

Research Paper

17

Co-operatives and Rural Development in India

Katar Singh and RS Pundir



Institute of Rural Management, Anand—388 001, India

August 2000

Copyright ©2000 Institute of Rural Management, Anand (IRMA).

All rights reserved. Except for purposes of quotations, criticism and review, no part of this publication may be reproduced, stored in retrieval systems, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without prior permission of IRMA.

The opinions expressed in this publication are authors' own and not necessarily those of IRMA or any other organisations mentioned in this report.

Published by: Institute of Rural Management Anand
Post Box No. 60
Anand – 388001
Gujarat, India
Phones: (02692) 60181, 60186, 60246, 60391, 61502
Fax: (02692) 60188 *Gram:* IRMA, Anand
Email: corpas@fac.irm.ernet.in
Website: <http://irma.irm.ernet.in>

Printed at: Anand Press, Gamdi, Anand

Price: Rs.45/ US \$3

List of Abbreviations

AMUL	: Anand Milk Union Limited
CEO	: Chief Executive Officer
CIP	: Co-operative Initiative Panel
CPRs	: Common Pool Resources
DCCB	: District Central Co-operative Bank
DDP	: Dairy Development Programme
EEC	: European Economic Community
FSS	: Farmers' Service Society
GOI	: Government of India
ICA	: International Co-operative Alliance
IFFCO	: Indian Farmers' Fertiliser Co-operative
IRMA	: Institute of Rural Management Anand
KRIBHCO	: Krishak Bharti Co-operative
LAMPS	: Large - sized Adivasi Multipurpose Society
LT	: Long Term
NABARD	: National Bank for Agriculture and Rural Development
NDC	: National Development Council
NDDB	: National Dairy Development Board
NEP	: New Economic Policy
NGO	: Non Governmental Organisation
NRM	: Natural Resource Management
OED	: Operations Evaluation Department
OF	: Operation Flood
PACS	: Primary Agricultural Credit Society
PCARDB	: Primary Co-operative Agriculture and Rural Development Bank
SCARDB	: State Co-operative Agriculture and Rural Development Bank
SCB	: State Co-operative Bank
ST	: Short Term
WDC	: Women's Dairy Co-operative Society
WTO	: World Trade Organisation
YWCS	: Yemmiganur Weavers' Co-operative Society

CO-OPERATIVES AND RURAL DEVELOPMENT IN INDIA

Katar Singh and RS Pundir¹

Abstract

With more than 700 million of its people living in rural areas and with its rural sector contributing about 29 percent of the gross domestic product at factor cost at the 1993-94 prices, no strategy of socio-economic development of India that neglects the rural people and the rural areas can be successful. Rural development is, therefore, a *sine qua non* of overall development in India. Rural development is influenced by a multitude of factors such as natural resources, human resources, technology, and institutions and organisations including co-operatives. A co-operative is a form of organisation that is widely prevalent in developing countries including India and that has great potential as an instrument of rural development. India can rightly claim to have the largest network of co-operatives in the world. As of March 31, 1996, there were nearly 4.72 lakh rural co-operatives of 24 different types having the total membership of some 220 million and the total working capital of Rs.15,30,684 million. They occupy an important place in India's rural economy in terms of their coverage of rural population and their share in the total supply of agricultural inputs including credit and contribute significantly to rural development.

This paper characterises and distinguishes co-operatives from other forms of organisations and highlights the important place they occupy in India's rural economy. It examines their contribution to rural development that is broadly defined as a set of desirable societal goals such as increase in real per capita income, improved income distribution and equitable access to education, health care, and employment opportunities. It also identifies and briefly discusses some contemporary issues in the management of co-operatives and outlines strategies for their resolution. The authors assert that despite their overwhelming importance in India's rural economy, most of the co-operatives suffer from a variety of internal and external problems. The major constraints identified by the authors include the lack of professionalism in management; an archaic co-operative law, excessive control and interference by government;

lack of good elected leadership; small size of business and hence inability to attain financial viability; lack of performance-based reward systems; and internal work culture and environment not congenial to the growth and development of co-operatives as a business enterprise. It is argued in the paper that rural co-operatives need to be democratically governed by Boards of Directors elected by their members in good standing, unshackled from the archaic co-operative laws, liberated from unnecessary government controls, and managed professionally, if they are to survive and grow in the new era characterised by deregulation, privatisation and globalisation.

CO-OPERATIVES AND RURAL DEVELOPMENT IN INDIA

1.0 INTRODUCTION

Since time immemorial, India has been, still continues to be and will remain in the foreseeable future, a land of village communities. With more than 700 million of its people living in rural areas and with its rural sector contributing about 29 percent of its gross domestic product at factor cost at the 1993-94 prices (GOI 1999S5), no strategy of socio-economic development of India that neglects the rural people and the rural areas can be successful. Rural development is, therefore, a *sine qua non* of overall development in India. The term, rural development, is a subset of the broader term “development”, which is a subjective and value-loaded concept and hence difficult to define. Howsoever we define it, development is a universally cherished goal of individuals, families, communities and nations all over the world. The term, ‘rural development’, connotes overall development of rural areas as revealed in improved quality of life of rural people. In this sense, it is a comprehensive and multidimensional process and phenomenon. It 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. Generally speaking, development can be conceptualised as a non-decreasing set of desirable societal objectives such as increase in real per capita income, improvement in income distribution (equity), political and economic freedom, and equitable access to resources, education, health care, employment opportunities, and justice (Singh 1999a:9).

Rural development is influenced by a multitude of factors such as natural resources, human resources (labour), capital, technology, public policies, and institutions and organisations. Although the old school of institutionalists led by Thorstein Veblen, John R. Commons, and Karl Marx emphasised the role of institutions in economic development, the neo-classical economists did not assign any place to institutions in their theories (Singh 1999a:35). However, of late, as a result of failure of neo-classical economics to explain international and Intra-national differences in economic development, it is now widely

recognised that institutions and organisations are an important aid to development. The economic life of a community takes place in a milieu of institutions and organisations; the former embodying the rules of the game and the latter denoting formal or informal structures comprising groups of individuals having common interests. They together largely determine the economic structure of the community and set the rules in which the economic game is played.

Organisations affect rural development in many different 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, facilitating investments and savings and bringing the two together, and so on. Vaidyanathan (1996:2451-58) examines in detail the institutional imperatives of agricultural development in India. He highlights the crucial importance of institutional reforms, particularly in the domain of public systems for sustained agricultural development.

There are many forms of organisations such as public (government) agencies, sole proprietorships, partnerships, companies, co-operatives and charitable trusts that can and are, in fact, serving the needs of rural people in India. Government intervention in the rural sector in India can be traced to the last quarter of the 19th century. Since then, the government has expended thousands of crores of rupees on agricultural and rural development programmes and is, by all accounts, the biggest agent of rural development. Co-operatives also have played an important role in promoting agricultural and rural development in India, particularly in the field of credit, processing, and marketing. The dairy co-operatives of Gujarat and sugar co-operatives of Maharashtra are good examples of co-operatives that can promote and sustain rural development.

Gandhiji saw a great virtue in co-operation as an instrument of rural development. He assigned specific roles to co-operatives in the field of agriculture commending the promotion of co-operative farming and thereby preventing further fragmentation of land holdings. He also advocated the establishment of other types of co-operatives such as credit co-operatives, weavers' and spinners' co-operatives and dairy co-operatives. Pt. Jawahar Lal Nehru, the first Prime Minister of India, also had a strong faith in the co-

operatives. He wanted India to be “convulsed with the co-operative movement”. Sardar Vallabhbhai Patel, the first Deputy Prime Minister and Home Minister of India, had great faith in co-operation as a means of promoting farmers’ wellbeing. He was the prime source of guidance and assistance for the Kheda District Co-operative Milk Producers’ Union Limited, popularly known as AMUL, which later became a model of co-operative dairy development in India.

This paper aims at examining the role of co-operatives in rural development in India. It is mainly based on a review of the relevant literature available on the subject. The paper is divided into six sections including this Introductory Section. Section 2 traces the origin and evolution of co-operatives. Section 3 characterises the co-operative as an organisation and distinguishes it from other forms of organisations. Section 4 presents a profile of co-operatives in India and briefly examines their performance and the factors affecting it. In Section 5, an attempt is made to assess the impact of co-operatives, especially milk and sugar co-operatives, on rural development. And finally, Section 6 identifies and briefly discusses some contemporary issues confronting co-operatives and outlines strategies for their resolution.

