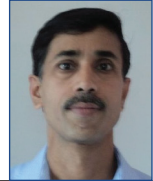


The Milk Producers' Organization and Indian dairy sector - a strategic alignment



Avijit Sarkar* and Avijan Dutta

Abstract

The needs of the Milk Producers' Organization are achieved by strengthening the scattered and poorly organized Indian milk producers, who lack access to resources and services. In fact, the Milk Producers' Organization has emerged as an interface between the business environment and individual milk producers through forward and backward linkages, while facilitating the strength of collective action, bargaining power and economies of scale. It has thus responded appropriately to the economic and socio-cultural needs of producer members and surrounding entities. The National Accounts Statistics (2020) of India estimates that the contribution of livestock in total agriculture and allied sectors Gross Value Added (at Constant Prices) has reached to 28.63 per cent (2018-19) which again shows the importance of the Milk Producers' Organization in a populous country such as India. The Organization extends its assistance in the form of financial support, technical inputs, milk productivity, quality produce, managing value chains, access to market actors and handling environmental and business regulation. This review paper outlines the key viewpoints and aims to explore how the Milk

Producers' Organization has built capabilities and optimized capacities in the existing scope and challenges of the Indian dairy sector. The livestock sector supports the livelihood of approximately 20.5 million people in India. India's milk production is at 4.8% CAGR as opposed to 1.8% CAGR of global milk production. However, the Organization faces conflicting areas of interest, such as social concern and business demands and this ambivalence necessitates enabling policy and professionalism to steer organizational growth and sustainability. In view of the globalized business environment, the Milk Producers' Organization has taken on the responsibility to compete both on the domestic and global markets. In view of emerging international trade practices, further study is required to establish mechanisms to deal with Sanitary and Phytosanitary measures. A co-operative business model can be further explored with additional utilization of bovine manure and unproductive bovines to re-establish a more cost efficient model to deal with global price levels of milk and dairy products.

Key words: *collective action; dairy producers; sustainability; value chain*

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Introduction

Agriculture and the allied sector is the backbone of the Indian economy. The contribution of agriculture & allied sector is 15.30 % to national GDP out of which livestock sector alone contributes 3.61 % (2006-07). Livestock sector is the largest contributor (23.6%) to GDP of agriculture & allied sector (2006-07). This is followed by rice (at 14.4%) and wheat (at 8.7%) production (1998–99) (Source: National Accounts Statistics-2014, Central Statistical Organisation, Govt. of India). Two-thirds of the rural population is dependent on the livestock sector. Employment generation from this sector is around 8.8% of total population. One-third of the gross income of rural households is generated from milk production (Chellappa and Haran, 2018), and accordingly, the dairy industry supports both livelihoods and sustenance (Jaiswal et al., 2018). The annual potential of employment generation from the dairy sector is around 2 crores, which is significant in India in view of the massive unemployment. This sector supports the livelihood of around 6 crores rural families, where some 70% are small and marginal farmers (Bhatnagar, 2018; Jaiswal et al., 2018; Setia, 2019).

Despite the increasing demand of livestock products and the future potential of the dairy sector, individual farmers face financial barriers, infrastructure gaps, lack of quality milk breeds, shortage of feed and fodder, inadequate veterinary aid and insufficient land for rearing dairy animals. Globally, this sector is undergoing a number of challenges (Knips, 2005). These individual, small, marginal milk producers cannot achieve a decent price for their products. It has been observed that the milk producers' share in the consumer's rupee is 10% to 23% in India, against the observation of 64% to 81% in developed countries

(Source: FAOSTAT, 2013). Due to the lack of infrastructure, technology and market access, these small milk producers cannot consider milk processing to produce traditional products. They sell their raw milk to middlemen, private vendors or private companies in search of ready payment (Kumar et al., 2011). Another emerging concern and challenge for small, marginal and landless milk producers are the possible impacts of globalization and liberalization.

Scattered, fragmented, unorganized poor milk producers cannot resist the challenges individually. Hence, collective action is needed to deal with these challenges. Such collective action is reflected in the formation of the Milk Producers' Organization. Dairy cooperatives and milk producer companies are two popular formats in this category. In line with this concept, we find the State Milk Cooperatives in India, which operate using a three tier model, *i.e.*, cooperative societies, district milk unions and state level milk federations. The Milk Producers' Organization maintains relation with relevant stakeholders operating in their economic and institutional environment and takes up the appropriate agendas as needed (Sahu, 2014).

