

AN ANALYSIS OF DAIRY COOPERATIVES IN INDIA

Dr. Kuldeep Kaur

Assistant Professor of Economics, A.S.B.A.S.J.S.M. COLLEGE, BELA (ROPAR)

ABSTRACT

India is predominantly an agrarian economy, most of its population is working in the agricultural sector. However, in the modern era, it is difficult to provide employment opportunities in agriculture sector due to the rapidly growing population. As an alternative to provide jobs through allied activities is a necessary step, as in dairy sector, poultry farming and fisheries etc. To examine the growth of dairy cooperatives Societies (DCSs) and identify the major challenges and barriers affecting the different regions of India, the data is driven from secondary sources. The area of study of this paper has been divided into four regions, Northern, Southern, Eastern, and Western Region. Key findings of the studies shows that northern states had got significantly rapid growth rate. The study suggests the need to improve financial facility like credit, infrastructure, veterinary services for milch animals, milk collection centers and cold chain facilities etc.

Keywords: Cooperatives, Dairy, Development, Financial, Growth, Institutional and Regional.

INTRODUCTION

Dairy farming is a significant allied agricultural activity that plays a consequential role in generating employment opportunities for the growing population and enhancing rural income level. Dairy sector plays a noteworthy role in creating employment for rural populations and enhancement of household income levels and rural livelihoods.

The Concept and Structure of Dairy Cooperatives are given below:

Dairy cooperatives operate under the well-known Anand Pattern in India, which follows a three-tier organizational structure at Village Level which are known as Dairy Cooperative Societies (DCSs) (collect milk directly from producers), District Level are called Milk Unions (process

milk and manufacture dairy products) and at State Level, State Federations (which are responsible for marketing, branding and distribution).

REVIEW OF LITERATURE

Dairy cooperatives have long been a central institution in India's dairy economy, especially for integrating small and marginal milk producers into organized markets. Early studies emphasized that cooperatives reduced transaction costs, improved access to inputs and services, and helped farmers secure better prices for milk (Shah, 2016). A major theme in the literature is the role of cooperatives in reducing market risk for rural producers. Researchers have found that cooperatives can stabilize milk sales, lower marketing costs, and improve access to fodder, concentrates, credit, and technical advice (Meena et al., 2023). This is particularly important in India because many dairy households depend on small-scale production and cannot easily negotiate with private buyers on equal terms (National Dairy Development Board, 2024). At the same time, the literature points to persistent structural weaknesses. The Indian dairy cooperative system, despite decades of expansion, still accounts for only a portion of the total marketed milk, and several studies argue that this limits its national influence (Mahida et al., 2022; World Development, 2023). Researchers also highlight problems such as uneven technological adoption, limited value addition, weak price incentives, and rising production costs, all of which affect cooperative efficiency (Vasava & Gelda, 2025). Another important line of research focuses on social development outcomes. Studies from states such as Gujarat, Kerala, and Assam suggest that cooperatives contribute to women's empowerment, community participation, and rural entrepreneurship (Barot & Bose, 2023). Evidence also indicates that employee satisfaction and organizational commitment influence cooperative performance and sustainability. These findings show that the impact of cooperatives extends beyond milk marketing into broader processes of rural development and social transformation (National Cooperative Development Corporation, 2024). The most recent scholarship moves toward a more policy-oriented understanding of the sector. Scholars argue that the future of dairy cooperatives depends on stronger professional management, better farmer education, higher value-added products, and policies that improve competitiveness in an increasingly mixed market environment (Vasava & Gelda, 2025).

The above review of literature shows that dairy cooperatives in India have played a significant role in income enhancement, market access, and rural development, especially for smallholder producers.

NEED OF THE STUDY

The present study seeks to examine the challenges and opportunities of dairy cooperatives in India and to suggest measures for improving their effectiveness and long-term sustainability.

OBJECTIVES

1. To analyse the region and state- wise number of DCSs in India.
2. To identify the major challenges and barriers affecting the DCSs in different regions of India.
3. To suggest policy recommendations for enhancing DCSs in India.

METHODOLOGY

The data has been collected from various journals, books, internet, reports from NDDB and government policies. It has been analyzed through available resources using suitable methods such as average, percentage and growth rate etc. The study indicates that four major regions, namely Northern, Southern, Eastern and Western Region have been taken into account in order to analyze the growth of DCSs. The division into these four regions helps in the analysis of inter-regional variations, simple growth rate SGR (Simple Growth Rate) and policy requirements.

