CHAPTER 2

Review of Literature

Review of the related literature, allows the researcher to acquaint him with the findings of some of the earlier research studies and the method adopted therein. Such review of literature connected with the working and performance of Dairy Cooperative Union and Primary Dairy Cooperative Societies and also studies related to other type of cooperative societies that existed in India, especially in Nagaland and abroad to provide a basis either for confirming the earlier findings or contradicting them and thereby to suggest points of departure for further studies.

Consistent with the objectives of the study, the review of literature is presented under the following heads:-

2.1 - Studies conducted to determine the Financial Performance of Dairy cooperatives using Ratio Analysis.

2.2 - Studies conducted to determine the Financial Performance of Other Cooperatives using Ratio Analysis.

2.3 - Studies Related to Application of other Financial Management techniques on Dairy and Animal cooperatives.

2.4 - Studies Related to Marketing Analysis of Dairy products.

2.5 - Studies Related to General aspects of Cooperatives.

2.1- Studies on Evaluation of Financial Performance of cooperatives Using Ratio Analysis

Sarker et al (2008) studied and analyzed the cost, return and relative profitability of cooperative and non-cooperative milk producers’ societies of West Bengal by ratio
analysis and calculated Gross profit, Net profit, Overall profitability, EBIT, etc. The study has revealed that cooperative farms have much higher profitability than non-cooperative farms.

Patil (1991) explored Karnataka State Cooperative Milk Producers Federation Ltd and its impact on Dairy Development by using different ratios such as, solvency, liquidity, profitability, turnover and efficiency, etc. The study revealed that there was a decreasing trend in the liquidity ratio due to accumulation of fixed assets. There was an increase in liabilities representing the increased trend of solvency of the organisation. Also higher inventory turnover represented the higher existence of stock carrying or unsalable units which would not adversely affect the organisation.

Mattigatti (1990) conducted a study on Performance of Milk Producers Cooperative Societies and their impact on Dairy Farming in Dharwad district. By making use of different financial ratios such as gross profit, net worth and capital ratio he assessed the financial position of the societies. He found that, 1) increasing trend of gross ratio was due to the increase in the business turnover, 2) net worth in the case of below average societies was lower but positive.3) The net capital ratio was more than unity. He inferred that the lower net worth did not affect the strength of the below average societies.

Sidhu & Sidhu (1990) in their joint case study on the Primary Cooperative Service Society & Milk Producers Cooperative Society in Punjab, have expressed that success of Cooperative can be understood on the basis of parameters such as consistency in the growth rate of the membership & later in the stability of the membership. They took the indicators such as average lending of the member, pattern of overdues, capital formation, the business expansion patterns & the measures of income, expenditure & profits, etc. The Capital formation was reflected by capital contributed by the members & to determine the ratio of borrowings against the capital contributed by the members, Debt/Equity Ratio was also used. Authors also stressed on the study of non-financial indicators.

2.2- Studies on Evaluation of Financial Performance using Ratio Analysis of Other Cooperatives

Smitha et al (2003) conducted a study based on the eight fishery cooperatives of eleven existing primary cooperative societies in Vasai taluk. Financial ratio analysis technique was used to study financial performance of fishery cooperatives. Vasai zone with a production of 32,643 tons had contributed to the tune of about 32 percent of the total marine fish in 1995-96, which has come down to about 9,943 tons by the year 2002-03. This decline was due to over exploitation of fish and loss of fish stock due to increasing population level in the area.

Thanulingam, et al (1987) conducted their study on Handloom Cooperatives for the period 1980-84 by using liquidity, profitability and turnover ratios. The study revealed that financial performance of the societies was poor due to the factors such as like accumulation of heavy stocks, very low gross profit margin and large number of debtors created high current ratio resulting in inability of handloom sectors to meet short term obligations.

ShankaraMurthy (1986) based his study on the Performance of the Karnataka State Co-Operative Marketing Federation Ltd., and its impact on farm market by using various financial ratios like solvency, liquidity, profitability and turnover ratio. He also used compound growth rate analysis for the selected financial and physical indicators. He analysed the response from three different groups of respondents by employing cluster analysis technique.