Milk Producers' Organization and Strategic Fit

Cooperative enterprises are the largest organization in the world (Anonymous, 2014). Democratic decision-making and surplus ownership forms of member-oriented enterprises render cooperatives better able to address market failures, thereby increasing resilience to crises and success in the achievement of long-term goals (Birchall and Ketilson, 2009). This organizational structure is considered a valuable wealth and strategic fit in dairy farming in the Indian

context. Dairy farming has high market dependency and socio-economic values (Bor, 2014). Dairy cooperatives facilitate milk producers to integrate against oligopolistic powers in distribution and retailing (Van der et al., 2007) by means of strategic logistics between production, processing and distribution (Berre et al., 2014), particularly in emerging markets (D'antoni, 2012). In a mature market, it also assists producer members while reducing financial risks and economic uncertainty (Maynard, 2009) caused due to increasing volatility in milk and feed prices (Wolf and Olynk Widmar, 2014). It also helps to maximize returns and minimize the costs of processing inputs (Labrecque et al., 2015).

Traditionally, the promotion of dairy farming is considered a reliable means to increase milk production, and with that employment and revenues (Jaiswal et al., 2018). Considering the unorganized small, marginal and landless milk producers, a viable platform such as the Milk Producers' Organization is essential to create an impact of unified or collective action for a sensible and visible outcome (Nikam et al., 2019). In a populous country with increasing unemployment, a model like the Milk Producers' Organization and its efficient operation has proven to be effective in creating self-employment and economic self-reliance. Such an organization has been extended to also include the major participation of Indian women. During 2017–2018, cooperative milk unions together covered about 186,000 village dairy cooperative societies with a total membership of 16.6 million milk producers, producing an average of 475.6 lakh kg milk per day. The sale of liquid milk was 349.6 lakh litres per day. In March 2018, the total number of women members in dairy cooperatives across the country was 4.9 million (Anonymous, 2018) reflecting the extent of female empowerment via the Indian dairy sector.

In India, dairy cooperatives have made a distinguished contribution towards the cost, quantity and quality of milk production, with the simultaneous responsibility to achieve a better price for the milk producers (Kumar et al., 2011). Progress in respect of food safety compliance becomes easier due to the availability of organizational discipline (Kumar et al., 2013). The increased presence of dairy cooperative societies has also resulted in higher growth of self-employment (Kakade and Bagade, 2001). Growth of the Indian dairy sector has been driven by population growth, increasing urbanization, changing food habits and higher disposable income for dairy products (Rajeshwaran et al., 2015). This further strengthens the need for the Milk Producers' Organization.

Milk Producers' Organization and collective action

Cooperative collective action facilitates rural transformation, which in turn leads to inclusive growth of impoverished farmers (Woolcock, 1998). There are two levels to steer it:

- 1) at the micro level (or local level), collective action supports the necessities of the mass through the principle of "Getting ahead collectively";
- 2) at the macro level, public policies are formulated in liaison with civic bodies.

Collective action and consequent empowerment can lead to inclusiveness when the activities of both levels are synchronized.

Collective action for economic improvement through local groups

Globally, total milk production by small and marginal milk producers has increased from 21.2 million tonnes in 1968–1969 to 132 million tonnes in

2012–2013. The majority of these milk producers are landless. This reflects the socio-economic status of rural livelihood. It would be imperative to adopt a policy to improve this situation through efficient use of land (D'Haese et al., 2009).

Over time, there has been a gradual shift of focus towards a collective approach. Kurien (2007) mentioned the need of shifting the focus towards production by the masses but not towards mass production. This concept has been reflected in the Anand pattern cooperative with its three-tier structure (i.e. co-operative society, district milk union and state federation). It facilitates regular payment of a remunerative price to milk producers, which in turn increases the number of milk producer members (Figure 1) and co-operative

