghee</li> <li>▪ Lassi</li> <li>▪ Kadbi</li> </ul>	<ul style="list-style-type: none"> <li>▪ Mishti dol</li> <li>▪ Rabri</li> <li>▪ Kheer</li> <li>▪ Khoa</li> <li>(a) Burfi</li> <li>(b) Pedha</li> <li>(c) Kalakand</li> <li>(d) Gulabjamun</li> </ul>	<ul style="list-style-type: none"> <li>▪ Paneer</li> <li>▪ Sandesh</li> <li>▪ Chhana</li> <li>▪ Rasgoola</li> <li>▪ Pantoda</li> <li>▪ Rasmalai</li> </ul>

### India's contribution to world dairy market

India today is the lowest cost producer of per litre of milk in the world, at 27 cents, compared with the U.S' 63 cents, and Japan's \$2.8 dollars. Also to take advantage of this lowest cost of milk production and increasing production in the country multinational companies are planning to expand their activities here. Some of these milk producers have already obtained quality standard certificates from the authorities. This will help them in marketing their products in foreign countries in processed form. While world milk production declined by 2 per cent in the last three years, according to FAO estimates, Indian production has increased by 4 per cent. The milk production in India accounts for more than 13% of the total world output and 57% of total Asia's production.

The top five milk producing nations in the world are India, USA, Russia, Germany and France. Although milk production has grown at a fast pace during the last three decades (courtesy: Operation Flood), milk yield per animal is very low. The main reasons for the low yield are-

- Lack of use of scientific practices in mulching
- Inadequate availability of fodder in all seasons
- Unavailability of veterinary health services

**Milk Yield Comparison**

Country	Milk Yield (Kgs per year)
USA	7002
UK	5417
Canada	5348
New Zealand	2976
Pakistan	1052
India	795
World (Average)	2021

Source: Export prospects for agro-based industries, World Trade Centre, Mumbai.

**What does the Indian Dairy Industry has to Offer to Foreign Investors?**

India is a land of opportunity for investors looking for new and expanding markets. Dairy food processing holds immense potential for high returns. Growth prospects in the dairy food sector are termed healthy, according to various studies on the subject. An entrepreneur's participation is likely to provide attractive returns on the investment in a fast growing market such as India, along with an export potential in the Middle East, Singapore, Malaysia, Indonesia, Korea, Thailand, Hong Kong and other countries in the region. The basic infrastructural elements for a successful enterprise are in place.

- Key elements of free market system
- Raw material (milk) availability
- Established infrastructure of technology
- Supporting manpower

**Demand for various types of cheese in the Indian market**

Type of cheese	% of total consumption
Processed	50
Cheese spread	30
Mozzarella	10
Flavoured/Spiced	5
Others	5

**World's Major Milk Producers (Million MTs)**

The industry is still in its infancy and barely 10 per cent of our total milk production undergoes organized handling. India's position in relation to milk producing countries of the world

Country	2009-10	2010-11 (Approx)	Country	2009-10	2010-11 (Approx)
India	71	74.5	Brazil	21	27
USA	71	71	UK	14	14
Russia	34	33	Ukraine	15	14
Germany	27	27	Poland	12	12
France	24	24	New Zealand	11	12
Pakistan	21	22	Netherlands	11	11
Australia	9	10	Italy	10	10

