Trade Performance of India in Livestock Products under WTO Regime

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Context

The National Agricultural Policy (NAP) document released in July 2000 relies heavily on 6-8 percent growth rate in Animal Husbandry sector to achieve the targeted growth rate of 4 percent for the Agriculture sector as a whole since the present rate of growth in crop production is well below 2 percent (GOI, 2004). The 10th Plan Approach Paper also stresses on the significance and importance of food and nutritional security through diversification of agriculture in animal husbandry and fishery sector. India produced around 80 million tonnes of milk in 2000-01. However, the organized sector in our country not even handled 10 percent of this total milk production (NDDB, 2001). The consumer prices of milk in India are comparable to some of the lowest in the world due mainly to un-remunerative and unattractive price offered to our dairy farmers for their milk production. Our purchasing power, and the demand for milk are not able to expand in line with the increasing milk production (Shah, 1997 and 2006).

Ironically, though dairy industry is the single largest contributor to India's GDP and involves over 80 million small farming households with its profound social impact, the opening up of the Indian market to an influx of foreign goods, however, has raised much concern about the livestock sector of India and the status of Indian dairy industry in the era of WTO regime. The subsidies provided by the developed countries to their dairy farmers have helped them to lower their price of dairy products and consequently influencing the world prices.

It is against this backdrop that the paper attempts to assess not only the significance of livestock sector in the national economy but also examines the likely impact of trade liberalization under WTO regime on the domestic market. The paper pins attention to various issues that need to be taken cognizance of to save livestock sector of India in the era of WTO regime in which the cattle in the rich countries are pampered at the cost of several hundred million farmers in the developing world. It is perceived that free world trade regime ushered in by the WTO not only poses many threats but also opens up many opportunities for the livestock sector of India. This is certainly a point that needs to be investigated in the today's WTO regime.

Plan Allocations for Livestock Sector

India has shown an up-trend in plan allocations for the development of livestock sector. Government outlay on development of livestock sector rose dramatically from a mere 905 million rupees in the Third Plan (1961-66) to the Sixth Plan (1980-85) total outlay of 3,966 million rupees on animal husbandry and dairying, of which 2,983 million rupees was meant for

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expenditure on dairying alone. During the Seventh Plan (1985-90), 3,028 million rupees was earmarked for dairying out of a total outlay of 4,679 million rupees for animal husbandry and dairy. Expenditure on dairying increased sharply during the Eighth Plan (1992-97). Of the total outlay of 13,000 million rupees for animal husbandry and dairying, the expenditure on dairying was nearly 63 percent. Though outlay on development of livestock sector increased to 15,456 million rupees in the Ninth Plan (1997-2002), only 30 percent of the total outlay was earmarked for dairying and the remaining for the development of other animal husbandry activities. The outlay for dairying in the Ninth Plan was substantially lower than the outlay for dairying in Eighth Plan but higher the Seventh Plan. Such increased allocation in plan outlay, leaving Ninth Plan aside, is a reflection of the importance of dairying in government's overall policy encompassing country's agricultural economy. Since dairying has already turned into viable and well developed sector, efforts of the government is now fully geared to strengthen other activities of livestock sector. As a result of concerted efforts towards total dairy development, dairy industry in India has moved from dependence to self-reliance with total annual output of milk touching nearly 90 million tonnes of late that is valued at much higher than any other agro-based commodity produced in India.

Value Addition

In the current context of liberalization and increasing global integration of economies, it would be unfair to compare livestock sector of India with that obtaining in most of the vastly modern and technologically far advanced western bloc countries in terms of a produce that is globally competitive. However, despite several weaknesses in terms of adoption of improved technique, the share of livestock in gross output of agriculture and allied activities has been showing a growing trend due mainly to dependence of millions of Indian farmers on this secondary remunerative source of agricultural income. The development of animal husbandry and dairying over time has resulted in significant expansion in value of livestock products in relation to value of agricultural products produced in India. The estimates relating to value of agricultural products and livestock products at different points of time encompassing the period between 1970-71 and 2003-04 are provided in Table 1.

At current prices, the value of livestock products produced in the country in 2003-04 was estimated at Rs.1,64,509 crores with milk and milk products accounting for 67 per cent share in this value. It is to be noted that the value of livestock products produced in the country has been steadily growing over the past three decades. The increase in this value was estimated at about 231 per cent between 1970-71 and 1980-81, 297 per cent between 1980-81 and 1990-91, 233 per cent between 1990-91 and 2000-01 and about 18 per cent between 2000-01 and 200-04. Not only this, the share of livestock products in total value of agriculture and allied activities was also estimated to be growing steadily from 15 per cent in 1970-71 to 26 per cent in 2003-04. Even at

constant prices, the value of livestock products in relation to total value of agriculture and allied activities has grown up over time.