2.0 THE GENESIS AND EVOLUTION OF CO-OPERATIVES

A co-operative is a form of organisation that is widely prevalent in developing countries including India. It has great potential as an instrument of rural development. Co-operation as an ethical norm has been eulogised all over the world since time immemorial. As a mode of social behaviour, it is manifest in countless activities of people performed for the purpose of achieving a common goal. From the philosophical perspective, co-operation and its opposite, competition, are two basic tendencies of human behaviour and both co-exist in every individual. Co-operation can emerge under highly diverse situations and accordingly there are several theories/propositions that seek to explain why people do and do not co-operate (Singh 1996a). The origin of formal co-operation in the form of a co-operative organisation is traced to Europe, particularly, England, France and Germany, in the mid-nineteenth century. Robert Owen of England, Charles Fourier of France, and Herr F.W. Raiffeisen and Herr Franz Schulze of Germany are considered as the founding

fathers of the modern co-operation (Craig 1980:38, Madan 1994:25-27). In 1844, a group of people in Rochdale, England, formed the Rochdale Society of Equitable Pioneers to obtain higher wages from their employers and to set up a co-operative store. The Rochdale Society became the model for similar stores and related enterprises throughout the world. Around the same time, Fourier established “phalanxes” in France and Raiffeisen and Schulze pioneered and implemented the idea of co-operative banks in Germany. Subsequently, in other European countries also, co-operatives emerged primarily as people’s response to their exploitation by moneylenders and traders. **With the emergence of co-operative movement in Europe, the International Co-operative Alliance (ICA) was established in 1895. Its main responsibility was to co-ordinate the activities of affiliated co-operative federations in various parts of the world.** Establishment of communism in USSR and subsequently in other countries was instrumental in promoting government-directed, or parastatal co-operatives. Some co-operatives failed and some others succeeded. Despite their failures and weaknesses, co-operatives have survived over time and now control significant shares of markets in many developed and developing countries including market-oriented economies. For example, in USA, co-operatives command 70 per cent of the fluid milk market, 80 per cent of the fresh fruits market, 35 per cent of agricultural credit of all types, and 30 per cent of the grains and oilseeds market (Dwivedi 1996:723).

In most developing countries including India, co-operatives were promoted by their governments as instruments of rural development. In India, thanks to the British legacy, the co-operative form of organisation was born in 1904 consequent upon the enactment of the Co-operative Credit Societies Act. Subsequently, a more comprehensive act, the Co-operative Societies Act, was enacted in 1912. This Act provided, *inter alia*, for the creation of the post of Registrar of Co-operative Societies, registration of co-operative societies for various purposes, and audit. Under the Montague-Chelmsfort Reforms effected in 1919, co-operation became a Provincial Subject and the provinces were authorised to make their own co-operative laws. Under the Government of India Act 1935, “co-operative societies” were treated as a State Subject. In order to facilitate the establishment of co-operatives having membership from more than one Province, the Government of India enacted the Multi-Unit Co-operative Societies Act, 1942. Later a more comprehensive Central legislation,

the Multi-State Co-operative Societies Act, 1984, was enacted by Parliament with a view to consolidate different laws governing the same types of co-operative societies.

After India attained Independence in August 1947, co-operatives assumed greater significance as an instrument of socio-economic development and became an integral part of India's Five Year Plans. The All India Rural Credit Survey Committee Report, 1954 recommended an integrated approach to co-operative credit and emphasised the need for viable credit co-operative societies by enlarging their area of operation, encouraging rural savings, and diversifying their business. The Committee also recommended that the government should contribute to the share capital of the co-operatives. In 1958, the National Development Council (NDC) adopted a Resolution on National Policy on Co-operatives. Subsequently, in January 1959, the Working Group on Co-operative Policy set up by the Ministry of Food and Agriculture, Government of India, recommended a blueprint for implementing the NDC's Resolution. The Government of India has since provided massive financial, technical and administrative support to co-operatives both directly and indirectly through State governments (Dwivedi 1996:13-14).

3.0 THE CO-OPERATIVE VERSUS OTHER FORMS OF ORGANISATIONS

A co-operative is generally viewed as an autonomous association of persons united voluntarily to meet their common social and economic needs and/or objectives. Thus, a co-operative is a socio-economic organisation that is expected to have its members' interest truly at heart. For the purpose of this paper, we are concerned with co-operatives that are registered under a legislative act of either the Central government or a State government. A co-operative is based on certain values and principles of its own which distinguish it from other forms of organisations. The International Co-operative Alliance (ICA) Congress held in Manchester on September 23, 1995, adopted the following seven principles:

- i. Voluntary and open membership;
- ii. Democratic member control;

- iii. Member economic participation and limited interest on share capital;
- iv. Autonomy and independence;
- v. Provision of co-operative education, training and information;
- vi. Co-operation among co-operatives; and
- vii. Concern for community.

It has been observed that in many situations, adherence to these principles becomes an obstacle for co-operatives in attaining and retaining financial viability in the present era characterised by deregulation, privatisation and globalisation. In view of this, many liberal co-operators now question the sanctity of these principles but there are many orthodox co-operators who continue to maintain that these principles are essential for the existence of co-operatives as a distinct form of organisation. In addition, there is also a school of thought that maintains that co-operation has three dimensions, that is, economic, social, and moral, which are equally crucial for its success. The very motto of co-operation, “each for all and all for each”, signifies loyalty, trust, faith, and fellowship. A co-operative is a perfect democratic institution of the members, for the members, and by the members and is based on the ‘one-member-one-vote’ system of decision making.

The co-operative as a business organisation is similar in many ways and different in many other ways from other forms of organisations. The similarities are in the domain of roles and functions and differences in the manner in which the roles and functions are performed. Co-operatives are expected to reflect in their day-to-day practices the principles and values of co-operation which emphasise, *inter alia*, equality, equity, and mutual self-help.

Like any other business organisation, co-operatives are expected to ensure efficiency and profitability in their operations. But unlike other business organisations in the private and public sectors, a co-operative is both a social organisation and a business enterprise and, therefore, has a dual purpose; it serves both a social as well as an economic function. A co-operative manager must be concerned not only with the economic aspects but also with the social obligations of his organisation.

Co-operatives have higher comparative advantage over other forms of organisations in involving people in their activities, in mobilising people's resources and political power for achieving their goals, in identifying and developing local leaders through democratic processes, in securing vertical and horizontal integration of production, procurement, processing, and marketing functions, and in facilitating equitable distribution of benefits of development. All these advantages can help co-operatives in improving their competitive position as a business organisation vis-à-vis their competitors (Singh 2000: 343).

The economic rationale for a co-operative organisation lies in its endeavour to secure for its members the advantages of modern technology, economies of scale, access to national and international markets, and professional management. A co-operative organisation that does not want or cannot secure these advantages is doomed to failure sooner or later. Theoretically speaking, there is hardly a better organisational structure than the co-operative for achieving the dual goal of social and economic development but final success depends on the level of operational efficiency achieved (Dulfer 1974).

The major difference between co-operative management and management in other organisations is the greater need for co-operatives to involve directors, members, and staff in key positions in problem-solving and decision-making. This is no small task. Managers trained in traditional management schools, when confronted with a difficult situation, feel they must think it through for themselves and find out a solution. That is what they have learnt in management courses. Co-operative theory requires a different response. Co-operative managers are expected to take the problem out to the members, and staff and involve various interest groups in the development of solutions. Given the complex and diverse socio-cultural, economic and political environment in which co-operative managers operate and given the poverty, ignorance, and illiteracy of most of the members of the co-operatives they are supposed to serve, co-operative managers have to be far more creative, enterprising, affable and sensitive to members' needs and aspirations than their counterpart business managers. They have to have skills, dexterity and perseverance required for organising rural producers and empowering them. In addition, they must also be adept in empathising and sympathising with rural

people who because of their exploitation by unscrupulous landlords, moneylenders, traders and petty government functionaries and politicians for generations naturally tend to be suspicious and fearful. The co-operative manager must also be adept in establishing and maintaining harmonious relationship with his Board members. In a private business firm, the Chief Executive Officer (CEO) has to manage only one boss—the proprietor - but in a co-operative, he has to manage many bosses having different, often conflicting, expectations and interests. That is why managing a co-operative is much more difficult than managing a private business enterprise.

4.0 A PROFILE OF CO-OPERATIVES IN INDIA AND THEIR ACHIEVEMENTS

India can rightly claim to have the largest network of co-operatives in the world. As of March 31, 1996, there were nearly 4.72 lakh rural co-operatives of 24 different types having the total membership of some 220 million and the total working capital of Rs.15,30,684 million (Table 1). They occupy an important place in India's rural economy in terms of their coverage of rural population and their share in the total supply of agricultural inputs including credit. For example, co-operatives now cover approximately 99 percent of

Table 1
A Profile of Co-operatives in India, 1995-96

Type of Co-operative	Number	Member-ship ('000)	Paid up capital	Reserves	Working capital	Business operations
I. Credit Co-operatives:						
1.1 State Co-operative Banks (1996-97)	28	135.4	3950.7	19134.6	250094.4	*74684.1
1.2 District Central Co-operative Banks (1996-97)	364	1701.4	16476.1	19008.8	397163.6	*121286.1
1.3 Primary Agril. Co-operative Societies including LAMP® and FSS® (1996-97)	92260	91403.0	21059.5	18390.8	201911.9	*61137.7
1.4 State Co-op Agriculture & Rural Dev. Banks (1996-97)	19	5766.6	4344.4	8122.9	107702.1	*19178.7
1.5 Primary Co-op Land /Agl. & Rural Dev. Banks (1996-97)	1772	19006.0	7435.2	17695.1	214760.2	-
1.6 Primary Co-op Banks including Urban Banks	733	5950.9	3894.9	1764.2	54215.1	*10323.8
1.7 Non-Agri. Credit Co-operatives (Primary)	42494	24643.0	15629.6	5554.5	81387.9	46743.7

