CHAPTER – 2

REVIEW OF LITERATURE

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REVIEW OF LITERATURE

"India lives in its villages" - Mahatma Gandhi.

Rural economy is the backbone of present Indian economic status. Rural economy in India has been playing an important role towards the overall economic growth and social growth of India. Predominantly, the rural character of Indian national economy is reflected in the very high proportion of population living in rural areas. According to the Census report of India 2011, rural population is 833 million (68.84 %) in comparison to 377 million (31.16 %) from urban areas. (Chandramouli. C. 2011). With more than 700 million people living in rural areas, and with the rural sector (700000 villages) contributing about 29 % of Indian Gross Domestic Products (GDP), no strategy of socio-economic development for India that neglects rural people and rural areas can be successful. (Singh Katar, 1999).

Most of the people living in rural areas draw their livelihood from agriculture and allied sectors (60.41 % of total work force), and poverty mostly persists here (27.1 % in 1999-2000). At the time of independence around 83 % of the Indian population were living in rural areas. Accordingly, from the very beginning, our planned strategy emphasized rural development and will continue to do so in future. People in rural areas should have the same quality of life as is enjoyed by people living in sub urban and urban areas. Further there are cascading effects of poverty, unemployment, poor and inadequate infrastructure in rural areas on urban centers causing slums and consequential social and economic tensions manifesting in economic deprivation and urban poverty. Hence rural development which is concerned with economic growth and social justice, improvement in the living standard of the rural people by providing adequate and quality social services and minimum basic needs becomes essential. (Anonymous 2012b).

The rural character of the economy and the need for regeneration of rural life was stressed in the very beginning by Mahatma Gandhi. He wrote in Harijan (4 April 1936):

"India is to be found not in its few cities but in 700,000 villages. But we town dwellers have believed that India is to be found in its towns and villages were created to minister to our needs. We have hardly paused to inquire if those poor folk get sufficient to eat and clothe themselves with and whether they have a roof to shelter themselves from sun and rain."

He further wrote in Harijan (29 August 1936):
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“I would say that if the village perishes, India will perish too. It will be no more India. Her own mission in the world will get lost. The revival of the village life is possible only when it is no more exploited.”


2.1 Rural Development – cause and its concept

The term 'rural development' is of focal interest and is widely acclaimed in both the developed and the developing countries of the world. There is however no universally acceptable definition of rural development and the term is used in different ways and in vastly divergent contexts. As a concept, it connotes overall development of rural areas with a view to improve the quality of life of rural people. In this sense, it is a comprehensive and multidimensional concept and encompasses the development of agriculture and allied activities—village and cottage industries and crafts, socio-economic infrastructure, community services and facilities, and above all, the human resources in rural areas. As a phenomenon, it is the result of interactions between various physical, technological, economic, socio-cultural, and institutional factors. As a strategy, it is designed to improve the economic and social well-being of a specific group of people—the rural poor. As a discipline, it is multidisciplinary in nature representing an intersection of agricultural, social, behavioral, engineering, and management sciences.

In the words of Robert Chambers, rural development is a strategy to enable a specific group of people, poor rural women and men, to gain for themselves and their children more of what they want and need. It involves helping the poorest among those who seek a livelihood in the rural areas to demand and control more of the benefits of rural development. The group includes small scale farmers, tenants, and the landless.

Thus, rural development may mean any one of these, depending upon our focus. To avoid ineffective floundering among the myriad definitions we shall define rural development as a process of developing and utilising natural and human resources, technologies, infrastructural facilities, institutions and organizations, and government policies and programmes to encourage and speed up economic growth in rural areas, to provide jobs, and to improve the quality of rural life towards self-sustenance. In addition to economic growth, this process typically involves changes in popular attitudes, and in many cases even in customs and beliefs. In a nutshell, the process of rural development must represent the entire gamut of change by which a social system moves away from a state of life perceived as 'unsatisfactory' towards a materially and spiritually better condition of life.
Anriquez and Stamoulis (2007) studied on the role of agriculture in rural development and poverty reduction and concluded agricultural development can be an engine of growth and poverty reduction in developing countries under several conditions. They also reported some of the conceptual issues regarding the role of agriculture in both rural and overall development, emphasizing its role in poverty reduction. They defined rural development as the development that benefits rural populations; where development is understood as the sustained improvement of the population’s standards of living or welfare.