Table 1: Value Added from Agriculture and Allied Activities in India: Current Prices

(Rs. crores)

Sr. No.	Items	At current prices				
		1970-71	1980-81	1990-91	2000-01	2003-04
1.	Value of Output	20730	56875	170698	518693	635104
	1.1 Agriculture	17531	46278	128657	378712	470595
	1.2 Livestock	3199	10597	42041	139981	164509
	Share (%)					
	a. Milk Groups	67.75	64.96	65.43	67.50	66.92
	b. Meat Groups	9.20	12.25	15.48	15.43	15.99
	c. Hides & Skins	2.29	2.36	1.66	1.84	1.83
	d. Eggs	6.63	3.31	3.11	3.17	2.93
	e. Wool & hair	0.61	0.46	0.34	0.23	0.18
	f. Dung	9.99	12.76	10.25	8.38	7.97
	g. Other Products	1.60	1.49	2.06	1.09	1.30
	i. Increment in Stock	1.93	2.41	1.67	2.36	2.88
2.	Less Inputs	4089	15247	38971	107020	127365
3.	Gross Domestic Product	16778	42466	135162	423523	521538
4.	Less Consumption of Fixed Capital	424	2418	7903	22083	27293
5.	Net Domestic Product	16354	40056	127259	401440	494245
6	Share in Value of Output					
	- Agriculture	84.57	81.37	75.37	73.01	74.10
	- Livestock	15.43	18.63	24.63	26.99	25.90
7.	Percent increase of 1.1 over					
	- 1970-71	-	163.98	633.88	2060.24	2584.36
	- 1980-81	-	-	178.01	718.34	916.89
	- 1990-91	-	-	-	194.36	265.77
	- 2000-01	-	-	-	-	24.26
8.	Percent increase of 1.2 over					
	- 1970-71	-	231.26	1214.19	4375.77	5042.51
	- 1980-81	-	-	296.73	1220.95	1452.41
	- 1990-91	-	-	-	232.96	291.31
	- 2000-01	-	-	-	-	17.52

Source: Estimates are based on figures Compiled from National Accounts Statistics, Central Statistical Organisation, Ministry of Planning and Programme Implementation, Government of India, 1982, 1996 & 2005

The constant price estimates show the share of livestock products in total value of agriculture and allied activities to grow from 19 per cent in 1980-81 to 28 per cent in 2003-04. Both at current and constant prices, the increase in value of agricultural products produced in the country has been slower than increase in value of livestock products, particularly between 1970-71 and 2000-01. This is an indication of growing importance of livestock sector in overall agricultural development in the country.

Although India has huge livestock population, in terms of trade it stands insignificant in the world trade of livestock products. However, since the past trend indicates a possible exportable surplus of livestock products, the emergence of India as an exporting nation of livestock products in the era of liberalization is sure to upset the traditionally exporting block of nations in these products. It is also widely believed that with the ushering in of the agricultural policy reforms in major industrial countries, the demand for livestock products from developing countries, like India, will get a real boost.

The adoption of several liberal policy measures by the Government in more recent times and the application of scientific production techniques have boosted India's livestock production. However, the point that merits consideration is how did the structure of livestock product trade of India changed over time and what future prospects India holds in the export trade of livestock products in the light of the rapidly changing world market conditions and in view of the various trade policy measures adopted by the various developed and developing nations.

Livestock Products Trade of India

Exports of various livestock products have been given due priority in various trade related policies that were initiated by the Government of India during the era of liberalization and opening up of the national economy to the international market. The major thrust has been on genetic up-gradation of livestock to improve the productivity and production of major livestock products. To achieve this objective, emphasis is placed on development of requisite infrastructure, feed management, and better health services (Government of India, 1999). A provision of financial assistance to the tune of Rs.465.69 lakhs was made under the central sector scheme "Development of Infrastructure and Technology for Export – Oriented Livestock Product Units" during the Eighth Plan period. The assistance was provided to one unit each in Utter Pradesh and Punjab (Ministry of Information and Broadcasting, 1999).