**Key driver outlook**

	Global economy	Global demand	Australian market	Global supply	Inputs	Exchange rates
Major Discussion points	Asian economies recovering faster than EU, USA and Australia. Asian countries lifting after economic slump. Modest signs of recovery in US and EU, but risks are still caught on downside. Stronger performance of Australian economy increasing the likelihood of further interest rate cuts.	International buyers returning to the market with increased activity, as commercial real estate has cleared and refilling of multiple pipelines begins. Consumer demand supported by lower retail prices, particularly in Asian markets. Signs of improved confidence patterns have emerged in large volume markets such as China, Russia, US and Europe.	Domestic reputation remains robust. Growth returning to normalcy in the supermarket (cheese sales). Consumers continue to seek value through private label offerings. Dairy product wholesale price trends have remained steady in recent months. Interest rates likely to continue rising, cutting off discretionary spending.	Market forces leading milk production growth around the world. Production growth has slowed in US, Brazil and many parts of Europe in 2010. Slowing rates of export product to government intervention stores. Existing government stockpiles provide an ongoing anchor on world market prices.	Grain prices continuing to trend down due to strong local crop prospects and large northern hemisphere harvests. Strong AUD pushing down import costs. Rising oil and fertilizer prices trend. Increasing interest rates will increase financing costs. State allocation on drought and Murray Systems increasing through to the end of 2010.	Australian dollar to remain high while economic out-performance the EU and USA. US dollar weak against most major economies increasing import affordability and supporting higher export offers from EU and NZ. Global financial institutions predict more cuts for AUD (and NZ dollar) but Australia banks are increasing 85-90 day term through to the end of 2010.

Impact on operating conditions or key driver status:  
 Positive: ↑ (Green), Steady: ↔ (Yellow), Negative: ↓ (Red)

**Potential for further growth**

Of the three A's of marketing - availability, acceptability and affordability, Indian dairying is already endowed with the first two. People in India love to drink milk. Hence no efforts are needed to make it acceptable. Its availability is not a limitation either, because of the ample scope for increasing milk production, given the prevailing low yields from dairy cattle. It leaves the third vital marketing factor affordability. How to make milk affordable for the large majority with limited purchasing power? That is essence of the challenge. One practical way is to pack milk in small quantities of 250 ml or less in polythene sachets.

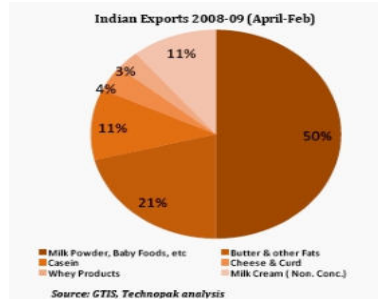
Export Potential: India has the potential to become one of the leading players in milk and milk product export. India is located amidst major milk deficit countries in Asia and Africa. Major importers of milk and milk products are Bangladesh, China, Hong Kong, Singapore, Thailand, Malaysia, Philippines, Japan, UAE, Oman and other gulf countries, all located close to India.

**India's exports of milk products**

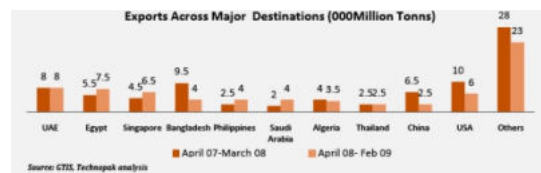
Description (Quantity, M T; Value, Rs. million)	1995-96		1996-97		1997-98	
	Quantity	Value	Quantity	Value	Quantity	Value
Skimmed milk powder	4,638.62	3,35.32	282.70	19.64	5.00	0.375
Milk and Milk Food for babies	8.27	2.019	111.37	4.27	11.00	2.02
Milk cream	332.23	28.04	1.00	0.084	-	-
Sweetened condensed milk	41.73	2.84	9.22	0.97	60.39	7.22
Whey	78.46	3.75	11.50	1.01	6.00	0.342
Chee/Butter/Butter oil	7,895.08	431.1	299.97	19.2	4,352.08	2,38.95
Cheese						
(a) Fresh	0.10	0.013	-	-	-	-
(b) Processed	5.67	1.20	2.1	0.375	22.10	2.19
(c) Other	66.64	8.35	36.78	0.69	24.84	4.55
Total	-	8,72.7	-	52.4	-	2,55.6