2.2 Determinants of Rural Development

Rural development is characterized by multiple goals. There is no single index or indicator which can adequately capture the multifaceted nature of rural development. At the same time, unless we measure the phenomenon of rural development, we are unlikely to know much about the quantitative impact of the factors that influence it. In the absence of single index of rural development it is suggested to use change in output as a proxy measure, and discuss the role of various factors that appear to us, on an a priori basis, as important determinants of this measure. Let us assume that change in output is a function of changes in the following determinants:

1) Natural resources
2) Employment
3) Capital
4) Technology
5) Organization and institutional framework

This can be expressed in notational form as follows:

Where,

\[ Y = \text{Output}, \]
\[ R = \text{Natural resources}, \]
\[ N = \text{Employment}, \]
K = Capital,

T = Technology,

O = Organization and institution

This equation states that changes in output will be functions of changes in those variables appearing on the right hand side of the equation, i.e. natural resources, employment, capital, technology and organizational and institutional framework. The variables might be called the ‘instrument variables’ of economic growth or change in output. It is not easy to determine the causal relationship between Y and these variables. All change simultaneously, and the contribution of a single variable is difficult to isolate, but at least some statistical association are often possible, and have been established by a number of economists.

2.2.1 Natural resources

Natural resource means any product, thing or circumstance found by man in his natural environment that he may in some way utilize for his own benefit. In this sense, the resources provided by the nature are air, climate, soil, water, plants, animals, mineral ores, mineral oil, coal, natural gas, solar radiation, and certain amenities. At any level of economic development, utilization of domestically available natural resources constitutes the bedrock of an economy. (Singh Katar, 1999).

Deavers Kenneth L. and Brown David L. (1985) carried out a research based on comparison of demographic, income distribution, economic structure, and human capital differences was made among counties classified as being directly concerned with natural resources. Findings indicated that 42% of all rural counties are natural resource dependent.

2.2.2 Employment generation

Employment generation is one of the most important determinants of rural developments. Research undertaken in developed and developing countries of the world reveals that for an increase in output, the quality of labour is more important than the quantity. No country with an educated, technically trained labour force is poor, and no country with a pre-dominantly illiterate, untrained labour force is rich. Thus, education and training is equally important with the employment generation for the economic development. (Singh Katar, 1999).
2.2.3 Capital

Capital formation is an important prerequisite of economic development as the rate of economic growth is expressed as the product of the savings rate and output-capital ratio. Much of new technology, such as high yielding seeds, chemical fertilizers and pesticides, tractors, combine harvesters and food processing plants, is embodied in capital. Increase in the capital stock lead to increase in marginal productivity of labour, which, in turn, generally enhances wage rates. (Singh Katar, 1999).

Hull J. W. (2005) advocated the importance of equity finance, credit subsidies and venture capital and the role of cooperatives in rural development.

Takenaka Shigeo (2006) reported that Asian Productivity Organization undertook a survey in 10 member countries including, the Republic of China, India, Indonesia, the Islamic Republic of Iran, Japan, Lao PDR, Malaysia, Sri Lanka, Thailand, and Vietnam to analyze the impact of social capital on development performance at the village level during rural transformation. He concluded that the methods for rural community development, including the Integrated Community Development (ICD) programme, should therefore be modified to ensure that the role of social capital is not neglected in changing communities.

2.2.4 Technology up gradation

In essence technological advancement is an improvement in the process of production. That produces increase in output per unit of input. It is associated with improvements in knowledge and know-how, improved skills, utilization of better machinery and equipment, all of which combine to increase producibility. (Singh Katar, 1999).

In all likelihood, technological advance is the most important factor that accounts for economic development.

2.2.5 Organization and institutional framework

The organizations like National Bank for Agricultural and Rural Development (NABARD), National Institute for Rural Development (NIRD), National Dairy Development
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Board (NDDB) and several Non-government Organizations (NGOs) are working with different programmes, policies and services for rural development.

Organizations and institutions are important aids to development. They affect agricultural and rural development in many ways, including provision of production inputs and services, reduction of transaction costs, enhancement of bargaining power of rural producers vis-à-vis those to whom they sell their produce and from whom they buy production inputs and services, influencing investments and savings and bringing two together, and so on. The economic life of any community takes place in a milieu of organizations and institutions.

2.3 Women Empowerment

“You can tell the condition of a nation by looking at the status of its women”.

- Jawaharlal Nehru.