DAIRY COOPERATIVES IN INDIA

The number of DCSs are shown in table 1 which was 13,284, 63,415, 96,206, 1,43,126, 1,90,627, 1,93,195, 2,23,610, 2,36,834 and 2,45,341 in 1980-81, 1990-91, 2000-01, 2010-11, 2018-19, 2019-20, 2020-21, 2023-24 and 2024-25 respectively. The SGR of DCSs are 94.58 and average i.e. 1,56,182. It is clear indication that from table number that DCSs has improved in India from 1980-1981 to 2024-25-time period.

Table 1: Number of DCSs in India

Particulars	1980-1981	1990-1991	2000-2001	2010-2011	2018-2019	2019-2020	2020-2021	2023-2024	2024-2025	SGR	AVERAGE
No.of dairy cooperatives	13,284	63,415	96,206	1,43,126	1,90,627	1,93,195	2,23,610	2,36,834	2,45,341	94.58	1,56,182

Source: Compiled from different years of NDDB, Annual Report

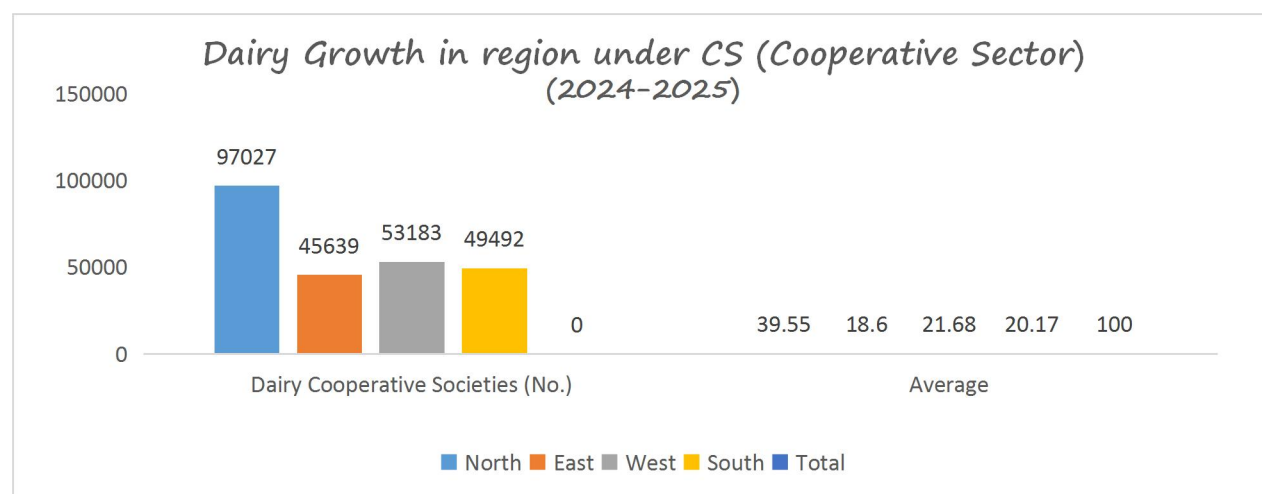
Dairy growth in different region/states is described in table 2 and also in figure 1. The region/state wise number of DCSs has an enhanced trend. The number of DCSs in 2024-25 were 2,45,341 throughout the country, North got the top position with 97,027 whereas west got the second position with 53,183 followed by South with 49,492 DCSs and the lowest number was of East with 45,639 DCSs in 2024-25. The highest percentage was got by northern region with 39.55 followed by western (21.68), and southern (20.17). The lowest average is of eastern with 18.60 percentage.