Type of Co-operative	Number	Member-ship ('000)	Paid up capital	Reserves	Working capital	Business operations
2. Marketing & Processing Co-operatives:						
2.1 Primary Co-op Marketing Societies	8236	5000.0	2947.3	-	15630.2	58028.5
2.2 Co-op Marketing Federations (1994-95)	448	3385.0	3221.4	927.4	37358.4	105847.9
2.3 Consumers' Co-operatives including students' co-ops.	30474	32800.0	4190.6	-	8594.1	54307.6
2.4 Sugar Co-operatives (1996-97)	253	3746.0	15096.5	-	87366.1	47565.9
2.5 Co-op Spinning Mills (1996-97)	275	694.0	3523.9	-	-	13486.3
2.6 Dairy Co-operatives (1996-97)	77993	9605.0	1780.2	-	6827.4	41706.0
2.7 Other Agro-processing Co-operatives**	1061	-	-	-	-	-
2.8 Fishery Co-operatives	12427	1938.0	292.1	-	1119.3	1494.9
2.9 Poultry Co-operatives	4412	455.0	92.8	-	420.9	300.3
3. Other Co-operatives:						
3.1 Labour Construction Co-operatives	27099	1367.0	1230.3	-	3518.0	4852.6
3.2 Forest Labour Co-operatives	3854	764.0	53.3	-	2169.6	401.8
3.3 Weavers and Non-Weavers Co-operatives	56850	3766.6	1655.0	-	9555.2	13246.7
3.4 Women's Co-operatives	8171	692.7	179.3	-	1408.1	811.3
3.5 Co-operative Farming Societies	6915	316.5	71.6	-	602.1	269.7
3.6 Irrigation Co-operatives (1996-97)	6266	506.3	187.7	-	6474.8	-
3.7 Housing Co-operatives including Apex Co-operatives (1996-97)	90025	6030.1	6616.7	-	42404.4	-
3.8 Electricity Co-operatives (1994-95)	52	781.0	-	-	-	-
All	472481	220453.5	113929.1	90598.3	1530683.8	675673.6

Source: Indian Co-operative Movement - A Profile 1998, National Resource Centre of National Co-operative Union of India, New Delhi.

Data relate to 1995-96, unless otherwise stated.

* Total agricultural loans/advances issued.

** Includes edible oil, rice, dal, fruits & vegetables and plantation crops.

@ Large-sized Adivasi Multi - purpose Societies.

@@ Farmers' Service Societies.

India's villages, 67 percent of the total rural population and account for 44 per cent share in the rural credit flow for agriculture, 31 per cent in rural deposits, and 34 percent of the total quantity of fertilisers distributed in the country. The two giant co-operative fertiliser plants—the Indian Farmers' Fertiliser Co-

operative (IFFCO) and the Krishak Bharati Co-operative (KRIBHCO)—manufacture about 21 per cent of the fertilisers produced in the country. The co-operatives account for over 60 per cent of the total sugar output in the country and about 50 per cent of the edible oil marketed under brand names. They are responsible for 27 per cent of the total wheat procurement and 21 per cent of the total jute procurement in the country. They also own 26 per cent of the total rural fair price shops.²

Since their birth in 1904, co-operatives in India have treaded a long and arduous path. They have performed well in some places and badly in many other places. But the fact remains that most of them have survived, albeit with a rather heavy dose of oxygen, for over 90 years and there is no reason for anyone to believe that they will all die in the near future. So it is worth our time and energy to examine their performance, and the factors affecting it.

So far as the determinants of performance of co-operatives are concerned, there are three distinct schools of thought. One, which may be called ‘structuralist’ believes that it is primarily the strategy, and the organisation structure/design of a co-operative that determine to a large extent its performance – success or failure. Shah (1996), who is an ardent proponent of this school, studied a large number of cases of successes and failures in the co-operative sector and identified three critical determinants of success of co-operatives, namely, swayambhu (creation by members themselves), complete autonomy, and member loyalty and allegiance. He asserts that these attributes are an outcome of “design” and not of exceptionally good leaders and managers (Shah 1996:285-86). The second school of thought, which may be called ‘contextualist’ emphasises the importance of the context—socio-economic, political, legal, and policy—as a major factor affecting the performance of co-operatives (Baviskar 1980 and Attwood and Baviskar 1987). The third school, which is management-oriented, argues that it is the quality of management and leadership which matters most in determining the success and failure of co-operatives (Singh 1996 a and 2000). We believe that it is all the three sets of factors, i. e., structural, contextual, and management, that together determine the performance of a co-operative, or for that matter any other organisation and that, to some extent, they could be substituted for one another.

Now we present brief profiles of important types of co-operatives in India and examine their performance by mainly drawing upon some of the published research studies.

4.1 Credit Co-operatives and Banks

Credit co-operatives and co-operative banks are the oldest and most numerous of all the types of co-operatives in India. The co-operative credit system in India is comprised of the Short Term (ST), or Production Credit structure and the Long Term (LT), or Investment Credit structure. The ST structure has at its base the Primary Agricultural Credit Societies (PACS), the Farmers Service Societies (FSS), and Large-sized Adivasi Multipurpose Societies (LAMPS) in tribal areas. All the base level societies are affiliated to District Central Co-operative Banks (DCCB) at the district level, which in turn, are affiliated to State Co-operative Banks (SCB) at the State level. As on March 31, 1998, there were 92,000 PACS, 367 DCCB, and 28 SCB in India purveying short-term and medium/long-term rural credit. The smaller States and the Union Territories had a two-tier structure whereas the larger States had a three-tier structure. In the two-tier structure, the credit requirements of PACS are directly met by SCBs. As in March 1998, the LT structure consisted of 19 State Co-operative Agriculture and Rural Development Banks (SCARDB) of which 11 had federal/mixed structure with 745 Primary Co-operative Agriculture and Rural Development Banks (PCARDBs) and 8 had unitary structure with 1500 branches (NABARD 1999:2).

The rationale of the co-existence of two parallel co-operative structures (ST and LT) of purveying credit has been questioned time and again. In fact, the Hazari Committee (ARDC 1976) had recommended the integration of the two structures long back. More recently, the Narasimham Committee on Banking Sector Reforms (GOI 1998) also had recommended the delayering of the co-operative credit structure. The integration is justified on the grounds of efficiency in operations and management, financial viability, and better services to borrowers. Consequently, some degree of integration has already taken place at functional level in many States (Satyasai and Viswanathan 1998:478).

At the national level, some indicators of coverage and performance of both ST and LT credit institutions are available (NABARD 1999:1-19). As of March 31, 1998, the average number of villages covered per PACS in the country was seven with the Western region having two villages per PACS and the North East region having 21. The total number of PACS members was 997.10 lakh of which 411.27 lakh (41.3%) were borrowing members. The total membership of the LT institutions at the ground level was 131 lakh of which 98 lakh (71%) were borrowing members. In 1995-96, the total loans issued by PACS amounted to Rs. 11,505 crore and the average loan business per PACS in 1996-97 was Rs. 14.08 lakh. As on March 31, 1996, of the total number of PACS, 65 per cent were viable, and another 28 per cent were considered potentially viable. Of the remaining, 3,113 societies were dormant, and 735 societies were defunct. In 1997-98, 211 DCCBs reported profits aggregating Rs. 317 crore whereas 156 DCCBs suffered losses to the tune of Rs. 473 crore. In the LT structure, of the 19 SCARDBs, 8 made profits and the remaining incurred losses. Of the 716 PCARDBs, only 283 made profits in 1996-97. The poor working results of the long-term structure are attributed to the application of prudential norms. In 1997-98, the total loans issued by SCBs and DCCBs amounted to Rs. 27,805 crore and Rs. 31,801 crore and the average recovery was 84 per cent and 70 per cent respectively. In 1997-98, the total loans issued by SCARDBs and PCARDBs amounted to Rs. 2,296 crore and Rs. 1,594 crore and the average recovery was 60 per cent and 55 per cent respectively. As of June 1998, the total overdues of SCBs and DCCBs stood at Rs. 2,391 crore and Rs. 7,534 crore respectively. In 1997-98, the total overdues of SCARDBs and PCARDBs were Rs. 1,225 crore and Rs. 978 crore respectively.

Quite a large number of micro level studies on the performance and impact of credit co-operatives are available.³ The main findings of a few of those studies and the determinants of poor and good performance of credit co-operatives as identified by them are summed up in the following paragraphs (Singh 1996c:833-35).

The performance of PACS was found satisfactory and their impact positive in a number of studies (see, for example, Bandyopadhyay (1996), Jayalatha *et al.*, (1996) and Kumar (1996). According to those studies, PACS played an important role in providing credit, seeds, fertilisers, gainful employment to

local people, mobilising local resources through a wide variety of activities, and providing various welfare services to the poor. In this sense, they directly and indirectly contributed to promoting rural development.

Sharma (1996) in her study of the role of co-operatives in the rural economy of Himachal Pradesh found that there had been a decline in the number of co-operatives and their membership over the years and that co-operatives had failed to provide credit and other services to their members. According to her, the primary credit societies were working more as suppliers of consumer goods and agents of public distribution system and that they suffered from the problems of low recovery and consequent huge amounts of outstanding loans, financial mismanagement, and lack of professional management. Gupta (1996) examined the role of land development banks in Jammu and Kashmir, and rated the performance as not encouraging. He identified lack of efficient management, huge overdues, declining trend in rural savings, lack of strict action against defaulters and waiving of loans as the main causes of the poor performance. Mukherji (1996) observes that the introduction of the financial sector reforms has reduced the flow of credit to the small scale agriculture and the handloom sector and argues that a social orientation of PACS is essential for sustained development of India's rural economy and for protecting the farmers from exploitation by private traders and corporate finance.