Empowerment as a goal is to have control over the determinants of one’s quality of life, and empowerment as a process is to create a professional relation where the client or community takes control over the change process, determining both the goals of this process and the means to use. (Tengland Per-Anders, 2008). Empowerment can be brought through control over life or health, autonomy, ability, self-efficacy, self-esteem, and freedom.

Empowerment is understood as “….possessing the capacity to make effective choices; that is, to translate one’s choices into desired actions and outcomes.” (Alsop & Heinsohn, 2005; Wendy Jassens, 2010).

Zimmerman (1995) described empowerment as “a construct that links individual strengths and competencies, natural helping systems, and proactive behaviors to social policies and social changes”. He proposed three components of psychological empowerment from a series of studies:

(a). The intrapersonal component, including domain-specific perceived control, self-efficacy, motivation control, and competence;

(b). the interactional component, including critical awareness, an understanding of causal agents, skill development, skill transfer across life domains, and resource mobilization; and
(c). the behavioral component, including community involvement, organizational participation, and coping behavior.

Empowerment is an essential component of therapy. Empowerment could be regarded as a multifaceted construction reflecting the different dimensions of psychological capabilities. (Hsu, W, 2009) (Menon, 1999).

“Woman has been suppressed under custom and law for which man was responsible and in the shaping of which she had no hand… women has as much right to shape her own destiny as man has to shape his…It is up to men to see that they enable them to realize their full status and play their part as equal of men” -Mahatma Gandhi.” (Shanthi Nachiappan and S.N. Soundara Rajan, 2008)

Empowerment includes totally or similar following capabilities,

1. Having decision making power of their own.

2. Having access to information and resources for taking proper decision.

3. Having range of options from which they can make choices.

4. Ability to exercise assertiveness in collective decision making.

5. Having positive thinking on the ability to make change.

6. Ability to learn skills for improving one’s personal or group power.

7. Ability to change others’ perceptions by democratic means.

8. Involving in the growth process and changes that is never ending and self initiated.

9. Increasing one’s positive self image and overcoming stigma.

Fatemi Iman et. al (2011) has advocated following five criteria for women empowerment:

1- Welfare criteria :

In this criteria, men and women as human resources of development should enjoy of desirable welfare conditions and equality.
2- **Access criteria:**

Men and women would equally access to sources and facilities. Concept of enabling at this stage is that women have equal right to access to sources at family and greater society.

3- **Conscientisation criteria:**

Women should know that their problems aren’t due to their individual inefficiency and shortage but it has emerged by social system in which discriminations has become formal and acceptable issue.

4- **Participation criteria:**

One the most important item that this criterion has considered is men and women’s equal participation at decision making process of affairs of family and at society.

5- **Control criteria:**

This criterion emphasize on this point that in addition to equal access of men and women to development sources, they must have adequate control on these sources that this issue is balance criterion, between men and women so that no one exceed other one.

Fatemah Allahdadi (2011) studied on community development strategies for rural development and women empowerment. She worked on four types of women empowerment system viz. community empowerment, political empowerment, organizational empowerment and psychological empowerment. It was suggested that strategies should be designed and implemented in ways that meet rural women’s diverse needs, community participation processes can be important to facilitating social, technological, political and psychological empowerment in terms of rural development. The results obtained prove to be suitable for the empowerment of rural women to take control of the management of local development in their villages. Because with the empowerment of women, the elimination of gender discrimination and the creation of a balance of power between men and women, will not only be beneficial to women, but society as a whole shall benefit politically, economically and culturally.

Tromp and Roestenburg in their study in textile industry in South Africa also confirmed the gender equality for women empowerment. The conclusion is reached that
empowerment of women can be achieved through traditional interventions such as affirmative action and complete equality between gender groups in appointments. But, it is also concluded that significant empowerment of women can be achieved through making very small but significant changes in the work environment.

Gharaibeh studied on women’s empowerment in Bahrain (Arab gulf country) on three aspects of women’s lives within the context of Bahraini traditions, cultural norms and expectations, legislation, and the political process. The several factors like education, equality in society, violence, rights of women were considered and it was concluded that the challenges to empower Bahraini women lie in their social and cultural inheritance, deeply rooted in Bahraini traditions and in the constitution and parliamentary framework of the country. The importance of government, civil society associations and political organizations was emphasized in the study to push the pace of women empowerment.

