

**Title:** Policy interventions for mainstreaming smallholder milk production - value chain analysis of the dairy sector in India

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## **ABSTRACT**

Milk production in developing countries is dominated by small milk producers. In India, small and marginal farmers contribute the highest (68 per cent) to the total milk production. However, the scale of milk production per household is very low; 63 per cent households producing less than or equal to 2.75 litres of milk per day (BIRTHAL, 2008). As the consumer preferences and market forces are playing greater role in determining the scale and kind of production, marketing and processing, mainstreaming of small milk producers will ensure livelihood, nutritional and food securities to this vulnerable section of the society.

The paper applied value chain analysis to the Indian dairy sector using the approach taken at Institute of Development Studies at University of Sussex, Kaplinsky and Morris (2001) & Schmitz (2005) to identify policy interventions. The value chain approach provides basic understanding needed in designing and implementation of appropriate development programs and policies to support smallholders' market participation (Rich et al., 2009). The analysis helps policy maker to (i) identify exogenous variables to stimulate the desired changes, (ii) determine competitiveness and power exercised by different players and (iii) understand the complexity of inter-linkages, in the value chain. The study combines the qualitative and quantitative analysis using data collected from earlier studies, reports and informal interviews.

The major policy interventions which emerged from value chain analysis are related with following major heads:

1. Strengthen milk production capacity of smallholders: Dairy production and consumption improve overall welfare of the small milk producers by addressing their income, employment and nutritional requirements. It, also, performs input and asset functions (Rangnekar, 2006). For dairy activities, because of poor socio-economic conditions, smallholders depend heavily on public veterinary infrastructure and input support services (credit) instead of the fact that the private veterinary services had mushroomed in the past especially in more dynamic regions like Punjab & Haryana. The public policies targeted at increased investment on livestock infrastructure and services, smallholder milk production system research and financial facilities will improve milk production capacity of the smallholders.
2. Bringing under the ambit of organized channels: The institutional support which enables small holder to be the part of organized channels (contractual production, cooperatives, collective marketing and processing) need to be strengthened to realize the long run benefits from dairy industry on sustainable basis. Policy recommendations addressed to deliver on the failure of these institutions are (a) avoid non-dairy farmer representatives and government control in cooperatives, (b) strengthen vertical integration, (c) regulate contractual and collective agreements and (d) enlarge product mix to take advantage of price and season effects.
3. Transportation and handling of milk: The policy issues are related to reduction of high transactions costs involved in market participation of smallholders (Staal et al., 1996). The analysis recommends better institutional support, improved milk storage and transportation facilities to avoid milk losses and quality deterioration (which are approximately 3%). Informal channels have a greater market penetration and offer add-on services to the small milk producers. Milk vendors exercise more power than cooperatives and contract farming on small milk producers in marketing of milk due to greater intimacy, flexibility and meeting financial requirements of the farmer.
4. Quality and demand specific production: Small producers need to capitalize niche market by catering to the specific demand for milk like fresh, organic, low fat milk, etc. These production systems need to be standardized and supported. Benefits of Indian consumers' preference for fresh milk directly flow to small milk producers. Policy targeted at strengthening of fresh milk marketing with added attributes (organic, cow/buffalo/goat milk) will help the small producers. This advocates policy intervention on supply chain management of fresh milk, its retailing and direct communication between the end users and producers.

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