The concerted efforts made by the government in the past and in more recent times with increasingly greater significance accorded to livestock sector to achieve the desired level of growth in agricultural sector have certainly boosted the Country's exports of various livestock products to newer heights. Though over the past two decades India has been net exporter of meat and meat products with negligible dependence on import trade of these products, the scenario obtaining in terms of export trade of milk and milk products during this period is not very encouraging. Despite the fact that India's dependence on import trade of butter, ghee from cow milk, cheese and curd animal fats, etc. has come down sharply over the past two decades in the face of rise in export trade in the same, the trade balance of India in these products remains negative due to higher value associated with imports as against export (Table 2). Similarly in the case of animal fats and hides and skins the net exports are negative. India's significantly greater dependence on import trade of hides and skins has led to negative trade balance in this case. India shows nearly 28 per cent annual growth in hides and skins imports as against only 7 per cent annual growth in the export trade of the same between 1981 and 2001. However, India is noticed to be net exporter of eggs as the growth as well as value of export trade of the same is significantly higher than its import trade. Another interesting feature of India is the export trade in meat and meat products. Among various meat and meat products exports from India, buffalo meat accounts for nearly 90 per cent share. The import trade of India over the past two decades in meat and meat products has been negligible. As a result, net export of India in meat and meat products is not only positive but significantly high, which has been growing at the rate of 14 per cent a

year between 1981 and 2001. Interestingly, until the early nineties India's trade balance in milk equivalent as well as in milk condensed, dry and fresh was negative since import trade of the same was much higher as compared to their export trade. However, this trend was seen to reverse in the late nineties when India's trade balance in milk equivalent as well as in milk condensed, dry and fresh turned positive due significantly higher value associated with export trade of the same as against their import trade. The estimates presented in Table 2 are concomitant of the fact that in the era of WTO regime India faces significant threat in the case of import trade of some of the dairy products like butter, ghee, cheese and curd, animal fats and some other livestock based products like hides and skins.

Table 2: Export and Import Trade of India in Livestock Products

(in '000' US $)

Exports/ Imports	Milk Equivalent	Milk Condensed, Dry & Fresh	Butter	Ghee from Cow Milk	Cheese & Curd	Animal Fats	Hides & Skins	Hen Egg	Meat @ Products (Buffalo)
Export									
TE 1983	1525	333	1186	1170	19	-	374	2526	37333
TE 1993	3910	2545	1270	1251	8	5	653	4197	72244
TE 2001	45361	20470	5127	4713	304	628	730	12477	224270
CGR (%)									
- 1981 -1990	0.90	7.06	-3.08	-4.57	2.38	-60.34*	-10.93	-14.02	7.89*
- 1991 - 2001	29.92*	20.09	16.85*	15.93*	56.12*	50.32*	-4.52	18.14*	18.77*
- 1981 - 2001	18.35*	20.73*	5.96*	5.65*	12.12**	-11.42	7.27	19.84*	14.17*
Imports									
TE 1983	132054	74009	57973	47975	72	49610	1552	11	-
TE 1993	11701	8555	2976	2976	71	295	24930	-	-
TE 2001	20265	9487	9557	9543	958	893	64299	64	-
CGR (%)									
- 1981 -1990	-25.02**	-21.67**	-48.23*	-48.11*	-0.94	-52.49*	56.64*	1.14	-
- 1991 - 2001	1.37	-7.53	16.32	16.29	35.14*	14.61*	12.15*	11.40	-
- 1981 - 2001	-13.63*	-18.31*	-9.96	-8.34	10.82*	-10.76	27.50*	1.51	-
Net Exports/ Trade Balance									
TE 1983	-130529	-73676	-56787	-46805	-53	-49610	-1178	2515	37333
TE 1993	-7791	-6010	-1706	-1725	-63	-290	-24277	4197	72244
TE 2001	25096	10983	-4430	-4830	-654	-265	-63569	12413	224270

Source: Computations are based on figures obtained from Occasional Paper, NABARD and FAO Trade Yearbook

Note: * - significance of growth rate at 1 per cent level of probability

** - significance of growth rate at 5 per cent level of probability

@ - Buffalo meat accounts for nearly 90 per cent in total meat and meat products exports of India

Despite the fact that WTO framework is based on free trade, European Union along with United States by passed and openly violated their commitments to WTO. For instance, New Zealand Dairy Board dumped a large quantity of butter oil into India at price below $1000 per ton, though the prevailing international price is around $ 1300 per ton. New Zealand's butter oil was made available at Rs.64.54 per kg that stood cheaper by Rs.15 a kg as compared to prevailing international prices of Rs.87.40 per kg. Consequently, domestic prices of butter oil crashed by 10 15 per cent as the recent import was in the range of Rs.100 to Rs.120 per kg. Though consumer gained from this situation, the Indian producers were the worst affected and faced the music of cheap imports.