Saleh Mahasin F. (2011) studied on a project in Jordan viz. The Bani Hamida Weaving Project established by Rebecca Salti (A pioneer in Women empowerment in Jordan). The project became a model income-generation project throughout the developing world and is internationally known. It continues today with the participation of three generations of rural Bedouin women of the Bani Hamida Tribe. Rebecca’s skills, energy, and vision led her to establish other income-generation. They opened exhibitions of the works of the Bani Hamida Project and Jordan River Designs, marketing and selling the rugs and handicrafts, thereby bringing the socio-economic development and women upliftment.

Shanthi Nachiappan and S.N.Soundara Rajan (2008) did the analysis of economic empowerment of women through Working Women’s Forum, an NGO founded in Chennai, India by Dr. Jaya Arunachalam, a recipient of Padmashree award. The Working Women’s Forum (WWF), an NGO and a Society located at Chennai, has reached more than 700,000 women living in slums and working as small-scale traders and vendors. The women’s used appropriate information technology to create a massive database of its members and managed their details of social background, borrowings and refunds, family particulars and continuously upgraded their member’s details. The outstanding feature of this intervention was that the women who are not all that highly educated have adopted the technology. They had been trained and they effectively disseminated their knowledge to the members who have developed confidence in the system. The database management through fault less technology adoption consisting of data warehousing and data mining to retrieve any information at the shortest time helped them to serve their members efficiently. It’s no doubt that the technology has definitely served their cause and also proved to be of low cost and easily adoptable. The
sharing and caring feeling most dominant among the poor has led to bring the participatory
development in the women through this NGO.

Taborga Carolina (2009) emphasized the gender equality and social upliftment of
women achieved through INSTRAW (International Research and Training Institute for the
Advancement of Women). The UN International Research and Training Institute for the
Advancement of Women (INSTRAW) is the only United Nations institute with a mandate to
conduct research and capacity building for gender equality and women’s empowerment.

Torri Maria-Costanza and Martinez Andrea, carried out a study on women’s
community enterprise promoted by local NGOs in the state of Tamil Nadu in India, usually
known as GMCL (Gram Mooligai Company Limited). GMCL has been promoted by local
NGOs in the state of Tamil Nadu and is an example of community women enterprise. Its main
purpose is to assess the impact of GMCL on enhancing economical and social empowerment
of women in order to better understand the potential of this particular type of initiative in
promoting capacity building and local development. It was concluded that increasing
women’s participation must take into account potential costs. Without measures to address
gender inequality, such as capacity building initiatives, enterprise development may merely
increase women’s workload and responsibilities without increasing their control over income.
Major outcomes of this research include giving voice and visibility to poor women,
identifying their preferences and decision making needs to poverty reduction.

Torri Maria Costanza (2010) carried out a study in Sariska region of Rajasthan, India
to analyse the benefits of community development programme in gender analysis, structural
and power allocation. The role of women was analyzed inside the Gram Sabha, which is the
village institution used at community level for the management of natural resources. It was
concluded that the community-based conservation initiatives have helped women to improve
their social status and to become aware of their role within their communities. It was also
interesting to note that these women's committees, formed with the aim of forest conservation
and supported by local leaders, have extended their initial brief and are taking up other social
reforms such as fight against dowries, early marriages etc.

Self Help groups (SHGs) are formed to alleviate poverty. Groups of individuals
who are below the poverty line are given micro credit for generating income through small
income-generating activities. The basic principles of homogenous groups is that the members
know each other, and can maintain friendly relations in connection with complex financial
transactions.
Ramachandar Lakshmi and Pelto PJ (2009) studied over the influence of SHGs in rural development and women empowerment through microfinance in Bellary district of Karnataka. It was reported that the increased access to money, ability to buy consumer goods, release from the dependence on daily wage labour, and improved housing have all had positive effects on the women’s lives. SHGs also improved Inter-caste and Inter-community relations, and understanding across some cultural barriers within the group improved relations.

Educational institutions share a great responsibility in upliftment and empowerment of women. Educated women represent the hope of expanding our cultures, societies and economies. An educated woman can interact with her peers and contribute positively to life and can influence others directly through advising, informing and encouraging. Educated women make social changes and improvements through spreading democracy and emphasizing the human side in their relations with people in society.

Nasralla Emily (2006); Nassar Anita Farah(2006) emphasized the role of Lebanese American University in education of Lebanon and Arab world. It brought the empowerment of Arab women in the school classroom while teaching reading and writing, as well as in the home, where they instituted a new style of education that included mothers and other family members.