Source: www.opensecrets.org/industries

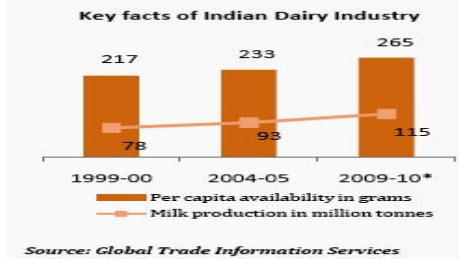
India is a net exporter of dairy products, export volumes of 2008-09 equating to more than 70,790 tons. India exports various categories of milk products including milk powders, baby foods, butter and other fats, casein, milk and cream, cheese, and whey products.



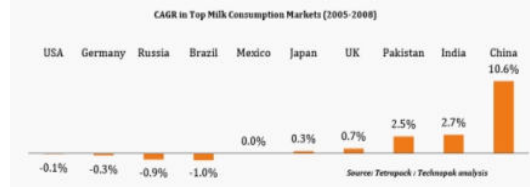
India exported more than 50 percent of its total dairy products shipments to the United States, Bangladesh, U.A.E., China, Egypt, and Singapore during MY 2008/09. The GOI has designated the National Productivity Council (NPC) and the Export Inspection Council (EIC), Ministry of Commerce and Industry, GOI as quality auditors for conducting periodic inspection of units registered under the MMPO to ensure compliance with sanitary, hygienic, and food safety measures. Indian imports of dairy products are not substantial in volume. The volume of imports during MY 2008/09 was approximately 9,130 tons.



Dairy production is an important direct and supplementary source of income for around 75 million rural families (mainly comprising small farmers and landless labourers), which accounts for around 98 per cent of total milk production. The top ten milk producing states of Uttar Pradesh, Rajasthan, Punjab, Andhra Pradesh, Gujarat, Maharashtra, Madhya Pradesh, Bihar, Tamil Nadu, and Haryana account for more than 80 percent of India's milk production.



Since 1999, the Index has found that India has produced more milk than any other country in the world and since 2006, milk production has increased by a CAGR of 4.3%. These high levels of consumption and production in the country are mainly driven by a population of 1.3 billion people, where milk is an integral part of their diet.



SWOT Analysis of Indian Dairy Industry

Strengths	Weaknesses	Opportunities	Threats
Demand profile Margins Flexibility of product mix Availability of raw material Technical manpower	Perishability Lack of control over yield Logistics of procurement Problematic distribution Competition	Value Export potential	Milk vendors Un-organized sector

The Govt of India has devised many central sector and centrally sponsored schemes for the development of dairy in India. The processing of the milk and milk products have moved to the purview of ministry of food Processing Industries (MoFPI), Govt. of India. The MoFPI also promotes dairy food processing under two schemes which are the Mega Food Parks scheme and Scheme for cold chain, value addition and preservation infrastructure.



New Challenges of Globalization and Trade

Liberalization - Perspective 2011, the NDDB has recently put in place Perspective 2010" to enable the cooperatives to meet the new challenges of globalization and trade liberalization. Like other major dairying countries of the world, the Indian cooperatives are expected to play a predominant role in the dairy industry in future as well. However, India is in the mean time, attaining its past glory and is once again becoming DOODH KA SAGAR. But, what percentage of this SAGAR is handled by the cooperatives - just a little over 7%. Since liberalization of the dairy sector in 1992, a very large number of private sector companies / firms have, despite MMPO, established dairy factories in the country. The share of the total milk processing capacity by private sector is 44% of total installed capacity of 73 MLPD (Million Litres Per Day) in the country. Therefore, the total share of the organized sector, both cooperatives as well as the private sector is barely 12%. According to the World Bank, India is the fourth largest economy in the world going by the purchasing power parity estimates. Further, India has been identified as among the first 10 emerging markets in the world. India has the vastest domestic market in the world with over one billion consumers - a majority of whom are vegetarians with drinking of milk as habit. The untapped potential of the dairy sector is immense and opportunity to set up a new dairy venture is great.