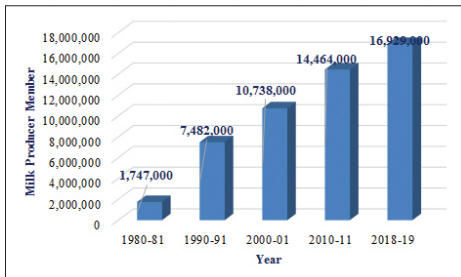


Figure 1. Increase in the number of milk producer members

Source: FICCI Paper on Development of Dairy Sector in India. July, 2020

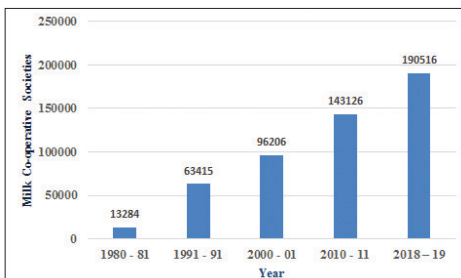


Figure 2. Increase in the number of milk cooperative societies

Source: FICCI Paper on Development of Dairy Sector in India. July, 2020

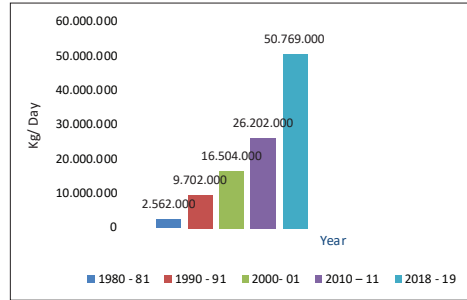


Figure 3. Increase in Milk Procurement (Kg/Day)
Source: FICCI Paper on Development of Dairy Sector in India. July, 2020

societies (Figure 2), resulting in enhanced milk production at the national level (Figure 3).

Collective action at the macro level and policy intervention

Social movements at the grassroots level contribute to the shaping of public policies. Where social organizations are weak, public policies take centre stage and the same is used as a tool to strengthen collective action and social movements. These two-way exchanges further lead to democratic governance.

Collective action and vertical linkages: impact and up-scaling

Co-ordination with higher strata of organization enables collective action to strengthen inclusiveness. Relations among national and international networks (NGOs, United Nations organizations, bilateral aid agencies, SFAC or societal bodies) contribute to create new social movements (Bosc, 2018). Collective action facilitates: i) Institutionalization, ii) Empowerment of milk producers, iii) Bargaining power, and iv) Economies of scale.

i) Institutionalization

Institution can be defined as a social structure having a high degree of resilience (Scott, 2005). In institutional

economics, the institution is defined as a stable pattern of behaviour that directs and constrains economic activity (North, 1990). Legitimacy and suitability of dairy institutions depend on the perception of milk producers and relevant stakeholders regarding the institution's appropriateness to take on sectoral challenges. Milk producers, as price takers, do not consider themselves as competitors. Both dairy farmers and policy makers are concerned with the lack of negotiating power of milk producers with respect to milk processors. Depending on the type and strength of sectoral challenges, co-operatives may be considered reasonably appropriate organizational structures. Traditional local dairy institutions manage, administer and provide services to milk producer groups, associations or co-operatives at various levels, including dairy co-operative societies, milk unions or milk federations (Trebbin and Hassler, 2012).

Role:

- To encourage dairy development, including planning, policy, promotion and strategies
- To facilitate organization of milk producers while mapping legal framework and trade
- To promote milk consumption for better health and nutrition and to channelize communications towards existing and potential customers.

Scopes and opportunities:

- Purchasing inputs
- Handling legal frameworks
- Validation of milk and milk product standards
- Managing feed and fodder resourcing, genetically improved breeding
- Handling processing costs
- Milk procurement from society members offering the right

price and maintaining payment regularity (Kumar and Thamila, 2015).

- Logistics and marketing
- Risk assessment and mitigation (Bennett, 2008)

Challenges in view of the globalized trade scenario:

- National and international trade standards
- Free trade agreements among global players
- Subsidies and tariffs
- Trade blocks
- Volatile market (Weber et al., 2013)

Current issues: Decreasing availability of land, fodder and feed resources and increasing demand in biofuels have created a price pressure. Poor governance of the Milk Producers' Organization and the value added product tax are just a few of the aspects requiring appropriate measures (Chellappa and Haran, 2018). Uncertain regulatory and socio-economic environments impact the progress of dairy cooperatives (Marcos-Matas et al., 2013). In respect of the implications of joining WTO, the presence of regional trade groups such as ASEAN and other Free Trade Agreements has created uncertainty within the dairy sector. The responsibility of the dairy institution is enhanced and the need of its efficient presence has been more visible.