Kaddoura Maha(2006), Sfeir Myriam(2006) Zuhur Sherifa(2006) emphasized the role of higher education and stated that an educated woman is the most precious jewel that can be offered to the nation for building the future. Given more space, they addressed women's literary and cultural expressions and their impact on the road to empowerment.

Mastey Nimi studied on the models of empowerment applied by two different widow ashrams: Ma-dham and Chetan Bihar, conducting individual interviews of the women living in ashram; and proposed the need for widow ashrams in Northern India to look specifically at the needs of individual widows and shape the resources to better suit the women and fits their needs more closely. She concluded that rather than handing down resources to the widows, there needs to be a shift towards working with the women and helping them accomplish their own self-identified goals.

Wendy Jassens, 2010 investigated the impact of Community Based Development programmes in India. The Data were collected from 2,000 households operating through the “Mahila Samakhya Programme”, in Bihar. The study estimated the impact of the programme on trust and cooperation in rural communities. Mahila Samakhya programme has resulted in
significant increases in trust in community members and in strangers. In addition, contributions to community projects such as the construction or maintenance of schools, roads, and bridges are significantly larger in programme villages than in control villages. The impact of the programme was especially large among the lower castes and the poorest and least educated households.

Sathiabhama K. emphasized the contribution of Self help groups (SHGs) in women empowerment and reported that Self Help Groups (SHGs) have paved the way for economic independence of rural women. The members of SHGs are involved in Micro Entrepreneurships. Through that, they are becoming economically independent and providing employment opportunities to others.

2.4 Emergence of Cooperatives

Cooperatives as formal associations came to be set up in India from 1904 mainly as credit societies, followed by non-credit societies from 1912. The Royal Commission on Agriculture in 1928 underlined the importance of cooperatives: "If cooperation fails, there will fail the best hope of rural India". Thus, the present scenario of dairy co-operative societies trace its origin from the emergence of an event in the past, i.e. the enactment of co-operative societies act, 1912. With three-fourths of the population in rural areas, cooperatives were considered necessary instruments of agro-socio-economic change.

In 1946, Anand pattern dairy cooperatives were established and during 1960’s, various state governments tried different strategies to develop dairying, including establishing dairies run by their own departments, setting up cattle colonies in urban areas, and organizing milk schemes Anonymous(2011a). Later, National Dairy Development Board (NDDB) was established in 1965 with the mission of making dairying a vehicle to a better future for millions of grassroot milk producers. This commitment has been rewarded with India’s emergence as the world’s largest milk producing nation. The Board’s programmes and activities seek to strengthen the functioning of dairy co-operatives by providing them financial assistance and technical expertise on milk production, employment generation, availability of milk, foreign exchange savings and increased farmer’s income. The operation food programme was further launched in three phases to cope up with the shortage of milk (Bandyopadhyay, 1996).

The Integrated Dairy Development Project (IDDP) was launched in the year 1993-94 in the non-Operation Flood, backward and hilly areas of the country like Orissa, Nagaland, Maharashtra, etc. in order to increase milk supplies in project areas by increasing local milk
production, and providing facilities for collection, chilling, processing and sale of milk, ensuring remunerative prices to milk producers and increasing their income, employment and nutritional standards. Central assistance under IDDP to the states is in the form of 100% grants in-aid. The scheme is being implemented in 22 States and one Union Territory. (Pal S.P., 2003)

Dairy cooperatives have helped in reducing poverty, improving nutrition, education and women development and thus have bring vast changes in the livelihood of the milk producers in India. Sixty percent of beneficiaries were small- or marginal farmers, or landless producers (Anonymous, 1998).

2.4.1 Functioning and services of dairy co-operatives

Initially dairy co-operatives were setup to abandon the dominance of private agencies in dairy industry. But nowadays, dairy co-operative share large responsibilities. The main constraint that milk producers seek to overcome by acting collectively is the marketing of their produce. The need to be assured of a secure market is a real one. It can be met by dairy farmers cooperatively establishing their own collection system and milk processing facility in order to convert their perishable primary produce, which requires special and timely attention, into products with longer-keeping quality for marketing purposes (Anonymous, 2005).