Trade Distortions

One of the important elements of globalization is the liberalization of international trade. Increasing flows of livestock and livestock products, including capital, exchange of information, technologies, increasing standards and changes in sectoral structure towards concentration and integration are the major components of globalization in the livestock sector (FAO, 2005). Of late the distortions in global livestock trade are taking place due to subsidized production of livestock products in EU and USA. These subsidized livestock products are exported in the world markets much below their true cost of production (Sharma et. al. 1996; Williams et. al. 1995, 2004). This coupled with trade barriers, restrictive trade policies and stringent health and sanitary standards restrict many producers in developing world to enter in higher priced international markets (Parthasarathy Rao et. al. 2005).

In the dairy sector, the subsidized exports of EU have adversely affected the dairy industry in India, Brazil and Jamaica. For instance, India imported over 1,30,000 tonnes of EU's highly subsidised skimmed milk powder in 1999-2000, which was the outcome of Euro 5 million export subsidies extended by them that works out to approximately 10,000 times the annual income of small-scale milk producer (Sharma, 2003). Further, due to butter export subsidy paid by the EU, butter oil import in India has grown at an average rate of 7.7 per cent annually. This trend has already depressed prices of ghee in the domestic market. Incidentally, despite being the largest producer of milk in the world, India does not provide any subsidy for the dairy sector.

Notably, in India milk is produced by small farmers belonging to remote areas and processed in plants owned by cooperatives, whereas in EU countries and New Zealand there has been different concept where there stand factory style operations of milk production and squeezing their cows poses a great threat of dumping excess production at lower rates in rest of the world (Gupta, 2001). Since under WTO provisions, there has been greater emphasis on liberalizing trade and government policies to enhance world import demand for dairy products, commitments on market access, reduction of domestic support and subsidies on exports for the removal of distortions in the domestic market, the consequent effect or pressure will be on small farmers, particularly on women.

Although agriculture is characterized by significant levels of government support in many developed countries subject to reduction in commitments under the AoA, these countries continue to support their domestic agriculture due to several loopholes and clauses in the AoA. The OECD countries exercise support to their agriculture to the tune of $ 257 billion with the average Producer Support Equivalent (PSE) to the extent of 32 per cent (Table 3). Among various livestock products, the highest PSE was noticed for milk (49 per cent), followed by mutton (42 per cent), beef (35 per cent), pig meat (21 per cent) and poultry meat (17 per cent). Since the chief exporters of dairy and meat products are OECD countries, their high level of protection to these commodities has a large distortionary effect on world trade (Gulati and Narayanan, 2003).

Table 3: Support to agriculture and producer support equivalents for livestock products in OECD countries, 2003.

Commodity	US	EU	OECD
Support to agriculture (US $ million)			
Total agriculture	38878	96549	257285
Livestock	10992	17943	47396
Milk	1197	20389	33598
Beef	367	4736	11032
Pig meat	677	3093	6632
Poultry meat	46	3820	5122
Mutton	166	105	1132
Eggs			
Producer support equivalent (%)			
Total agriculture	18	37	32
Livestock			
Milk	45	51	49
Beef	3	77	35
Pig meat	4	24	21
Poultry meat	4	37	17
Mutton	12	58	42
Eggs	3	2	5

Source: Parthasarathy Rao et. al. (2005)

With the implementation of AoA commitments without any bias it should lead to reducing support to agriculture in countries with high levels of support, which consequently should lead to curtailing protection in those countries and giving opportunity for exports of production where the support levels are lower or negative. Perhaps this will lead to increase world market prices for primary commodities that include livestock products (Diao et. al. 2001).

Though initially there stood no threat as world prices for milk and milk products were ruling high, in due course of time, however, many developed nations exerted pressure on their governments to provide subsidy to dairy farmers that helped them to reduce price of their dairy products and consequently influenced the world market prices. Obviously, this provided ample opportunities to the traders to import cheaper milk products with the goal of earning higher profit margins, perhaps at the cost of Indian dairy farmers. This is the plight of Indian dairy farmers in the WTO regime and as long as we continue to remain a member of WTO the threat will continue to bother us. There is hardly any time for Indian dairy farmers to face the challenges of imported milk and milk products under WTO regime and our farmers are yet to be fully geared up to face the situation or challenges arising in the era of WTO regime.