Hence, institutional building efforts are quite significant in today's scenario. Systematic value-based strengthening of institutional capability and capacity produces not only "physical, financial and organizational" impacts in the short-term, but also strives emphatically to ensure self-sustained long-term growth. This is translated in terms of measurable end objectives through two base level organizations: dairy cooperative societies and district milk unions

ii) Empowerment of milk producers

Collective action generates three types of interlinked empowerment: economic, social and political. Economic empowerment helps to overcome inequity and power imbalances. In the absence of economic empowerment, poor people fail to raise productivity and are forced to surrender to the existing market's bargaining power. Social empowerment pertains to about respect and the recognition of others. Every person has their own entity and self-respect which should be honoured, and should not be dictated by others. Political empowerment refers to respecting individual political faiths and freedoms. All these types of empowerment, when reinforced mutually, assist and support poor farmers holistically. Three-dimensional empowerment (*i.e.* economic, social and political) is comprehensive in nature. It motivates small milk producers to understand their own importance and to act with confidence. This empowerment facilitates people to overcome poverty, participate in growth processes, understand the value of their own contributions, restrain discriminatory practices and negotiate the allocation of benefits.

Thus, collective action enables poor milk producers to garner bargaining strength in respect of economic, social and political outcomes despite having little to capital. Thus, small scale milk producers secure equitable access to land, labour, commodities, financial aid and markets. These poor farmers become more responsive and accountable for state institutions, which leads to better access to quality services and socio-political status (Desai and Joshi, 2013).

iii) Bargaining Power

The next positive outcome of collective active action is the enhancement in

bargaining power of milk producers in basic areas like the purchase of inputs and sale of their products. These benefits can be summarized as follows:

- a) Strengthening milk producers' authority and control in the milk sector, *i.e.*, in milk production, collection, processing and marketing
- b) Facilitate achievement of a positive economic rate of return for livelihoods and benefits from the cooperative scheme
- c) Enabling small, marginal and landless milk producers to obtain access to the market and market intermediaries
- d) Enabling access to basic and sophisticated technologies along with equipment and instrument.

iv) Economies of scale

Individual, poor milk producers find it difficult to manage expenses due to a small herd size of only one or two milk cows. The costs of farm production decrease with increasing herd size (Tauer and Mishra, 2006; Bailey et al., 1997). Small scale producers are often constrained by subpar inputs, poor services, and high transaction costs due to reduced bargaining power against traders and channel intermediaries (Markelova et al., 2009; Otte et al., 2012).

Hence, operating scale is always a significant aspect. Economies of scale in the dairy sector have always been significant in the farming of milk animals, processing of milk and dairy products, and handling the supply chain (Daryanto and Ibu, 2014). Scale lowers the cost of production (Dobrev and Carroll, 2003). However, economies of scale raise a few relevant issues. Hence, careful perusal is needed before moving into a scale of operation:

- the operational entity needs to determine its minimum efficient scale, *i.e.*, the output level at which scale economies are exhausted;

- the operational entity needs to determine the cost penalty that arises from small scale operations, i.e., how much higher is the cost of a small firm that is unable to realize a minimum efficient scale?
 - the operational entity needs to determine the output level at which the diseconomy of scale begins, i.e., the cost per unit starts to increase. This operation level can be termed the maximum efficient scale.
- vii) Availability of technological resources for manufacturing a cost-efficient and high quality product, and
 - viii) Access to market actors.

Diseconomies of scale are clearly important. However, the available technology, price of inputs and operator efficiency assume significance when the economies of scale are analysed. According to Chambers (1988), "economies of scale" is applicable under a specific technological relationship. In case of non-homothetic production (*i.e.*, the same quantity output is produced for varying combinations of inputs), cost minimizing factor proportions vary with output (Macdonald et al., 2007; Anonymous, 2016).

Milk Producers' Organization: key issues and solutions

Several key issues are considered priorities by the Milk Producers' Organization in India in order to strengthen its position:

- i) Mobilization of individual milk producer and formation of formal organizations (Suntharalingam, 2019);
- ii) Development of a business plan;
- iii) Arrangement of financial credit;
- iv) Arrangement of bank lines;
- v) Access to legal resourcing regarding various laws and regulations;
- vi) Access to evolving technology and updated farm management practices to improve yield (Khanal et al., 2010);

Many times, the viability of producers' organizations is not found on strong footing. The creation of a Milk Producers' Organization should be achieved through proper theoretical training and community principles to enhance organizational capabilities and competitiveness (Chamala and Shingi, 1997). A Farmer Producers' Organization needs a strong support system for its establishment and subsequent support for building capabilities and expanding capacities. Promotion and support of the producer organization is crucial. In this regard, the institution promoting the producer organization can avail both financial resources and technical inputs from government bodies such as NABARD, SFAC, and others (Source: www.nabard.org; www.sfacindia.com).