In a nutshell, we could conclude that although the credit co-operatives have made considerable progress in providing credit to agriculture and allied activities, they suffer from the problem of low recovery which has been further exacerbated by populist measures such as loan waivers, disbursement of loans in loan melas and stay orders on legal processes of recovery. In view of this, there is need for all party consensus at the national level for doing away with all such populist measures to ensure that co-operatives are not misused by politicians and other vested interests for their self-aggrandisement.

4.2 Milk Co-operatives

Growth and development of milk producers' co-operatives in Kheda district of Gujarat under the umbrella of Kheda District Co-operative Milk Producers' Union Ltd., popularly known as AMUL, during the fifties and sixties demonstrated the potential of co-operatives as an instrument of dairy

development.⁴ After having visited AMUL and a village milk producers' co-operative society in October 1964, the then Prime Minister of India, Lal Bahadur Shastri, got convinced about the suitability of Anand model and advised the Government of India to set up an organisation under the chairmanship of Verghese Kurien to replicate the Anand Pattern dairy co-operatives in India. Consequently, the National Dairy Development Board (NDDB) was established in 1965 with its headquarters in Anand. NDDB designed a programme called Operation Flood (OF) to replicate the Anand Pattern co-operatives in the country. OF is perhaps the world's biggest dairy development programme. Launched on July 1, 1970 in 18 selected milksheds, OF now covers 175 milksheds in India and is now in its Phase IV.

OF has contributed significantly to the modernisation and development of India's dairy industry. It has invested over Rs. 2000 crore in creating and strengthening the basic infrastructure for procurement, processing, transport, storage, and marketing of milk and milk products, for compounding of cattle feed, for provision of animal health care and breeding services, for manufacturing of dairy machinery, equipment and other materials, and for education and training of rural managers, farmers, and members of Boards of Directors of co-operative dairy unions and federations. As of March 1996, there were some 72,000 Anand Pattern milk producers' co-operative societies operating in India with the total membership of over 9 million milk producers spread over 175 milksheds in the country (Singh and Singh 1998:9). Some other salient features of OF are presented in Table 2.

The co-operative dairies under OF procure, on an average, some 96 lakh litres of milk every day and sell 93 lakh litres every day in some 185 metro and class I cities in the country. Co-operative dairies now handle about 12 per cent of the total liquid milk marketed in India. The total milk production in India has increased from about 21 million metric tonnes (mmt) in 1969-70 (pre-OF year) to about 74 mmt in 1998-99. India now is the highest milk producing country in the world and is almost self-sufficient in milk and milk products; in fact, it now exports some dairy commodities on a small scale. Besides, OF has generated millions of days of employment for the rural poor and improved their socio-economic condition. All these achievements can be largely attributed to

OF which represented a paradigmatic shift from privatisation to co-operativisation of India's dairy industry (Singh 1999b:201-223).

Table 2

Salient Features of Operation Flood and Achievements, 1970-96

Features	Operation Flood (OF) Phase:		
	OF - I	OF - II	OF - III
Date When Started	July 1, 1970	October 2, 1979	April 1, 1985
Date When Concluded	March 31, 1981	March 31, 1985	March 31, 1996
Investments (Rs. crore)	116.5	277.2	1303.1
No. of Federations/Apex Milk Unions set up	10	18	22
No. of Milksheds covered	39	136	170
No. of DCSs set up ('000)	13.3	34.5	72.5
No. of Members (lakh)	17.5	36.3	92.63
Average Milk Procurement (mkgpd)	2.56	5.78	10.99
Liquid Milk Marketing (llpd)	27.9	50.1	100.2
Processing Capacity:			
Rural Dairies (llpd)	35.9	87.8	180.9
Metro Dairies (llpd)	29.0	35.0	38.8
Milk Drying Capacity (MTPD)	261.0	507.5	842.0
Technical Inputs:			
No. of AI centres ('000)	4.9	7.5	16.8
No. of AIs done at end (lakh/year)	8.2	13.3	39.4
Cattle feed capacity ('000 MTPD)	1.7	3.3	4.9

Sources: (1) Dairy India 1997; (2) Quarterly & Monthly Progress Reports on Operation Flood, NDDDB, Anand, 1996 as quoted in Singh (1999b:205).

mkgpd: million kg per day; llpd: lakh litre per day; MTPD: metric tonne per day.

In their study in Madhya Pradesh, Singh and Acharya (1986: Tables 5.11 and 5.12) made an attempt to determine, *inter alia*, the profitability of milk production and found that gross margins in milk production after taking into account variable costs were very high – ranging from 30 per cent to 84 per cent. They also found that OF had raised the proportion of income from milk production. In addition, they asked a sample of selected milk producers their opinion about the benefits from Operation Flood. The responses were remarkably positive.

All in all, the Anand Pattern milk co-operatives are considered to have been most successful in serving their members as well as society at large. They have been most intensively studied by research scholars and have been both applauded and criticised (Singh 1999b:201-223). There is need for comprehensive national level studies to evaluate their financial performance and identify determinants of success.

4.3 Sugar Co-operatives

Co-operative sugar factories in India are a post-independence development although four such factories were set up between 1933 and 1935. The Pravara Co-operative Sugar Factory which was set up in 1950-51 in Shirampur taluka of Ahmednagar district of Maharashtra proved an outstanding success and inspired sugarcane growers and Maharashtra government to set up similar factories in the state. The Government of India also adopted a policy of encouraging co-operative sugar factories through preferential treatment to them over private and joint stock factories while issuing licenses. The State government assisted the co-operative sugar factories by contributing to their share capital but no subsidies or any other privileges were granted to them. Two renowned public figures, D.R. Gadgil and Vaikunth L. Mehta played an important role in assisting and guiding the co-operative sugar factories in the State. Like the Anand-pattern dairy co-operatives of Gujarat, sugar co-operatives of Maharashtra are also considered successful as instruments of rural development (Baviskar 1980; Attwood and Baviskar 1987). There are over 280 co-operative sugar factories in India now which account for about 60 per cent of the country's total sugar production.

Using a theoretical model, Sen (1996:193-225) examines the rationale of co-existence of sugar co-operatives and joint stock companies in the Indian sugar industry. He analyses the relative strengths and weaknesses of both the forms of organisation and attempts to explain why the co-operative form prevails in some regions of India and the joint stock company in others. In his opinion, sugar co-operatives have an advantage over joint stock companies in terms of their ability to achieve more effective co-ordination of their own activities with those of the member sugarcane suppliers and thereby to ensure optimal investment and production decisions. He concludes that neither form is globally superior; in terms of some parameters, the co-operative form is better and in terms of others, the joint stock form is superior. This explains their co-existence, in his opinion.

While reviewing the growth and performance of sugar co-operatives in Maharashtra, Gadgil (1975:280-293) identified several determinants of their success. They included a producer oriented pricing policy that ensured remunerative and stable price of sugarcane; producer owned and controlled co-operative sugar factories; provision for a proper depreciation reserve and compulsory deposits by members; provision of technical guidance and inputs to sugarcane growers by the agriculture departments created within each factory; equitable distribution of benefits from sugar factories among the members; and provision of welfare services. He also lists some undesirable, albeit unintended, effects of sugar co-operatives such as keen competition among their members and bitter and expensive elections to gain control over the co-operatives, lack of focus on improving the internal management and efficiency, and indiscriminate extension of sugarcane cultivation to areas which were water-stressed. Baviskar (1980:4-5) identified a number of social, political, economic, and institutional factors that affect the performance of co-operatives. In his opinion, those co-operatives which are imposed from above by the Government or any other authority are likely to fail. On the other hand, if and when co-operatives are organised by the people themselves in response to their felt needs or to fight against some sort of exploitation, they are likely to succeed. He also found out that the success of a co-operative depended on its ability to fulfil the objectives for which it was established. Loyalty of members was identified to be another important determinant of success of a co-operative.

More recently, Apte (1996) examined the causes of success and failure of sugar co-operatives in the state. He identified several factors like installation of plants in shortest possible time, provision of irrigation facilities, bringing large areas under sugarcane cultivation, democratic functioning, provision of remunerative prices to the farmers, business-like approach, and diversification as the key to the success of sugar co-operatives. He also lists several factors including corruption and malpractices which are responsible for the ruin of some of the sugar co-operatives in the state. Suryawanshi and Gaikwad (1996) explored various determinants of spectacular success of the Warana Sugar co-operative in Maharashtra. They identified several contributing factors such as relatively high share capital, large acreage under sugarcane, provision to its members of improved inputs and services such as seedlings, soil testing facilities, farm implements and machinery, development of horticultural plantations, improved technical know-how, and irrigation facilities and provision of facilities for supplementary income from dairying and poultry.

To sum up, sugar co-operatives of Maharashtra present an example of how a single commodity co-operative could initiate a process of transformation of the entire rural economy through backward, forward and lateral linkages. The model needs to be studied more intensively and rigorously and lessons of experience of sugar co-operatives distilled carefully for their possible use in future policies.

4.4 Natural Resources Management Co-operatives

Natural resources management (NRM) co-operatives are of relatively recent origin in India but they are playing an important role in promoting participatory management of renewable natural resources such as wastelands, fisheries, water, and minor forest produce. Many micro level studies have been conducted recently in India to assess the impact of NRM co-operatives on rural development (Singh and Ballabh 1996). We present in the following paragraphs the major findings of a few selected studies.