Rayadu (1985) studied the performance of industrial cooperatives covering period 1977-78 to 1981-82 using various financial ratios. It was found that all the industrial cooperatives had more solvency than liability but was less than the established standard of 2:1. It was also revealed that they were not in a position to meet all current obligations immediately, since the aggregated acid test ratio worked out 0.46:1.

Rama (1984) evaluated the performance Evaluation of Farmer Service Societies in Karnataka by using the solvency ratios, such as total liability to owned funds and fixed assets to owned funds; the liquidity ratios like liquid assets to total assets, current assets to current liabilities and acid test ratio; the profitability ratios such as net profits to total assets, net profits to working capital, and the turnover ratios like efficiency of capital, inventory turnover ratio, working capital turnover, gross profit ratio and operating ratio. By using different ratios he assessed the performance of the societies.

Ananth (1984) examined the performance of farmer service societies by employing the ratios such as structural, liquidity, profitability, turnover ratios, total sales to fixed assets ratio and total sales to owned funds ratio in order to study the financial position at the various stages of the growth of the concerned society.

Natarajan et al. (1980) studied Consumer Cooperatives in Andhra Pradesh and reviled that the current ratio 2:1, quick ratio of 1:1, they also calculated inventory ratio, net profit margin, return on to societies was assets and return on share capital which were considered to be the best standards of evaluation. The results of their analysis showed that the liquidity position of the cooperatives was not satisfactory.

2.3- Studies on Dairy cooperatives by Applying other Financial Management techniques

Siddaram, Sonnad and Shivashankar (2007)\(^{12}\) in their study on Marketing Management of Milk and Milk Products in North Karnataka evaluated and analysed data relating to the Investment and Procurement management of milk for last three years i.e., 2000-2003. The results indicated that the investment in private processing unit was quite high compared to the co-operative sector unit. The performance with respect to economies of scale can be realized through adequate investment. The procurement pattern of raw milk by the private sector unit involved many intermediaries like contractors, sub-contractors and there was lack of producers’ involvement due to absence of village level producer’s societies.

Rhone, Ward, Vries, Koonawootitririron & Elzo (2007)\(^{13}\) conducted a study to compare milk pricing systems and their effect on milk price and milk revenue of dairy farms in the central region of Thailand and by applying fixed linear model, they analyzed milk price of different sizes of farms. (small, medium, and large). Their findings showed that small farms had higher (\(P<0.05\)) milk prices than medium and large farms.


Gartia, Otto, Amit, Khalid, Asaah and Torsten (2006)\textsuperscript{14} studied the Dairy Development Programs in Andhra Pradesh. By analyzing data collected from different households they calculated annual household income which ranges $1,000 to $4,000. The dairy activities contributed 16 percent to the daily per capita household income. This study showed that feeding programs can have an impressive impact of increasing return to dairy labour by up to 145 percent.

Chauhan, Kalra, Singh, Vir, Raina, (2006)\textsuperscript{15} jointly conducted a study on the economics of milk processing in a dairy plant in Haryana and made the observations that there was economics of manufacturing of different dairy products, viz. ghee, full-cream milk, standardized milk, toned milk, double-toned milk, skimmed milk and ice-cream (processing only) as they are being produced above the recommended break-even level. The study suggested that the quantity of double-toned milk production should be raised at least equal to the recommended break-even level to avoid losses.


Anjani (2006) evaluated and analysed the performance of exports and imports of livestock and various livestock products of India. The triennium averages (TF) were computed to have an idea of trend.

Bardhan (2004) evaluated the India’s trade performance in livestock and livestock products on the basis of time series data pertaining to the period 1980-2004. To examine the changes in exports and imports compound growth rates for two periods ie like pre-WTO (1980-94) and post-WTO periods (1995-2000) were separately computed assess the implication of WTO on livestock trade. He noticed that the share of livestock to total agricultural export-although small has shown increasing trend in the recent past, which implied better growth in export earnings from livestock products than those from other agricultural commodities.