Farmer-owned dairy cooperatives engage in a variety of activities to provide members an assured market for their milk. They may negotiate prices and assemble, haul, manufacture, process, or market milk and milk products to wholesalers, retailers, or in their own stores. Dairy cooperatives range widely in size and function-some solely arrange for the sale of members' milk and provide few services, while others manufacture a wide range of products and may market their own branded products directly to consumers. Additionally, many offer supporting services for their members, such as providing field services, verifying weights and tests of milk, selling milk production equipment and supplies, and providing health insurance (Anonymous, 2005).

A dairy cooperative business is owned, operated, and controlled by the dairy farmers who benefit from its services. Members finance the cooperative and share in profits it earns in proportion to the volume of milk they market through the cooperative.

With the success of Anand pattern, government of India tried to replicate this pattern to other states under different five year plans and thus the emergence of many dairy co-operatives took place. Koli (2003) reported that in India more than 1, 01,427 primary milk co-
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operatives with 10 million milk producers are covered under the dairy co-operative and 176 milk unions are collecting milk on daily basis and generating income to the rural community.

Shiyani in his study on “An Economic Inquiry into the impact of Dairy Cooperatives on Milk Production” divided the sample into members and non members for study regarding the capacity of milk production in between members and non members and also between seasons. The result of decomposition analysis showed that difference in buffalo milk yield between member and non-member milk producers is 21.69 percent, 32.68 percent and 16.44 percent in rainy, winter and summer seasons respectively. Overall difference was observed to be 29.96 percent. This implies that the overall productivity of milk buffalo was relatively higher in respect of members of dairy cooperatives as compared to non members.

If, both neutral and non neutral components are added together, contribution of dairy cooperatives to the total change in milk yield is obtained. The contribution turns out to be positive in all the seasons and for over all period, indicating that milk yield per buffalo would be more in the case of members even if, the same mean levels of inputs are used. This proves the hypothesis that there is a positive impact of dairy cooperatives on milk production.

Anjani Kumar et. al. (2013), studied “Do Dairy Cooperatives Enhance Milk Production, Productivity and quality? Evidences from The Indo Genetic Plain of India.” and reported that a cross comparison between the member and non member farmers of Dairy Cooperatives suggests that scale of farming and level of adoption of improved animal have been significantly higher in members than non members of dairy cooperatives. In the same way higher quantity of production and productivity is observed among members of dairy cooperatives.

2.5 Impact of Dairy Co-operatives

2.5.1 Income generation through dairy co-operatives

Sidhu et. al. (2004), studied the impact of dairy on income and employment in Punjab. The study revealed that the livestock economy especially dairy is considered to be an economically viable alternative for increasing income and employment in the farm sector of Punjab.

Reddy (2000), studied the employment opportunities and the standard of living among the rural folk and compared between arable farming, mixed farming and dairy farming labourers in milk shed area of Vijayawada and the dry land area of Chittoor. The data was collected by survey method from selected respondents and analyzed. They found that mixed
farming created 32 percent of extra work as compared to arable farming. The dairy farming created 45 percent of extra work as against mixed farming and 92 percent of extra work as compared to arable farming. They also estimated that an additional employment for 129 days as compared to mixed farming and 225 days as compared to arable farming were found by maintaining dairy farm.

Meena et. al. (2009) studied the impact of dairy cooperatives on income and employment generation of milk producers in Rajasthan found that the average net income was significantly higher (Rs. 13,285.30) in the member group than non-member group (Rs. 3,602.75). The overall labour utilization per annum per household was also significantly higher (207.36 man days) in the member group than the non-member group (181.92 man days). The study noticeably indicated a positive impact of dairy cooperatives on the income and employment generation of milk producers in the study area.

Singh (2004) observed that cooperatives are paying better prices in reference of Ambedekar district of Uttar Pradesh.

Shukla (2009) conducted study in Kheda and Anand and found that most of milk producers are educated up to primary level. 60% milk producers are dependent on dairying for livelihood and net income is Rs 10335 per cross bred cow per lactation.

Patel (1974) reported that dairy farming has the necessary potential to enter in optimal plans of a farmer as a competitive enterprise which means their maintaining dairy animals would have to figure as a profitable farm enterprise in competition with cash and grain crop farming.

Battacharjee (1961) postulated that a farm to be categorized as of mixed type should realize at least ten percent of its gross income from livestock activities, the upper limit being 49 percent. It offers full scope for utilization of family labour and permanent establishment which could otherwise remain idle in lean season.