Milk Producers' Organization: managing the supply chain

The Milk Producers' Organization is responsible for the in-bound and out bound supply chain network, in addition to corporate roles such as corporate social responsibility, corporate governance services, etc (Table 1).

Milk Producers' Organization: managing value chains and sustainability

To achieve sustainability of the Milk Producers' Organisation, a vision and mission statement are required to guide the functioning of the organisation, and awareness of farmers needs to be creating through financial inclusion measures (Kadam, 2018).

Table 1. Role of Milk producers' Organizations through Supply Chain Network

Contribution Areas	Scope of activities	Objective
Organizational services	Organizing milk producers for collective action	To avail Scale Economies and strength of bargaining power
Extension management	Subsidized feed, vet aids and technical training	Cost efficiency
Milk Procurement	Collection of milk against right price and regular payment	Increase in Quantity of milk and better milk quality
Milk Processing	Capacity utilization, efficiency in managing resources, product diversification	Building capability and optimize capacity
Sales and Marketing	Business promotion, penetration and new market creation	Increase in sales turnover and bottom line
Arrangement of financial credit	Loan and subsidies availability for milk producers	CAPEX & OPEX support and lowering cost of capital

Keeping in view the changing business environment, the Milk Producers' Organization needs to strengthen value chain inputs further for the expected rate of return. On-farm yield, operational efficiency, an efficient in-bound and out-bound supply chain network, with simultaneous attention towards environmental and social dimensions are essential requirements for differentiation and organization's sustainability. Three-dimensional orientation, *i.e.*, people, planet and profit, popularly known as the 3Ps or Triple Bottom Line (TBL) can further augment organizational strength (Figure 4) (McDermott et al., 2010).

Further, several key areas can build the organization's strength and competency:

- i) Innovation: Development of innovative technology and customization are options that can lead to customer centric dairy production and service, and

help the organization to stay in business.

- ii) QMS: Introduction of a Food Safety and Quality Management System instead of Quality Control System adds dividends to the organization.
- iii) Continual Improvement: Continual process upgrade and optimization with reduction in fossil fuel consumption, reduction in waste generation, and reduction in ground water consumption can help the organization to survive in the long run. Operational efficiency helps to create business sustainability (Dhuyvetter, 2011).

The changing consumer demand pattern influences value added product processing and it leads to a number of new value drivers for making food choices.