Table 2: Dairy Growth in region under CS sector (Cooperative Sector) (2024-2025)

Region	Number of DCS	Average
North	97027	39.55
East	45639	18.60
West	53183	21.68
South	49492	20.17
Total	2,45,341	100

Source: Compiled from different years NDDB, Annual Report, 2024-25

Figure 1.1: Dairy Growth in region under CS (Cooperative Sector) (2024-2025)



Source: Compiled from different years NDDB, Annual Report, 2024-25

The growth of DCSs is shown in table 3. The greatest number of DCSs was situated in west zone (5957), second rank was got by south zone (3949) and third rank was got by north zone (2676) and the east zone was the smallest (702) in 1980-1981. In 1990-1991, north zone was the topmost with 22,126 DCSs, second position was held by west zone (18,580) followed by south zone with 18,345 and the smallest number of DCSs was situated in east zone (4,364). In 2000-2001, west zone got first position with 32446 DCSs followed by north zone (31977) and west zone (24670) and east zone was at last with 7113 respectively. During 2010-2011 and 2020-2021, the number of DCSs in north zone was the highest i.e. 52911 and 84214 respectively, second position was got by west zone (42697) and (57286) respectively followed by south zone (31,190) and (43759) respectively. The smallest number of DCSs was in east zone (16328) and (38351) respectively. In 2021-22, The state wise SGR (Simple Growth Rate) shows that eastern states have maximum SGR than states of other zones of SGR. The average of DCSs are utmost in north zone, second position was got by west zone, south zone and smallest is in east zone also. The state wise average of DCSs shows that Uttar Pradesh, Haryana, Punjab, Maharashtra, Karnataka, Gujarat, Rajasthan, Tamil Nadu, Bihar, Madhya Pradesh, have performed very well. The states including Himachal Pradesh, Chhattisgarh, Jharkhand, Sikkim, Goa, Assam, Tripura, Nagaland and Pondicherry have shown an inadequate performance number of DCSs.

Table 3: Growth of DCSs in India

State/Region	1980- 1981	1990- 1991	2000- 2001	2010- 2011	2018- 2019	2019- 2020	2020- 2021	SGR	Average of DCSs
North									
Haryana	505	3,229	3,318	7,019	7,264	7,500	7,837	93.55	523,885.71
Himachal Pradesh	-	210	288	704	977	1,011	1,084	80.62	712.33
Jammu & Kashmir	-	105	-	-	457	620	896	88.28	51,950
Punjab	490	5,726	6,823	7,069	7,353	7,383	8,539	94.26	619,757.14
Rajasthan	1,433	4,976	5,900	16,290	14,822	15,067	21,300	93.27	1,139,828.57
Uttar Pradesh	248	7,880	15,648	21,793	31,754	31,958	40,353	99.92	2,137,628.57
Uttarakhand	-	-	-	-	4,168	4,169	4,205	0.87	418,066.66
Total	2,676	22,126	31,977	52911	66,795	67,710	84,214	96.82	4,691,557.42
East									
Assam	-	117	125	155	402	457	522	77.58	29,633.33
Bihar	118	2,060	3,523	9,425	22,261	23,510	26,275	99.55	1,245,314.28
Jharkhand	-	-	-	53	622	690	769	93.10	53,350
Meghalaya	-	21	74	49	97	97	30	30.00	6,133.33
Mizoram	-	-	-	-	42	42	42	00.00	4,200
Nagaland	-	-	-	-	52	52	52	00.00	5,200
Odisha	-	736	1,412	3,256	5,946	6,053	6,151	88.03	290,050
Sikkim	-	134	174	287	517	540	587	77.17	37,316.66
Tripura	-	73	84	84	100	117	119	38.65	9,616.66
West Bengal	584	1,223	1,719	3,012	4,094	4,236	3,804	84.64	266,742.85
Total	702	4,364	7,113	16,328	34,133	35,794	38,351	98.16	1,954,071.42
West									
Chhattisgarh	-	-	-	757	1,112	1,106	1,110	31.80	102,125
Goa	-	124	166	178	183	183	183	32.24	16,950
Gujarat	4,798	10,056	10,679	14,347	19,985	20,144	22,341	78.52	1,462,142.85
Madhya Pradesh	441	3,865	4,877	6,216	9,151	10,094	10,757	95.90	520,014.28
Maharashtra	718	4,535	16,724	21,199	20,652	20,762	22,895	96.86	
Total	5,957	18,580	32,446	42697	51083	52289	57,286	89.60	1,535,500
South									3,719,114.28
Andhra Pradesh	298	4,766	4,912	4,971	3,308	3,299	6,458	95.38	400,171.42
Karnataka							16,721		