Dhondyal (1961) discussed that a farm to be scientifically termed as “mixed farm” must have a minimum of 20 percent of its gross receipt from the milch cattle. He mentioned that in any mixed farming scheme, livestock enterprise is complementary to the crop production programme so as to provide a balanced and productive system of farming.

Patel and Singh had conducted that dairy farming gives a regular flow of income as compared to crop cultivation. The result of their study to establish economic superiority of cross breed cow and typical rural farm condition in a dairy demonstration unit at Karnal.
showed that 30 cross breed cows and five hectares of land for fodder could bring about minimum income of Rs 6500 per month throughout the year.

Usha Tuteja and Narinder Singh (2004) conducted a study on employment and income generation through livestock based milk processing units in rural Hariyana. The study revealed that the production of milk in Hariyana grew at the rate of 4.07 per cent per annum during 1980-1981 to 2000-2001. Therefore, milk processing on commercial scale has great potential in terms of enhancing the income of the farmers by selling milk products in the expanding domestic and international markets.

2.5.2 Improved living standard

Venkatadri S., Swaroopa Rani K., Reddy G.Raghunadha. (2008) carried out a study over the improved livelihood of the farmers through dairy farming in Prakasam and Chittoor district of Andhra Pradesh. He found that dairy dominant integrated farming system which ensures sustainable income, reduces vulnerability marked by less indebtedness was one of the important factor preventing the incidence of the suicides, and is especially helpful to the farmers of drought prone region. In his study he found that ninety seven percent of the sample respondents indicated that farmers suicides are less in dairy developed areas and 97.8% expressed that it provides sustainable livelihoods. It is also reported that integrated farming (98.2%) ensured sustainable rural livelihoods and commercial agricultural (96.0%) increased suicidal rate in Andhra Pradesh. In the study area the percentage of indebtedness among the dairy farmers was very low i.e. only 35.5 and 38% in Prakasam and Chittoor respectively as against the state average of 82% households’ indebtedness.

Mattigatti (1990) studied the performance of milk producer’s cooperative societies and their impact on dairy farming in Dharwad district. The author selected a number of physical and financial indicators to evaluate the performance. The secondary data required was collected from the various annual reports of milk producer’s cooperative societies for the period 1986-88. He opined that both the physical and financial indicators of the societies showed significant growth in their values. The above average societies have already progressed with higher values for the indicators compared to below average societies, while below average societies well shown a greater rate of growth, hence; he concluded that over the period of time all these societies would contribute to the overall development of the societies.

Ramachandran (2004), studied the income and employment potential of dairy farming in different stages in Kanyakumari district of Tamil Nadu. The primary data collected from 100 farmers engaged in farming activities of five selected villages of Kanyakumari
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district. The study revealed that the dairy farming is an activity with great potential and has offered considerable scope for employment and income generation in Kanyakumari district, the dairy farming gives employment opportunities in the form of collecting dung, cleaning shed, watering and feeding animals, grazing and cutting grass, milking, sale of milk, processing of milk and milk products. It may be concluded that dairy constitutes the major proportion of the cattle population in the sample households. Cattle rearing occupy a pivotal place among women folk of the rural areas. Thus, dairy farming plays the main source of employment and income generation in the study area.

Sidhu et al (2004) studied the impact of dairy on income and employment in Punjab. The study revealed that the livestock economy especially dairy is considered to be an economically viable alternative for increasing income and employment in the farm sector of Punjab. It is clear that the contribution of livestock economy to the farm sector has increased over time whereas the contribution of crop sub-sector to the agricultural growth as well as NSDP has declined due to stagnation/fall in productivity of important crops, rise in fixed cost and degradation of soil and water resources. The importance of dairy especially on small and marginal farms has increased and the proportion of dairy to the total farm business income on these farms has increased. The economic sustenance of these farmers is primarily dependent on dairy enterprise as it helps in utilizing their surplus family labour, requires less land and water resources and provides cash income to meet their daily consumption needs. The dairy sector has also helped in generating employment on small, marginal and semi-medium farms despite fall in employment in crop production.

2.5.3 Livestock Management

Dairy co-operatives also provide the services of cross breeding, artificial insemination, veterinary services etc to the milk producers, helping in livestock management. It has also boosted their knowledge regarding the animal husbandry practices like breeding, feeding and management. Crossbreeding of local cows with specialized dairy breeds provide the technology for rapid increases in milk production (Anonymous, 1998).