Policy Implications and Future Outlook

In order for Russia to improve its dairy processing productivity, major restructuring needs to take place. In sum, large/productive plants should expand, while small/unproductive plants should exit. Fortunately, the largest 72 plants (out of around 2,000 plants in Russia), which are located in major population centers, have the capacity to supply all the demand in Russia today. Simply by increasing the capacity utilization to 80% and eliminating excess workers, and shutting down existing small plants, we estimate that the current Russian productivity of 8% of the US level can rise to 58%. Capital expenditures required in these two steps will be minimal. In order to improve productivity from 58 to 70%, additional investment will be required; however getting to 58% should be the primary mid-term objective. As described above, barriers to increased utilization and layoffs in large plants, as well as barriers to exit of small plants, need to be removed for the Russian dairy processing industry to reach 58% of the US average. The main barriers for increased utilization and layoffs in large plants are: arrears from wholesalers; and local government interventions against layoffs. The main barrier to exit for small plants is the lack of bankruptcy enforcement.

Recommendations

- In order to manage the production risks faced by rural landless dairy farmers and to realize the potential of small-scale dairy production as a means to reduce poverty farm productivity has to be raised.
- Raising productivity of dairy farms and mitigation of their production risks requires the availability of improved breeding services, targeted preventive animal health care (specifically addressing foot-and-mouth disease and haemorrhagic septicemia) and better feeding strategies.
- Furthermore, access to formal credit at market interest rates would provide farmers with an alternative to having to accept loans from the milkman and thus increase their bargaining power in the market place.
- As long as small dairy producers are not an organized and active interest group, dairy and related sector policies will be driven by other actors who may have conflicting interests. Building the capacity of producers to act on their own behalf is therefore essential for improving poor producers' welfare.

- Competitiveness cost of production, productivity of animals etc. The demand for quality dairy products is rising and production is also increasing in many developing countries. The countries which are expected to benefit most from any increase in world demand for dairy products are those which have low cost of production. Therefore, in order to increase the competitiveness of Indian dairy industry, efforts should be made to reduce cost of production.
- Production, processing and marketing infrastructure If India has to emerge as an exporting country, it is imperative that we should develop proper production, processing and marketing infrastructure, which is capable of meeting international quality requirements.
- Focus on buffalo milk based specialty Dairy industry in India is also unique with regard to availability of large proportion of buffalo milk. Thus, India can focus on buffalo milk based specialty products, like Mozzarella cheese, tailored to meet the needs of the target consumers.
- Import of value-added products and export of lower value products With the trade liberalization, despite the attempts of Indian companies to develop their product range, it could well be that in the future, more value-added products will be imported and lower value products will be exported.

#### Conclusion

Globalization and Liberalization are the Mantras of the new economy today, which is now on the fast track. Industrial production is rapidly moving forward. The dairy industry is no exception. With the World Trade Organization (WTO) coming into effect, from 01 April 2009 and the imports and exports getting liberalized in the global economy, the dairy industry, which includes dairy products, faces both an opportunity for growth as well as a threat for its growth. The world trade in milk products is important as it accounts for around 25 per cent of the production of milk powder; the corresponding figure is however low (8 per cent) for butter and cheese. In the world dairy market, exports are dominated by the US, New Zealand, EU, and Australia. India also exports a sizeable amount of certain milk products like sweet meats, butter milk and whey. This is often constrained by the arbitrary quality standards of some developed countries. Selected developed countries, especially the EU and the US by careful orchestration of their domestic and trade policies continue to distort the world dairy market. At the aggregate level India has been a net importer of milk products during a large part of the reference period, though it has emerged as a net exporter in certain years. The reason for this fluctuation may primarily be attributed to the world prices of milk products. This is further reinforced by the trend in protection coefficients of milk products.

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