Among the NRM co-operatives, fishermen's co-operatives are perhaps the oldest. It was way back in 1913 that India's first fishermen's co-operative was organised under the name, 'Karla Machhimar (fishermen) Co-operative Society' in Maharashtra. The state of West Bengal was the next to organise

fishermen's co-operatives in 1918. Now India has one National Level Federation, 17 State level federations, 108 Regional/District level federations/unions, and 12,427 Primary Societies with the total membership estimated at 1.94 million. According to Tewary (2000:370) fishery community is, however, amongst the weakest sections of society. The basic reasons of their retarded growth are illiteracy, poverty and lack of knowledge of latest fisheries technology. Lack of institutional support, both in terms of infrastructure and finance, is also an important contributory factor to their poor growth. For some time, fisheries co-operatives had yielded good results in some areas and saved the fishermen from exploitation by middlemen and improved their socio-economic conditions, but the over all impact of fisheries co-operatives is not encouraging. Although, India now ranks 2nd in world aqua-culture production with 1.6 million tonnes of fish and shell fish production valued at US\$ 2 billion, the average annual per capita intake of fish in India is very low at 3.5 kg when compared with the world average of 11 kg.

Chauhan (1996) in his study found that the fishermen's co-operatives had played a significant role in improving the socio-economic conditions of the fishermen in Himachal Pradesh. This was possible mainly due to the co-operatives securing for their members the fishing rights in the reservoir and getting them support (remunerative) price for their catch. The study revealed that the co-operatives suffered because of their inability to control the quality of fish and the market price.

Ram Mohan and Singh (1996:215-233) conducted a case study of two marine fishermen's co-operatives in Kerala. They found, *inter alia*, that both the co-operatives were instrumental in helping their members with securing loans for acquisition of modern fishing craft and gears and with marketing of fish to some extent. However, they did not do anything to regulate the access of members and non-members to the fishing territories under their jurisdiction and thus failed to exclude the non-members from fishing. This in conjunction with the introduction of motorised boats and modern gear led to over-exploitation of fish stocks in the inshore waters and conflicts among artisanal and modern fishermen. Similar results were reported by Rahim and Singh (1996:248-262) in an exploratory study of marine fishermen's co-operative societies in West Bengal. Datta (1996:359-380) is a bit sceptical about the

future of existing parastatal fishermen's co-operative societies. He argues for their closure and for organising new genuine model co-operative societies through spearhead teams working under the auspices of renowned non-governmental organisations (NGOs). In his opinion, such co-operatives could play an important role in the development of capture, marine, freshwater and small reservoir fisheries in future. He pleads for strategic alliances between such co-operatives and private sector firms in the areas of processing and marketing. A study conducted by the Council for Social Development concludes that the fishery co-operatives are an appropriate tool for promoting the interest of fishermen and emphasises the need for organising active fishermen into co-operatives (Tewary 2000:370).

Khodaskar (1996) evaluated the economic performance of a lift irrigation co-operative in Pune district of Maharashtra. He found that the co-operative had created a positive impact on the use of improved seeds, chemical fertilisers and plant protection chemicals and that farmers had started growing high-value vegetable crops on larger areas than before. Shiyani and Ghonia (1996) also studied the performance of selected lift irrigation co-operatives in Saurashtra region of Gujarat. The authors found that the performance of the co-operatives in terms of membership and net and gross command area was satisfactory for the co-operatives established between 1961-70 and 1991-96 whereas it was sluggish for those established between 1971-90. The authors do not, however, explain the difference in the performance of the co-operatives over the two periods of time. In an in-depth case study of one successful co-operative, the authors also found that homogeneous membership, outstanding leadership, higher literacy level of the members and availability of groundwater in plenty were the main determinants of the success of the co-operative.

Marothia and Gauraha (1996) examined the role of co-operative management of *tendu* leaf collection and marketing in Madhya Pradesh with special reference to the performance of five primary minor forest produce co-operative societies in Raipur district. The authors conclude that the management of societies is largely dominated by the government nominees and that the elected members of the management committees do not have any control over financial, administrative and technical affairs. The authors identified quite a few weaknesses in the structure and functioning of the co-operatives such as

poor functional vertical linkages, lack of interaction among members, harassment of members by phadmunshis (depot incharges) and checkers and low stakes of members in the co-operatives. However, the authors found that the members of the co-operatives were getting proper (minimum) wages for collection of *tendu* leaves.

Drawing upon the findings of 14 case studies of NRM co-operatives, Singh and Ballabh (1996:35-38) conclude that most of the co-operatives were parastatal organisations and not member-owned and controlled autonomous co-operative societies. Most of them were not financially viable and were heavily dependent on government grants and support for their survival. Restoration, conservation, and sustainable use of natural resources received very little, if any, attention of the co-operatives studied; they were engaged in exploiting the resources that they owned. However, the authors believe that, in view of discouraging results of nationalisation and privatisation of natural resources, especially the common pool resources (CPRs), NRM co-operatives hold high potential as an institution for promoting judicious and sustainable use of CPRs. What is needed to realise their potential is the transformation of existing parastatal co-operatives into genuine co-operatives owned by their members, governed by their elected representatives and managed professionally.

4.5 Co-operative Spinning Mills and Weavers' Co-operatives

As shown in Table 1, there were 275 co-operative spinning mills in 1996-97 and 56,850 weavers' and non-weavers' co-operatives in India in 1995-96. In the textile sector, the share of co-operatives was 11 per cent with 2.97 million spindles. They produced 240 million kilograms of yarn which was 16.4 per cent of the total output and exported over 10 million kilograms of cotton yarn, which accounted for 11 per cent of the total output. A total of 431 cotton ginning and processing units were functioning in the co-operative sector which was 12 per cent of the total number in the country. While 58 per cent of the handlooms were owned by the co-operatives, their share in power-looms was 5 per cent.⁵

Relatively speaking, very few scholars have studied the performance and impact of co-operative spinning mills and weavers' co-operatives. Chadha and Sharma (1996) evaluated the impact of the Bhutti Weavers' Co-operative

Society on the income and employment of its members in Kullu district of Himachal Pradesh and identified factors influencing the success of the co-operative. The authors found that the co-operative since its inception in 1944 had registered tremendous growth in its activities and had made a significant positive effect on the employment and earnings of the member weavers and others associated with it. Democratic style of functioning, dedicated leadership, transparency in management decisions, socio-cultural homogeneity among weaver members, a vast marketing network, and strict quality control were identified as main determinants of the success of the co-operative. Varade and Bhole (1996) assessed the performance and prospects of ten selected co-operative spinning mills in Vidarbha region of Maharashtra. They found that the mills had played an important role in providing employment opportunities and increasing the labour productivity. However, there were wide disparities in physical efficiency across the mills and the financial position of the mills was also not satisfactory with six out of the ten sample mills running in loss mainly due to inefficient management.

Through a detailed case study, Mahammad (1996:226-246) explored the socio-cultural bases of an occupation-based co-operative society, the Yemmiganur Weavers' Co-operative Society (YWCS) in Kurnool district of Andhra Pradesh. He found that caste, kinship, leadership, politics, economics, and entrepreneurial factors played an important role in the emergence and growth of YWCS. Of all the factors, caste and kinship were most important. As weaving is a traditional occupation of some particular caste groups, weavers belonging to those caste groups could be easily mobilised to form YWCS. However, it were the recurrent famines of the late 1930s in the area that brought the traditional weavers together in a relief centre in 1936 which was later converted into YWCS in 1938. The master weavers who used to exploit the traditional weavers before the formation of YWCS became the founding members of the society and provided the requisite leadership. The society facilitated the exchange of different techniques used by different weavers in the area. The author observes that of late the society has been in the grip of a leadership crisis and prone to political interference. Consequently, its costs are going up and profits coming down. He highlights the need for arresting this trend but the question remains: Who will do it and why?

Apte and Setty (1996:61-83) reviewed the experiences of successful co-operative spinning mills in Maharashtra. They conclude that successful co-operative spinning mills have great potential to generate employment for both males and females in rural areas. However, they lament that out of 183 co-operative spinning mills in the state, only 48 were in production and only 10 of them had earned profits in 1993. They identified political patronage, dedicated, honest and dynamic leadership, full utilisation of plant capacity, quality control, modernisation of technology, judicious use of own and external funds, and marketing of yarn at remunerative prices as crucial in determining the success of co-operative spinning mills. Involvement of members, workers, technocrats and top executives in the affairs of the spinning mills was also an important determinant of success. They advocate the need for a National Policy for import and export of cotton and yarn aimed at minimising the erratic fluctuations in cotton prices.

Anandram (1996:84-105) conducted a detailed case study of a co-operative spinning mill, Shree Ganesh Co-operative Spinning Mills Ltd. In Maharashtra, which is considered to be one of the successful ventures in the co-operative sector. In the opinion of the author, the mill has established a niche for itself in the highly competitive cotton yarn market; in fact the mill exports nearly 60-70 per cent of its production. The success of the mill is attributed to a number of good practices such as clarity of the roles of top management incorporated in the bye-laws of the organisation, purchase of good quality cotton by a purchase committee, good house-keeping and personnel management, establishment of quality circles and sensitivity to customers' needs and demands.