Bishnupriya (1990) studied the Working Capital Management in Orissa State Cooperative Milk Producers’ Federation (OMFED) limited. He has used various concepts like gross working capital, net working capital in the analysis.

2.4- **Studies on Marketing of livestock and products Dairy**

**Halder, et al (2003)**\(^{19}\) jointly carried out their research to review the existing milk production, consumption and marketing situation in Bangladesh. It revealed that the final result of the study was that the most vulnerable to declining milk consumption were market dependent poor groups, the landless rural poor and slum dwellers. The urban market for processed and packaged milk products, though still very small, is expanding rapidly.

**Vijayalakshmi, Sitaramaswamy and Boer (2000)**\(^{20}\) observed that parallel to organized sector, the unorganized (informal) dairy sector also functions. This study compared the cost of procurement/distribution of the organized and informal sectors of the dairy industry in Bangalore and Kolar districts. The study revealed that the performance of organised sector is much better than unorganised sector.

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2.5- **Studies Related to General aspects of Cooperatives:**

Nishi, A. K. Sah, and Ram Kumar (2011)\(^{21}\) assessed the dairy farmers’ satisfaction with dairy cooperative societies. About one third of the respondents were happy with the functioning of societies. Organisational participation, market potential and economic motivation were found to have strong influence on the satisfaction level of farmers.

*Annual Report (2010-11) of the department of animal husbandry, Dairing & fisheries of the Government of India*\(^{22}\) India continues to be the largest producer of milk in the world. As a result of different measures initiated by the Government the productivity of livestock and milk production have increased the milk production significantly to the level of 100.9 million tonnes at the end of the Tenth Plan (2006-07) as compared to 53.9 million tonnes in 1990-91. The estimated milk production for 2009-10 was 112.5 million tonnes.

Yildirim, Terin and Ciflei (2008)\(^{23}\) In their joint study examined the influence of scale on the profitability of Culture-Cross Breed Dairy Cattle farms in the Western Part of Turkey by collecting data they study revealed that the small-scale dairy cattle farms could not afford to cover even the variable costs but the profitability rate of large-scale farms was 24.7%.

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Singh (2006) in his book investigated with the main objective of assessing the impact of integrated Tribal Dairy Development Programme on the socio-cultural and socio-economic life of tribal dairy farmers in Uttaranchal by evolving a strategy for strengthening dairy development programmes in tribal areas which included factors like the education of farmers, building strong cooperative institutions, fixing reasonable milk prices, providing veterinary services, etc.

Karki, Bir Bahadur (2005) described in his article titled ‘Strategic Planning in Co-operative Sector: A Study on Dairy Co-operative’ viewed that Dairy cooperative is a very popular business not only in developing countries but also in developed countries like the USA, Germany etc. After introduction of WTO, the most of the dairy cooperatives of developing countries have been suffering from global competition. They cannot compete with the developed countries. Developed countries have been giving emphasis on the enhancement of dairy product and market expansion. Thus they suggested that strategic planning of developing countries must be to increase production volume of buffalo milk and to bring about the internal improvement in cooperative societies, to reduce cost of production, and to provide quality service to consumer through skilled, trained and educated manpower, e-commerce.

US Cooperative Information Report 1 (2005)\textsuperscript{26} expressed that United State’s dairy cooperatives had shown their ability to successfully adapt to changes in the marketing environment and offer a wide variety of avenues for dairy farmers to market their milk. U.S. dairy cooperatives have adopted the World trade issues, such as subsidy levels and import quotas, etc. In sum, the dynamics of the 21st century dairy industry presented a broad array of issues for dairy cooperatives as they planed and directed their operations to market members’ milk to its best advantage.

Rajendran and Mohanty (2004)\textsuperscript{27} found that the dairy co-operatives played a vital role in alleviating rural poverty by augmenting rural milk production and marketing. Involvement of intermediaries; lack of bargaining power by the producers; and lack of infrastructure facilities for collection, storage, transportation and processing were the major constraints which affected the prices received by producers in milk marketing. Milk quality, product development, infrastructure support development and global marketing were found to be future challenges of India’s milk marketing.