Domestic Price Trends

In the aftermath of liberalization, conversion of surplus milk to powders helped development of milk production activity in India. Purchase of surplus milk during flush season and conversion to milk powder for recombination during lean season not only formed a major milestone of our development strategy but also helped in expanding market and maintaining a pull on production. In the face of fast changing domestic and international market conditions, taste, preferences and availability of products in processed form, etc., emphasis of late is on meeting the growing market demand for milk powders, butter, ghee, cheese, and other dairy

products. Consequent upon rise in demand for products in processed form, the wholesale prices of dairy products have grown faster than wholesale prices of milk and all-commodities (Table 4).

Table 4: Wholesale Price Indices of Dairy Products, Food Articles and All-Commodities of India (base 1981-82 = 100)

Product	1990-91	1992-93	1995-96	1997-98	1999-2000	ACGR (%)		
						1991-95	1996-2000	1991-2000
Milk	209.2	264.8	313.8	348.6	403.2	9.86	6.90	6.86
Tinned MP	203.6	305.2	322.2	365.9	442.7	12.00	8.31	7.83
Skimmed MP	178.6	289.9	344.1	372.0	385.6	8.96^{NS}	2.12^{NS}	8.02
Baby food	179.5	211.4	262.0	380.2	423.1	4.89	12.85	10.96
Butter	216.7	262.6	371.1	400.6	452.1	8.66	5.40	8.89
Ghee	188.7	239.1	325.2	342.7	400.4	10.88	5.91	8.35
Cattle feed	155.0	195.8	247.5	289.2	335.5	9.40	7.39	8.72
Fodder	224.4	245.4	326.3	417.3	428.1	4.67^{NS}	7.24	8.30
Food Articles	200.6	271.0	335.7	388.0	457.7	11.10	8.13	9.08
All-commodities	182.7	228.7	295.8	329.8	383.1	10.43	5.37	7.87

Source: Computations are based on 'Basic Animal Husbandry Statistics, 2002', Department of Animal Husbandry and Dairying, Ministry of Agriculture, Government of India, New Delhi

Note: @ - all growth rates are significant at 1 per cent level of probability
NS - growth rates not significant at one per cent level of probability

With 1981-82 as the base year, majority of milk and milk products listed in Table 4 showed higher wholesale price index (WPI) as compared to WPI of all-commodities during the entire period between 1990-91 and 1999-2000. Interestingly, while fluid milk, tinned as well as skimmed milk powder, butter and ghee produced in India showed higher growth in their WPI during the first half of the 1990s, this growth in WPI was faster for baby food during the second half of the 1990s period.

In general, not only growth in WPI with respect to baby food was higher than growth in WPI of all commodities but also all food articles put together produced in India during the period between 1990-91 and 1999-2000. The trends in WPI with respect to inputs such as cattle feed and fodder were in tune with rise in WPI of milk and milk products. The rise in milk production came about through productivity enhancements, which in turn was due to greater expenditure made on feeds and fodder owing to rise in their costs. The growing trends towards crossbreeding and greater significance accorded to high yielding animals could be the reasons for such relative trends with respect to WPI of milk and milk products and feeds and fodder.

Conclusions

Despite constraints like rearing of livestock under sub optimal conditions due to low economic status of livestock owners, India has now become the largest producer of milk in the world. The development of Indian dairy sector is an unprecedented success story as it is based on millions of small producers. Government of India is making concerted efforts to raise the per capita availability of milk through increase in productivity of milch animals. Though India does not want to leave any stone unturned insofar as her presence in international trade of milk and milk products is concerned, the liberalization of markets within the WTO framework, especially due to the export subsidies indulged in by OECD countries, now seen to be threatening the Indian

dairy sector. In the WTO regime, surging imports have not only affected farm incomes but also employment in many developing countries. Consequent upon cheap imports and absence of adequate protection measures, safeguarding income and livelihood of poor farmers have emerged issues that need to be addressed by policy makers. As for scope for the expansion of Indian dairy industry in new liberalized trade regime is concerned, it has been argued by Sharma and Sharma (2002) that, in general, the Indian dairy sector would be competitive only if the export subsidies on dairy products are abolished. In more relaxed market environment, the real challenge posed before Indian livestock sector would be in terms of Sanitary and Phytosanitary Measures (SPS), Agreement on Technical Barriers to Trade (TBT) and animal welfare related issues. With a view to meet these requirements - both domestically and in the world markets - modernization of supply chain encompassing producer as well as consumer is the need of the hour.

Undoubtedly, India is already price competitive in the world market and when subsidies from competitive producers like USA and EU countries are removed, the situation will make India more price competitive. In case India is not able to capture the world market in the event of removal of subsidies from the modern bloc countries, the other competitors like Australia and New Zealand would capture this market and enter in a big way to flood markets with their dairy products, making us loosing our competitiveness and a great opportunity in the new trade regime.

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