In absence of comprehensive national level studies of co-operative spinning mills and weavers' co-operatives, it is not possible for us to show draw any conclusions about their present financial status and their role in the new era when state patronage and protection to the co-operative sector are likely to be withdrawn or drastically cut. We are not sure whether these co-operatives will survive when they are exposed to unfettered competition from both Indian and foreign firms.

4.6 Consumer Co-operatives

The Consumer co-operatives in India also have a long history going back to 1904 when India's first Primary Consumer Co-operative Society was established in Tamil Nadu. Before Independence, their presence was more visible at the times of droughts, floods, famines, and wars when they played an important role in distributing essential commodities to the affected people (Gautam 2000:371). They were given due importance in Indian economy after Independence in 1947. The Five Year Plans have identified the Consumer Co-operatives as an institutional vehicle for socio-economic development, particularly in the rural areas. The Consumer Co-operatives now have a four-tier structure consisting of Primary Societies at the lowest (village) level (28,290), Wholesale/Central Stores at the district level (696), State Consumer Co-operative Federations at the State level (29) and a National Federation. The total membership of all consumer co-operatives is estimated at about 1.65 million and working capital at Rs. 45000 million. Their combined sales amounted to Rs. 90,000 million in 1998-99 (Gautam 2000:371). Although the share of consumer co-operatives in the retail distribution is merely 2 percent at national level, their significance lies in stabilising the prices of essential commodities, ensuring availability of consumer goods at fair price, especially in times of scarcity, creating employment opportunities, and enhancing the awareness of consumers of their rights and privileges under the Consumer Protection Act. But in spite of the vital role played by them, the consumer co-operatives have failed to build up their financial base which might be attributed mainly to low margins and increased establishment expenses in comparison to the private trade, lack of professional managerial staff and unnecessary interference by the government in managing their affairs, and proliferation of their numbers without any consideration of their financial viability.

5.0 IMPACT OF CO-OPERATIVES ON RURAL DEVELOPMENT

There have been no large-scale assessment studies of the impact on rural development of co-operatives across various sectors in India. What we have are small scale sample surveys conducted by scholars and research institutes to assess the impact of selected co-operatives, mostly milk, sugar, and credit co-operatives, on various dimensions of rural development such as income,

employment, and access to health care and education (for details see Singh 1996c and Rajagopalan 1996). Now, we will attempt to determine the impact of co-operatives on rural development with special reference to milk and sugar co-operatives.

5.1 The Impact of Milk Co-operatives

A number of scholars have recently attempted to study the impact of milk co-operatives on milk production, milk price, income, and employment, and have compared milk co-operatives with private traders/dairies. Impact evaluation has been mostly done using the “with and without” approach and the impact was found to be positive in almost all the cases studied (Singh and Singh 1998). For example, Singh and Das (1984), in their study of “Impact of Operation Flood I at the Village Level” in three selected milksheds in India, namely, Bikaner in Rajasthan, Sabarkantha in Gujarat, and Periyar in Tamil Nadu, observed that the average milk yield per milch animal, the average milk production per household, the average price received by milk producers, the level of employment in dairying, and the average per capita daily intake of calories and protein from milk and milk products were all substantially higher in the co-operative villages than in the control villages (Table 3). **The landless households in the co-operative villages were better off than their counterparts in the control villages in terms of most of these criteria. The vulnerable section of the rural populace, i.e., children below six years, and expectant and nursing mothers in the co-operative villages had, by and large, better nutritional status than their counterparts in the control villages.** Furthermore, although, OF was not designed to eradicate the problems of poverty and unemployment, it is true that millions of landless households, and marginal and small farmers who were engaged in milk production and were all poor benefited a lot from increased income and employment opportunities generated by OF. Of the farm families covered under OF, 21 per cent had no land, and another 66 per cent were marginal and small farmers owning less than four ha of land. Over 70 per cent of the participating households had one or two milch animals (NDDDB 1987:7). Thus, OF turned out in practice to be a pro-poor programme and improved the distribution of incremental income from milk among rural milk producing households more equitably.

Table 3**Impact of Operation Flood I at Village Level in Bikaner, Periyar and Sabarkantha Milksheds, 1980**

Sl. No.	Particular	Bikaner		Periyar		Banaskantha	
		Co-operative villages	Control villages	Co-operative villages	Control villages	Co-operative villages	Control villages
1	Average milk production(l/hh)	190.96	134.17	121.36	90.89	89.63	43.14
2	Average milk production (l/hh/per milch animal in milk) last month	109.02	69.21	69.74	62.24	79.31	53.25
3	Average price realised(Rs/l)	1.36	*1.14	2.02	1.52	1.76	1.96
4	Gross revenue from milk and milk products (Rs/hh)	142.99	14.24	220.77	84.80	102.16	29.54
5	Gross revenue per milch animal in milk (Rs/hh)	81.71	7.34	126.87	58.08	90.40	36.47
6	Average annual income from milk (Rs/hh):						
	- Landless households	428.78 **(3.43)	938.40 (2.47)	32.41 (2.38)	49.40 (6.43)	557.79 (11.51)	370.75 (11.72)
	- Landed households	1672.61 (96.57)	1596.59 (97.53)	543.37 (97.62)	253.51 (93.57)	1619.97 (88.48)	788.74 (88.28)
7	Employment in days from dairying (hh/annum):						
	-Landless households	76.84 (67.57)	190.10 (53.28)	79.28 (11.38)	40.04 (5.03)	66.54 (14.62)	38.97 (19.91)
	-Landed households	169.84 (32.47)	100.60 (26.06)	180.36 (35.32)	155.91 (32.13)	169.21 (38.26)	156.20 (36.40)
8	Calorie intake from milk and milk products (K calorie/capita/day)	460.0	255.0	107.0	94.0	154.0	97.0
9	Protein intake from milk and milk products (gm/capita/day)	9.0	6.0	4.0	4.0	5.0	4.0

* Implicit value of milk in terms of ghee price.

** Figures in parentheses represent percentage of the aggregate income, in case of employment these are percentage of total employment in all activities.

Source: Katar Singh and V. Mukunda Das, Impact of Operation Flood I at Village Level, Research Report I, IRMA, 1984.

Arora and Bhogal (1996) found the performance of the Meerut Milk Union to be highly satisfactory with about 50 per cent of the milk markets in rural areas captured by dairy co-operatives. The prices paid by milk co-operatives were higher than those paid by private vendors. However, the authors emphasise the need for more proactive role on the part of dairy co-operatives in order to meet the stiff competition from private milk vendors. Singh and Chattaraj (1996) found that the average number of cross-bred cows per household and the average family labour income per milch animal per annum were both higher in

the villages having milk co-operatives as compared to the villages without milk co-operatives. The authors conclude that the dairy co-operatives had a positive impact on income of the members. Koli (1996) in a similar study of Gokul Co-operative Dairy in Kohlapur district of Maharashtra found that the co-operative had played an important role in securing fair price to milk producers, in providing various inputs and services to them and in increasing employment opportunities.

In the pre-OF era, milk price was not used as an instrument of dairy development. No effort was made by any government to ensure remunerative price to the producer but consumer price of milk supplied from government-run city milk schemes was invariably subsidised. This had two adverse effects on dairy development. First, in the absence of year-round remunerative price for his milk, the producer did not have any incentive to increase milk production by better breeding, feeding, and management of animals. Therefore, milk production stagnated and increased at a miserably low rate of one per cent per annum in the pre-OF era. Secondly, due to lower sale price of milk (than its cost as well as open market price), city milk schemes incurred huge losses year after year and, thus, were not able to save and plough back any money in modernising and expanding their activities. Thus, the milk pricing policy followed before 1970 was anti-producer and anti-dairy development.

For the first time, OF accorded the highest priority to ensuring year-round and dependable market at remunerative price for rurally produced milk. As a matter of fact, OF was originally conceived as a marketing project. Producer price of milk in most OF areas is determined by the State governments concerned and is set at levels which are considered remunerative to milk producers, although cost of milk production is not explicitly considered in fixing the producer price. Despite the fact that the cost of milk production is not explicitly considered by Co-operative Dairy Federations and Unions in fixing the producer price of milk in OF milksheds, there is some evidence available to show that the terms of trade over the last one decade or so have been favourable to milk producers. The time series data on producer price of milk and the wholesale price index of oilcakes which account for nearly three-fourths of total cost of milk production confirm this. The compound annual rate of growth over the period, 1987-88 to 1995-96 in the producer price of milk was 10.9 percent as compared to 5.8

percent in the wholesale price index of oil cakes (Singh and Singh 1998:21-22).

Though, official statistics on milk production shows a substantial increase in milk production beginning with the 1970s under OF programme over the levels in previous two decades, the accuracy of the statistics has been challenged by several scholars. Mergos and Alderman (1987) assessed the impact of Operation Flood (OF) in two World Bank- funded dairy development projects, one each in Madhya Pradesh and Karnataka. They found that milk production had increased at the average incremental rate of about 7 per cent per annum in the Project areas under OF vis-à-vis non-Of areas. In a recent study based on the available theoretical and empirical evidences, Mergos (1997) examined the ground reality of increase in milk production and direct impact of OF on milk production. The study admitted that the direct impact of OF on milk production growth had been modest and indicated that 25 per cent to 50 per cent of increase in procurement by OF was likely due to switching. It also advocated that milk production increase in the country was real and no evidence was available to show otherwise. In our opinion, there is now enough evidence available to support the statement that much of the incremental milk production achieved after the launching of OF could be attributed to increased supply of concentrated balanced cattle feed, better animal health care and management, training and education of milk producers, and remunerative producer price of milk all provided under OF.