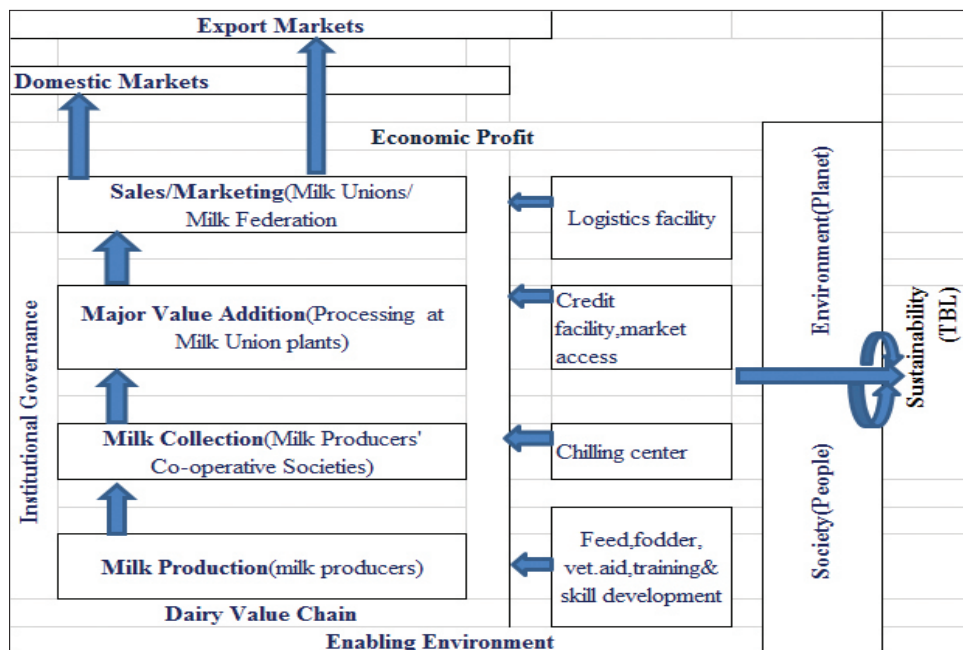


Figure 4. Dairy Value Chain and Sustainability

Table 2. India's Dairy Products* Exports (2014-15 to 2019-20)

Year	Quantity(MT)	Value(Rs in Cr)	Value(US \$ in million)
2014-15	66424	1205	198
2015-16	33442	755	115
2016-17	39166	905	135
2017-18	48039	1196	185
2018-19	180688	3376	483
2019-20	111146	1982	280

Source: APEDA,
https://apeda.gov.in/apedawebsite/Comparative_Statement_Mar_2019-20.pdf
 *skimmed milk powder, butter, butter oil, cheese, ghee, butter milk

In practice, the framework towards the sustainable food value chain (SFVC), a market led technique, is focused towards milk producers, organization management and policymakers (Anonymous, 2019).

Promotion of Dairy Export

The majority of India's rural population is dependent on the dairy sector. Hence, the importance of a milk producers' organization is immense from the point of survival, growth and

sustenance. To support this objective, an increase in milk productivity and support of smooth handling of surplus milk production is essential. Hence, exporting milk and dairy products to other countries is essential (Table 2). In this context, India needs to upgrade its infrastructure and logistics to facilitate the movement of milk and dairy products. The lack of a cold chain network is still visible (Meena et al., 2017). Cold chain facilities for transportation and storage requires major attention. Further, intangible critical success factors must be considered (*i.e.*, differentiation ability, brand management, customer relationship management and core competencies) to compete in international business (Scott et al., 2013).

International Trade in Dairy Products

India's export performance is yet to achieve its true potential. The Milk Producers' Organization can be instrumental in handling the export of specialized dairy products, like buffalo mozzarella, buffalo ghee, and others that command a premium on the US and European markets. This will also bring high returns to dairy farmers. In addition, export opportunities of indigenous Indian dairy-based sweets, such as gulabjamun, rosgulla, penda and others needs to be explored, as these products are mostly handmade. This can create further employment and boost the livelihood of milk producers and related people (Source: FICCI Paper on Development of Dairy Sector in India, July, 2020).

Obstruction to fair entry to international dairy trade

Small milk producers in a developing country like India have a herd size of 1–3 dairy animals and these producers are at a high disadvantage in comparison with

large scale dairy farms in Europe or other developed countries (Hegde, 2001). WTO has intervened in the international trading system. In fact, it has paved the way for developed countries to access worldwide markets. Opportunity in international trade is much awaited by developed countries where livestock sectors enjoy subsidies in a major way. WTO has also published global guidelines to diminish import tariffs. Thus, the market of developing countries is opening to others, including developed nations. This may create difficulties for developing nations that cannot provide heavy subsidies towards dairy and agriculture sector like the EU and other developed countries. It is easy for developed countries (*e.g.*, US and the EU) to manipulate the free and fair international trade practices (Joshi, 2015).

Article 20 of the GATT regulation has empowered nations to take appropriate measures to protect human life, animal and plant health with the underlying assumption that discrimination or disguised protectionism should be avoided. However, it may be misused through imposition of sanitary and phytosanitary (SPS) measures and technical barriers to trade (TBT) to create entry barriers in international trade practices. The Indian dairy sector would face difficulty in conforming to the stringent SPS regulations (Das 2008; Mukherjee et al., 2019) and the Free Trade Agreement with New Zealand (Saraswat et al., 2018; Jha, 2019).

Recently, the Indian government introduced duty benefits for exports of milk-related products under the Merchandise Export from India Scheme (MEIS) to boost overseas shipments. The MEIS scheme (Source: PTI, Economic Times, September 28, 2018) is soon to be replaced by a Remission of Duties or Taxes on Export Products (RoDTEP) (Source: ET Bureau, Economic Times, March 13, 2020).