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Akho & Aotoshi (2003) studied Livestock Resources and Provision of Inputs in the operation area of the Kohima District Co-operative Milk Producers’ Union Ltd, (KDCMUL), Dimapur and observed that dairying being a relatively new occupation & amidst all strife-torn socio-political environments and a gloomy economic scenario, KDCMUL is one of the few economic enterprises successfully operating in the state of Nagaland. It had created a sense of inspiration & a ray of hope for the rural farmers & weaker section of population.

Prakasam and Suriakala (2003) studied the perception of women employees towards attitudinal environment prevailing in cooperatives. It is suggested that the discrimination in the work place on the basis of sex has to be eliminated and women have to be equally placed in all respects.

Bhatnagar et al (2003) studied the organisation called National Dairy Development Board (NDDB) as a national-level body involved in promoting, financing and supporting milk-distribution organizations in India with the help of Operation Flood (OF) program. The study revealed that organizing illiterate farmers was a challenging task, the quality and the hygiene maintenance of the milk being distributed as it is highly perishable in nature, etc.

Kumar (2002)\textsuperscript{31} studied the Milk Production Function and Factor Demand in Dairy Farming of from Meerut villages of Uttar Pradesh. It is revealed that the elasticities of production of green fodder input were positive but non-significant for all the breeds of milch animals. The study concluded that a small decrease in the price of green fodder is not likely to enhance its consumption substantially in the study area.

Devendra (2001)\textsuperscript{32} in his paper identified the constraints of smallholder dairy production system such as: limited choice of species; poor breeding programmes; unavailability of animals; lack of feed resources; inefficient feeding systems; poor management of animal manure, etc. He suggested interdisciplinary research and integrated natural resource management, development of partnerships between farmers and scientists to demonstrate increased productivity and sustainable dairy production systems.

Gakul Chandra Baruah (2001)\textsuperscript{33} studied on the dairy farming in Sibsagar District of Assam and concluded that the majority of the milch cattle were reared by the small farmers. Fodder cost had been found to constitute major portion of the cost of production Problems of marketing, lack of transport facilities, lack of unity among farmers, lack of contact with the extension workers, etc. are same of the constrains of cooperative.


Rama (2001) in his paper discussed the advantages of Personal Computers and internet in the milk collection Centres of the Dairy Cooperative Societies (DCS) this service help the dairy farmers with timely messages and for dairy related education system, effective scheduling and organizing the veterinary, artificial insemination, cattle feed and other related services.

Parthasarathy (2001) provided a detailed guideline in his paper titled National Policies Supporting Small-holder Dairy Production and Marketing that amendment in the co-operative laws and provision of alternative legal frameworks for control of infectious diseases of animals, disease surveillance, drug and vaccine quality enforcement, etc. He suggested that the step must be taken to improve the productivity of the cows to make milk production far more remunerative, quality of milk products to be improved.

Singh and Pradeep (2001) conducted the study and selected various variables operating in a mountain farming system that would influence the performance of a smallholder dairy farm. They concluded on the performance indicators that figures for cows are not much satisfactory; for buffaloes, they are reasonably good. Result of the study was that the poor performance of cows was reflected due to under nutrition, particularly during lean period. Buffaloes are better fed, for they are especially reared for milk sale. Shortage of bulls was another important cause of long dry periods in cows in the area.

Sarma (2000) in his book stated that even after all the support that are being extended to consumer co-operative, no significant stride had been made. He suggested that professional managers were required to look after the cooperatives, participative & responsive attitude of the members, getting the accounts audited internally & appraise at the board’s meeting, etc.

Deepak Shah (2000) reviewed the book titled ‘Amul-Story of a Growth Model with a Complete Story of Operation Flood’ as to how OF increased the production of milk and made it available to consumers in most of the urban areas of India and acknowledged problems faced by Kurien for his attachment with the concept & operational aspects of operation flood. The final section of the book also set out the agenda for the future growth and warned India against blindly following the model of the market-driven economy.