Nalini Kumar (1997:34) while reviewing the literature on OF, particularly in the post- 1987 period, observed that OF had generated a voluminous and controversial literature. He noted that a lot of evidence on OF was either anecdotal or was based on area specific case studies. Lack of empirical data and scientific rigor continue to be a serious limitation of the available evidence on OF programme effects. Critics have even doubted the accuracy of official estimates of milk production. But there is sufficient evidence to show that there has been substantial growth in the dairy sector. Tremendous change in the dairy economy, wide marketing network and increased per capita availability of milk despite the high increase in population are sufficient pointers of the growth.

Initially, Operation Flood, like any other successful development programme, had attracted a lot of criticism, mostly from a group of social scientists working under the auspices of the Institute of Social Studies, at The Hague. For example, Doornbos *et al.* (1990:283, 284, 293 & 294) have observed, *inter alia*, that (a) the availability of dairy aid to India under OF allowed the Indian authorities to maintain the so-called transfer prices of skim milk powder and butter oil at a level below the domestic production cost; (b) with the exception of some advance regions, the large increase in milk procurement under OF could be due to a shift in marketing channels, i.e., farmers switching their sales from ghee traders to co-operatives, rather than to any sizeable increase in milk production. They conclude that although dairy co-operatives may have increased the income earning opportunities of the landed milk producers, they certainly have not reduced the general inequalities inherent in local socio-economic structures. Also, it was felt that whatever income gains may have been derived by marginal and small farmer producers have hardly made any significant dent in the major problems of poverty and malnutrition. In our opinion, it is not correct that the transfer prices of skim milk powder and butter oil were ever below the level of domestic production cost. On the contrary, as we have mentioned earlier in this paper, a deliberate effort was made under Operation Flood to ensure that the producer price of milk is fixed at a level which not only covers the cost of production but also provides a reasonable margin to the producer. The strategy was to provide the requisite incentive through the milk price and subsidised inputs and services to the producer to increase milk production.

Shanti George (1985:20-21) has been a critical observer of OF. In her opinion, dairy processing and marketing have been given higher priority over dairy production technology while in many projects it has been generally assumed that efforts should be made to raise productivity before the problem of marketing could be tackled. In her critique of OF in India and a similar programme called Dairy Development Programme (DDP) in Zimbabwe she observes that the OF has proved fiercely controversial both within and outside India, partly for its dependence on dairy aid from the EEC. Some of the questions and criticisms that focus on the NDDB's dairy co-operative strategy seem to be worth mentioning here. Is it realistic to accept these rural co-operatives to generate a flood of milk? Do they express programme's emphasis

on marketing at the cost of production? Is the Western dairy technology that OF seeks to propagate through these co-operatives suited to India's requirements and constraints? Is the programme sufficiently aware of the symbiosis between agriculture and dairying in India? She is of the view that critics of OF have often felt that these questions did not receive an adequate response from the NDDB in India. The DDP authorities in Zimbabwe took them more seriously. DDP from the very beginning sought to distance itself from the OF paradigm, having benefited in the approach it adopted from the wisdom of hindsight in analysing India's programme (Shanti George 1994:11-12). It seems to us that all the above-cited criticisms of OF are not based on any concrete evidence or facts, they reflect the lack of proper understanding on the part of the author of the OF objectives, strategy, and actual achievements. It is a fact that milk co-operatives established under OF have created a virtual flood of milk and has enabled India to emerge as the world's highest milk producing country and had made India independent rather than dependent on food aid in the form of dairy products.

Doornbos and Nair (1990:15) were of the opinion that advocates of the Anand pattern of organisational set-up consider it superior over other forms as it combines procurement, processing and marketing all within one structure. However, critical observers indicate that with its single product focus it relates to one household activity only, i.e., milk production. Also, there is a strong viewpoint that this model is inappropriate for replication throughout the various regions of the country. This argument is based on the reasoning that the Anand model has evolved under socio-economic and agro-ecological factors which are confined to the Anand region. Since these factors are likely to vary from one region to another, doubts are expressed regarding the relevance of replicating this model in other regions. This opinion has been negated by the fact that genuine Anand pattern co-operatives succeeded in all socio-economic and agro-climatic environments in India when they had honest and enlightened elected leadership and committed professional managers. Further the increased income from milk under OF initiated a process of change in other activities of the milk-producing households and contributed to their socio-economic development.

Attwood (1993:5) in his study on the potential economy of sugar in western India observes that sugar co-operatives of India are better known in the world because of various reasons. One of the reasons is that co-operative sugar factories are not dependent on foreign aid of any kind. This is in contrast to India's dairy co-operatives, which have attracted the attention of many international agencies. The dairy co-operatives have received billions of rupees in foreign aid, as a result, the donors gladly propagate claims made by Indian dairy organisations concerning their own achievements. While it is true that dairy co-operatives under OF benefited a lot from donated dairy commodities and foreign loans, it is not true that the donors and lenders did not objectively assess the performance and achievements of dairy co-operatives under OF. For example, the most recent and rigorous evaluation of OF has been done by a renowned agricultural economist, Wilfred Candler and Nalini Kumar (1998) under the auspices of the Operations Evaluation Department (OED) of the World Bank. According to the OED report, milk production in India has increased over 4 percent per annum since the inception of Operation Flood while before the OF the growth rate was only 0.7 per cent per annum. Furthermore, it was also observed that dairying was shifting in a few cases from sideline activity to a serious economic enterprise and in some cases it was becoming the major source of farm income. Reliability and regularity of payments have added tremendous value to dairying. As far as the impact of Women Dairy Co-operative Societies (WDCs) is concerned, it is dramatic. In such WDC's women find themselves empowered, as they are authorised to make their own decisions by way of holding meetings outside the home. Income from WDCs enables the women to make most household expenditure without being dependent on their husbands. Regarding employment generation for women, OF has played an important. With 3.5 million milk suppliers, "it is reasonable to assume that 5 percent represented women who were able to stay at home rather than go out for work. This withdrawal of women from the labour force will have created an additional 175,000 labouring jobs, predominantly for the very poor" (Candler and Kumar 1998:50-51).

According to the OED report, the estimated incremental milk production due to OF was 38.5 mmt in the year, 1994-95, and that under the assumption of 'ban on imports of milk products and perfectly inelastic short run supply function for milk' the consumer surplus and the producer surplus were both

substantially higher than in the situation of “without OF”. For the year, 1994-95, the former was estimated to be higher by Rs. 4,14,000 million and the latter by Rs. 42,000 million at the 1996 dollar prices. To these gains in the consumer surplus and the producer surplus, we must add Rs. 20,400 million on account of avoidance of the consumer subsidy which the government would have had to pay in the absence of OF. Thus, the total annual incremental benefit to society in 1994-95 due to OF was of the order of Rs. 4,76,400 million representing the gains in consumer surplus and producer surplus and avoidance of consumer subsidy. From this, we could conclude that the impact of OF was positive and significant. In fact, the evaluation report says that the calculated benefits from OF in one year greatly exceed the total cost of OF (Candler and Kumar 1998:40-46).

To sum up, we could say that despite certain weaknesses and failures, the Anand Pattern milk co-operatives have had, by and large, a positive impact on milk production, producer price of milk, and socio-economic development of villages under their jurisdiction. At the national level, OF has enabled India to attain self-sufficiency in milk and milk products and created a strong foundation for future growth and development of India's dairy industry.

5.2 The Impact of Sugar Co-operatives

A number of scholars have studied the role of sugar co-operatives in rural development, mostly in Maharashtra. Baviskar (1980:4-5) conducted an intensive study of the Kisan Co-operative Sugar Factory, Kopergaon, Maharashtra, spread over many years. He found that there existed a dynamic and reciprocal relationship between politics and development and that the existing political structures and distribution of power within them affected the course of development and distribution of benefits from development. This in turn generated new opportunities and resources and thereby brought about changes in the very structure and style of politics. In his opinion, sugar co-operatives had become highly politicised with closer links and identification with the Congress party and the government and had resulted in concentration of economic and political power in big sugarcane growers.

Taimni (1994:220-245) examines various aspects of sugar co-operatives in Maharashtra including their genesis, evolution, growth, performance, impact,

and determinants of success. He also presents an in-depth case study of a successful sugar co-operative—the Warna Sugar co-operative. He concludes that sugar co-operatives have completely transformed the life style of sugarcane growers and other sections of rural population. The co-operatives have created job opportunities for thousands of rural people directly in their sugar factories and indirectly in such operations and services as harvesting and transportation of sugarcane, construction and repair of roads, whole-sale and retailing, banking and so on. They have helped establish basic infrastructure in remote rural areas and thereby facilitated their development through improved access to education, extension services, irrigation facilities, improved seeds, fertilisers, and cross-bred cows. Above all, sugar co-operatives have given birth to and nurtured a new generation of entrepreneurs and politicians who now dominate the economic and political forums in the state. The author identifies several determinants of success of sugar co-operatives including charismatic leadership, use of advanced technology, enlightened and responsive membership, consistently high sugarcane prices to producers, and effective management. However, he also highlights the fact that not all the co-operative sugar factories in Maharashtra were successful. They suffered from political rivalries, poor management, irrational investment in by-product industries, inadequate finance, and recurrent drought conditions leading to reduced supply of sugarcane.