Conclusion

The Milk Producers' Organization enhances capacities and capabilities at both the individual and organizational level. It leads to better earnings for members, which in turn makes the rural economy healthy through a market-oriented approach. Hence, development of a Milk Producers' Organization in India is a strategic alignment that facilitates inclusive growth under the prevailing socio-economic conditions. Where social relations intervene with the economic results of the enterprise, the dairy institution needs to handle conflicting demands (duality of efficiency or social concern) through strategic actions from a multidimensional point of view that is duly supported by aligned policy and professionalism. With the intention of increasing capability, process digitalization, creation of a GRID of farm gate infrastructure, following a socially embedded learning curve, widely engaging vocational rural youths, strengthening institutional governance with flexibility to changed circumstances may be considered priorities for the success of the producers' organization model to its fullest extent. The Milk Producers' Organization may be treated as a MSME in line with India's *Atmanirbhar Bharat* initiative. Further, cooperative business model research can be undertaken to explore more revenue routes through the utilization of manure for energy generation and utilization of unproductive and/or aged bovines. This should also assist in competition with international trade pricing. Animal health care and management research is also needed to deal with sanitary and phytosanitary measures faced in course of international business.

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Organizacija proizvođača mlijeka i indijski mljekarski sektor - strateško usklađivanje

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Potreba za osnivanjem Organizacije proizvođača mlijeka temeljena je na nužnosti za ojačanjem raštrkanih i neorganiziranih, siromašnih indijskih proizvođača mlijeka koji nemaju pristup resursima i uslugama. Organizacija proizvođača mlijeka nastala je na sučeljavanju poslovnog okruženja i pojedinačnih proizvođača mlijeka kroz veze unaprijed i unatrag (*forward i backward linkages*), istovremeno omogućujući osnaživanje kolektivnog djelovanja, pregovaračke moći i ekonomskih razmjera. Time je prikladno odgovoreno na ekonomske i socijalno-kulturalne potrebe članova proizvođača i subjekata koji ih okružuju. Prema procjeni Statistike nacionalnih računa (2020.) Indije, doprinos stočarstva ukupnoj bruto dodanoj vrijednosti (pri stalnim cijenama) poljoprivrede i srodnog sektora dosegao je 28,63 % (2018.-2019.) što ukazuje na važnost Organizacije proizvođača mlijeka u mnogoljudnoj zemlji poput Indije. Organizacija proizvođača mlijeka pruža svoju pomoć s aranžmanima financijskog kredita, tehničkim ulaznim informacijama, produktivnošću mlijeka, kvalitetnim proizvodima, upravljanjem vrijednosnim lancima, pristupom dionicima na tržištu i bavljenjem ekološkim i poslovnim regulativama. U ovom preglednom članku opisana su ključna gledišta i pokušalo se

istražiti kako je Organizacija proizvođača mlijeka izgradila sposobnost i optimizirala kapacitet u postojećem opsegu i izazovima indijskog mljekarskog sektora. Stočarski sektor pomaže izdržavati oko 20,5 milijuna stanovnika Indije. Složena godišnja stopa rasta (CAGR) proizvodnje mlijeka u Indiji iznosi 4,8 % u odnosu na 1,8 % CAGR globalne proizvodnje mlijeka. Međutim, Organizacija proizvođača mlijeka suočava se sa sukobljenim područjima interesa: poput socijalnih pitanja, kao i poslovnih zahtjeva i ta ambivalentnost iziskuje poticajne politike i profesionalizam za upravljanje rastom i održivošću Organizacije. S obzirom na globalizirano poslovno okruženje, Organizacija proizvođača mlijeka preuzela je odgovornost natjecanja na domaćem i globalnom tržištu. S obzirom na nove prakse međunarodnog trgovanja, potrebna je dodatna studija za uspostavljanje mehanizma koji će se baviti sanitarnim i fitosanitarnim (SPS) mjerama. Suradnički se poslovni model može dalje istražiti dodatnom uporabom gnojiva goveda i neproduktivnih goveda za ponovnu uspostavu ekonomičnijeg modela kako bi se moglo nositi s globalnim razinama cijene mlijeka i mliječnih proizvoda.

Ključne riječi: *kolektivno djelovanje, proizvođači mlijeka i mliječnih proizvoda, održivost, vrijednosni lanac*