Kerala	1,267	5,621	8,516	12,372	16,021	16,416	3,337	92.42	1,099,057.14
Tamil Nadu	-	1,016	2,781	3,666	3,317	3,331	10,555	69.55	2,90,800
Telangana	2,384	6,871	8,369	10,079	10,677	10,076	6,581	77.41	843,014.28
Pondicherry	-				5,189	5,176	107	21.15	564,866.66
Total	-	71	92	102	104	104	43,759	33.64	9,666.66
	3,949	18,345	24,670	31,190	38,616	38,402		90.97	2,841,871.42
Total	13,284	63,415	96,206	1,43,126	1,90,627	1,94,195	223,610	94.05	13,206,614.28

Source: Compiled from different years of NDDB, Annual Reports

The study states that northern states had gained significantly rapid growth of DCSs like Uttar Pradesh, Bihar, Gujrat, Karnataka, Madhya Pradesh, Rajasthan, Tamil Nadu, Haryana, Punjab, Odisha, Telangana, West Bengal, Uttrakhand, Kerala and Andhra Pradesh. Northern states like Punjab, Uttar Pradesh, Rajasthan, and Haryana, east states such as Bihar and Odisha, West states like Maharashtra, Gujrat and in the southern states, such as Karnataka, Andhra Pradesh and Tamil Nadu are in an excellent position.

FINDINGS

The northern states have shown extreme growth of DCSs in India. This study demonstrates the significant growth of DCSs. The trends reveal that Gujrat, Uttar Pradesh, Bihar, Karnataka, Madhya Pradesh, Rajasthan, Haryana, Tamil Nadu, Punjab, Odisha, Telangana, West Bengal, Uttrakhand, Kerala and Andhra Pradesh, have got a vital progress of DCSs. The northern states, Uttar Pradesh, Rajasthan, Haryana and Punjab, east states Bihar and Odisha, West states Maharashtra, Gujrat and the southern states i.e. Karnataka, Andhra Pradesh and Tamil Nadu are in much better position than other states.

POLICY IMPLICATIONS

Policy Implications and suggestions are given below in detail:

1. There should be improved financial literacy and support i.e. loan facilities, infrastructure, veterinary services for milch animals, milk collection centers and cold chain facilities.

2. There should be greater investment in rural credit facilities and livestock insurance schemes for dairy cooperative members.
3. Women's participation in dairy cooperatives should be encouraged through education, digital literacy and targeted self-help group (SHG) integration etc.
4. The policies should be made to reduce inequalities and ensure inclusive growth of the dairy cooperatives sector in India.

SUGGESTIONS

There should be digitalization of dairy cooperative operations. The government should take the lead in providing fair prices to the dairy cooperative members. Government ought to provide financial aid, training and capacity-building programmes should be organised such as seminars, conferences visit tours in district and state level centers.

CONCLUSION

The study concludes that there are significant variations in the growth in different regions/states of the India. Overall, dairy cooperatives continue to play a remarkable role in rural employment generation, income enhancement and to improve economic conditions of their members. So, the government should take sufficient steps to provide related equipments like sufficient finance on reasonable rate of interest, installment facilities for buying instruments, loan for milch animals and by providing fair prices for their milk production to members of DCSs. The living standard of members of DCSs can be enhanced according to the modern era and they can use modern technology to their advantage and improve their efficiency according to the need of the times. It is for greater growth of DCSs in the country if the government takes the needy steps for their growth so that DCSs can provide greater opportunities to their members.

LIMITATIONS OF THE STUDY

1. The study is based primarily on secondary sources.
2. Dairy cooperatives in India differ significantly across states in terms of performance, management practices, and membership participation.

3. The study mainly examines dairy cooperatives and does not extensively compare them with private dairy enterprises, informal milk markets, or other dairy business models.

SCOPE FOR FURTHER RESEARCH

The present study provides an overview of the challenges and opportunities of dairy cooperatives in India. However, several areas remain open for further investigation. Future research may focus on the following aspects:

1. Researchers can conduct comparative studies of dairy cooperatives across different states to identify factors responsible for variations in performance, membership participation, and profitability.
2. Future studies may examine how digital platforms, artificial intelligence, mobile applications, and data-driven management systems can improve the efficiency and transparency of dairy cooperatives.
3. Further research can explore the role of dairy cooperatives in enhancing women's economic empowerment, decision-making capacity, and leadership in rural areas.

Further research in these areas will contribute to a deeper understanding of the evolving dairy cooperative sector and help policymakers, cooperative leaders, and researchers develop strategies to enhance the sustainability, efficiency, and inclusiveness of dairy cooperatives in India.

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