Dixit et al (2004) studied the economics of milk production in five agro climatic zones of Kerala. The primary data with respect of farm inventory, production traits of Milch bovines, feeds and fodder fed, labour utilization, production and consumption of Milk, value of various inputs and outputs, expenditure on veterinary and other miscellaneous items etc. were collected from 750 households. The data pertained to the year 2002-03. The results of the analysis indicate that bovine husbandry forms an important component of the typical
homestead-farming situation in Kerala. The crossbreeding of cattle has resulted in the spectacular performance of dairy sector in the state.

Agrawal (1990) had find that productivity in cross bred cows in Western Uttar Pradesh is 3.8 Kg per day.

Tomar (2004) reported that, in Hariyana number of cross bred animals had increased in comparison of buffaloes and 18% share is of livestock asset in total asset.

Rao (2003) reported that recurring expenditure is Rs 10278 per lactation per animal. His study was conducted in Kanpur district of Uttar Pradesh.

Sharma (2004), in reference of Seekar district of Rajasthan observed that recurring expenditure is Rs17000/ and 25500/ per lactation for cross bred cow and buffalo respectively.

2.5.4 Improved Nutrition

The upliftment of milk producers has also resulted in their improved nutrition. Per capita milk availability has increased in the past decade. MOFPI (Ministry of Food processing in India) reports that in the year 2006-07 per capita availability of milk was 229 g per day. Per capita availability of milk was 258 g per day in 2009-10 increased from 241g per day in 2005-06, up from 112 grams per day in 1968-69 (Anonymous, 2011d). Reports suggest that per capita milk consumption in India is increasing with a growth rate of 1.5 %. (Anonymous, 2011c) Anil Srivastav, the director of NDRI, said that India has achieved the per capita milk availability (Anonymous, 2009).

2.5.5 Education

Operation Flood, in collaboration with NGOs, has established 6,000 women's dairy cooperative societies WDCSs and higher incomes for some women. Indirectly, it has expanded the number of children attending school because of the high income elasticity of demand for education in Indian villages (Anonymous, 2011e)

2.5.6 Women Upliftment

Women and girls constitute three-fifths of the world’s poor. In addition to their economic and income-generating activities, women assume multi-faceted roles in society. Reducing urban-rural disparities and gender inequalities is a crucial element for any poverty education strategy. (Anonymous, 2003). Efforts have been made to empower the women by increasing their participation in the dairy co-operatives. The first major effort to support women’s participation was funded and supported by the Ford Foundation in the states of
Andhra Pradesh and Bihar. It sought to create dairy co-operative societies for women led by women and managed by women. From the late 1980s the National Dairy Development Board (NDDB) placed a major emphasis on women’s education as part of our co-operative development programme, an activity designed to strengthen the role of women members in the control and governance of the dairy co-operatives (Patel Amrita, 1998). The programmes lead by NDDB has increased the women participation in dairy co-operatives. Increasing women membership in dairy cooperatives to 50 per cent has resulted in reorganization of the potential of this segment as decision makers having practical knowledge about animal husbandry practices. (Sapovadia Vrajlal and Achuthan Sarla, 2006).

Government of India has realized the existing disparities, and potential of women, and initiated a number of programmes for socio-economic emancipation of women during the plan periods. Support to Training and Employment Programme for Women (STEP) is one such programme being implemented by the Department of Women and Child Development, the Ministry of Human Resource Development. The scheme provides training for skill up gradation to poor and asset less women in traditional sectors like agriculture, animal husbandry, dairying, fisheries, handlooms, handicrafts, khadi and village industries, sericulture, social forestry, and wasteland development. Financial assistance is provided under this scheme for empowerment of women. Under STEP, Government of India has been promoting Women Dairy Cooperative Societies (WDCSs) through the various State Dairy Cooperative Federations in the country.

Dairy co-operatives have also provided the health insurance services to the member farmers. In 2005, Rajasthan Co-operative Dairy Federation offered Life insurance (Saras Suraksha Kawach) and cattle insurance to their members. In 2006 RCDF in collaboration with the ICICI developed a health insurance scheme to provide health cover to its members which was launched in January 2006, in which 45 % of the beneficiaries were the women. (Anonymous, 2006)

Increasing role of women in dairy co-operatives has also made them capable of generating the household income. Upadhyay Bhavana (2004) reported in her study that in low water shed areas of North Gujarat, especially Datiwada takula, where farmers are totally dependent on rain-fed agriculture; they are sustaining their livelihood from the dairy income brought home by women.