Chakravarty (2000) In the book described that the National Dairy Development Board-initiated cooperative movement has led to a substantial increase in milk production in India due to some degree been influenced by information technology. The cheap and credible technology was described to improve the prompt payment to the farmers and instilling their confidence in the cooperatives set-up. Other improvements and innovations had been in breeding and feeding technologies, and in processing and delivery infrastructure.

Walling (2000)\textsuperscript{40} explored the study related to the Kohima District Co-operative Milk Producers' Union Ltd, (KDCMUL), Dimapur and observed that the moderate satisfaction of farmers and the gradual changes in the attitude of the people towards milk in a society where flesh of animals constituted a basic element of food, would create an environment for the development of dairy industry.

Sasikumar (1998)\textsuperscript{41} studied the ‘Peasants, Subsistence and the Dairy Co-operative in Dry Land - A Fragile Existence’ and presented that through the development of proper network of procurement and distribution of milk might generate income for the farmer member. In conclusion he suggested that though there were 2700 cooperative societies working throughout Kerala but shortage of milk can be improved through proper State level milk grid.

Pandey and Pathak (1997)\textsuperscript{42} in their paper titled ‘Peasants, Subsistence and the Dairy Co-operative in Dry Land - A Fragile Existence’ observed that there existed a dynamic interaction between the text of dairy cooperative society and the dry land in agriculture in a tribal-peasant set-up. They concluded that without the realignment of the forces and the subsequent changes in the traditional arrangements, etc., a primary cooperative society may face disintegration.

\textsuperscript{40} Walling, Arlind. (2000) Studies on Livestock Resources and Provision of Inputs in the operation area of the Kohima District Co-operative Milk Producers' Union Ltd, (KDCMUL), Dimapur, Unpublished dissertation of M.Phil Degree, Department of Animal Production & Management, Nagaland University, Medziphema, Nagaland.

\textsuperscript{41} Sasikumar, M.V. (1998): Cooperatives And Decentralised planning in Kerala, Yojana, February.

Shiyani (1996)\textsuperscript{43} made an Inquiry into the impact of Dairy co-operatives on milk production and the study revealed that milk yield was positive for both cow and buffalo milk production. The significant difference in milk yield between members and non-members was due to higher use of feed nutrients, better management and veterinary services.

Mishra and Tushaar (1992)\textsuperscript{44} attempted and suggested that underperformance in co-operatives can be traced to failures in sub-systems namely, governing structure, operating system, critical linkages, patronage system and the micro-environment. Success of cooperatives was due to the managerial efforts for large-scale improvements in the general performance of co-operatives.

Acharya & Yadav (1992)\textsuperscript{45} studied the production & marketing of milk and concluded that the increase of productivity of individual livestock & production per farm can be enhanced by introducing improved breeds; improvement in productivity of village pastures, providing improved & balanced feed and veterinary care, training and education for the farmer to handle, sell, milk collection centres should have price guarantee mechanism, etc.


Kulkarni (1990) in his book attempted to study the profile of cooperative society and concluded that development of cooperative is positively related to the development of Telukas.

Madam Mohan (1989) in his book informed that the dairy co-operative societies were affected by overstaffing and uneconomic strength of manpower; strained employer-employee relationship; low procurement far below the handling capacity of Dairy units; highly overhead charges in spite of increase in milk sales. He also found that indifferent attitude of dairy management towards the producers and consumers; improper functioning of producers committee; non-establishment of consumers councils and per capita consumption of milk far below the prescribed standards.

Vithal (1986) studied the milk cooperatives of Ananthapur district of Andhra Pradesh and suggested that honesty, integrity should be taken into consideration while appointing the secretary. The dairy should arrange proper transport facilities to boost up milk procurement. Dairy should ensure proper support price to milk producers by taking into account the cost of milk production. Different schemes should be backed up with support facilities to make them successful.

From the above Review of Literature it is clear that there is a research gap in the study of dairy cooperatives in Nagaland. Not a single study has been conducted on the performance of cooperatives after the formation of DIMUL in Nagaland.