On the basis of his study of 12 sugar co-operatives in Maharashtra, Doshi (1996) observes that apart from bringing about all-round development in their areas, sugar co-operatives facilitate the emergence of a new class of rural entrepreneurs and business leaders. The author covered in his study five major aspects of sugar co-operatives, viz., financial management, working capital, financial structure, fixed assets and extraneous activities. The performance of each co-operative sugar factory was judged by merit-rating and assigning scores. The grand total of the scores was taken as the indicator of the relative performance of the factories. The author found that age of the factory had a positive but weak influence on the financial management and that the attitudes, policies, practices and integrity of the top management also influenced the financial performance of the sugar factories. Size of the factory was found to have a non-significant effect.

To conclude, we could say that sugar co-operatives of Maharashtra could serve as a model for organising integrated agro-processing and marketing co-operatives in other states of India. They could prove to be an effective institutional structure for promoting all-round socio-economic development of rural people in general and sugarcane growers in particular in sugarcane growing areas in the country.

5.3 Co-operatives as an Instrument of Rural Development in the New Era

In the wake of privatisation and deregulation that characterise India's NEP and in view of opening up of India's markets to competition from foreign firms under the new world trade regime ushered in by the World Trade Organisation (WTO), co-operatives will no longer have the protection, support, and patronage of government. They will have to defend for themselves and compete with private firms—both Indian and foreign—for their survival and growth. In our opinion, it is only co-operatives that can protect the poor producer and poor consumer from the adverse effects of free world trade and serve as the safety net for them. The economic reforms have so far bypassed the rural sector; it is only the industrial sector and banking sector that have been liberated from the shackles of unnecessary government rules and regulations/controls. The rural sector still continues to be stifled by several restrictions such as ban of inter-state movement of foodgrains, fixation by the government authorities of consumer price of milk sold by co-operatives dairies in cities, restrictions on adoption of modern technologies by sugar factories, and ban on export of *gur* (jaggery) from producing states to consuming states within the country for months during the *gur* manufacturing season.

With nearly one-third of India's rural population living below the poverty line and with most of the rural producers being small scale unorganised operators having virtually no bargaining power, it is unlikely that the free market model of development will help them. Most of the rural people are simply outside the domain of "markets". So how can the new policy of open and competitive markets help them? For example, freedom of entry in dairy industry by both Indian and foreign firms is neither economically sound nor socially desirable. Economically, it is imprudent to invest scarce capital in dairy plants and machinery when the capacity already created in the co-operative sector is

under-utilised. In the short run, the quantity of milk supplied to new dairies established in the milkshed of a co-operative dairy comes out of the total quantity that is supplied to the co-operative dairy and thus represents a transfer and not any addition to the quantity of milk that is already produced and processed. Hence, no contribution of private dairies to dairy development. With the total quantum of milk processed by both co-operative and private dairies remaining almost unchanged, any increase in investment in milk processing plants by private dairies would lead to inefficiency in the use of capital from the society's point of view. Thus a 'free for all' policy in these matters will certainly result in over-capitalisation of the dairy industry and both the co-operative dairies and private dairies will suffer from higher fixed costs and lower margins and neither producers nor consumers will be benefited from this policy in the long run. Many dairy rich developed countries in Western Europe such as France, Denmark, Sweden and the Netherlands have realised the futility of unfettered competition in dairy processing and consequently have decided to enlarge the scale of processing operations through mergers and acquisition so as to control the major segment of the processing industry. It would be an unwise decision of the Indian government to pursue a "free for all policy" in such a situation. On the contrary, it is quite likely that if the co-operative dairies become financially non-viable and have to close down, private dairies would exploit both the producer and the consumer as they used to do before co-operativisation. The surplus generated from the business would be siphoned out of the rural sector and/or India rather than ploughed back for dairy/rural development as is done by dairy co-operatives. Furthermore, distribution of surplus generated from processing and marketing of milk would be less uniform or more skewed when private dairies do these functions. Thus, promotion of private dairies as a policy measure is neither economically efficient nor socially equitable.

Socially also, privatisation is likely to have adverse impact on the weaker sections of milk producing populations in terms of reduced employment opportunities, higher costs of inputs and animal health care and breeding services and reduced or no access at all to nation's political system. The poor milk consumers would also be marginalised and priced out of milk markets and milk production would gradually become a pursuit of the rural rich.

Politically, privatisation will prove to be disastrous for the political parties in power at the centre and state levels. If 10 million households (or 50 million people who are members of dairy co-operative) unite and lobby against this policy, no government can afford to ignore their demand unless the party in power deliberately chooses to commit a political suicide. Milk being a politically sensitive commodity, no government can afford to deny supply of adequate and good quality milk at reasonable price to city/urban consumers. With private dairies ruling the roast and with the 'soft' state that we have, there is no way the government can ensure this. Private dairies have no sense of social obligations. There are umpteen examples of private dairies and multinational corporations supplying unsafe and unhygienic milk and milk products and evading payment of taxes and duties. So in view of all this, it seems to us that it is only producers' co-operatives or companies owned and controlled by their members and managed professionally that would promote their socio-economic development in the new era.

All in all, there is enough evidence that the ethical, ideological, social, political, and economic bases of co-operatives will enable them not only to survive but also successfully compete with other forms of organisations in the new era (Rajagopalan 1996:xliv). New forms of co-operation such as Self Help Groups and Producers' Companies and co-operatives in new sectors like rubber and coffee plantations, and health care (e.g. co-operative hospitals in Kerala) will hopefully be more robust, vibrant and autonomous than the conventional co-operatives.

6.0 SOME CRITICAL ISSUES AND STRATEGIES FOR RESOLUTION

In recent years, particularly after the launching of the New Economic Policy (NEP) in August 1991, several structural and operational reforms have been introduced in India's economy. Similarly, at the international level, new rules of game are being put in place by several international financial and development organisations, especially the World Bank, the International Monetary Fund, and the World Trade Organisation. These changes in the national and international economic environment pose several challenges for co-operatives and necessitate a re-examination of their role and prospects in the new era. The Government of India has not yet formulated any definite national

policy on co-operatives and hence the role of co-operatives in the new regime is ambiguous. Some of the emerging challenges/issues before the co-operatives are: (a) How to enable the weak co-operatives to attain and retain financial viability?; (b) How to professionalise their management so that they could meet the unfettered and increasing competition from the private enterprises?; (c) How to liberate them from unnecessary government controls; (d) How to create a congenial legal environment and ensure a level playing field for co-operatives?; and (e) How should co-operatives be re-engineered to enable them to cope with the challenges that they are facing and are likely to face in the new era?

More specifically, the following issues emerge from a review of the literature available and from the analysis of the experience of various types of co-operatives presented in the preceding section of this paper. Strategies for resolving these issues are also outlined in this Section.

6.1 Poor Performance and Loss of Financial Viability

Performance of co-operatives in India has been, by and large, not satisfactory. Despite huge government grants and equity participation, most co-operatives in India are not financially viable. For example, it is estimated that nearly 35 per cent of the PACS are not financially viable and as we discussed in Section 4.1, quite a large proportion of SCBs, DCCBs, SCARDBs and PCARDBs are not doing well financially. In general, failures are more common and successes rare in the co-operative sector (Baviskar, 1980:4). There are many institutional, economic, social, political, organisational and managerial factors that affect the performance of co-operatives. In general, where co-operatives are imposed from above by the government, or any other authority as part of some development/social welfare programme, they fail to enlist their members' participation and support and consequently they decline or become defunct sooner or later. On the other hand, where co-operatives are established by the people themselves in response to their felt needs, or to fight against some exploitation, they are likely to succeed.

If the government grants are stopped and government withdraws its contribution to the share capital of co-operatives as is likely to happen soon, many more co-operatives would lose their financial viability unless they are

able to raise resources from other sources including capital markets. In 1993, the government equity participation in 16 of the Indian states having a fairly big co-operative sector ranged from 6 per cent in Goa to 54 per cent in Orissa and the total amount invested was Rs.1,620 crore (CIP 1996:16 & 45). The loss of financial viability could be prevented if the state governments concerned, while enacting new Co-operative Legislation, convert the equity capital into outright grants to co-operatives and the Planning Commission in turn allocates additional funds to those States for compensating them. This would be a once-for-ever good gesture on the part of State governments.

Co-operatives will also need to explore other non-conventional avenues for raising resources needed for modernising their operations and meeting their working capital requirement. Issue of non-voting shares and borrowing from financial institutions and public are two such avenues. Tewari (1996) analyses some special features of co-operative finances and their implications for making co-operatives financially viable. He highlights the need for reform in the co-operative law to eliminate the inherent weaknesses of co-operative financial structure. He recommends that for increasing the capital base of co-operatives and to retain the faith of members, patronage rebates and dividends on shares at the maximum allowable rates may be permitted while keeping the prices of goods and services competitive. He also advocates that co-operatives may be allowed to raise capital from non-members through non-voting shares.

Ability and willingness to adapt their product mix and operating policies to the changing needs and expectations of their members and the changing national and international environment are essential for success of co-operatives. In these matters, co-operatives will have to mimic the successful private companies. There are umpteen number of cases of co-operatives that were highly successful in the 1950s and 1960s but due to their failure to keep pace with the changing times, they lost their financial viability and are now sick. Diversification into new but related products, exploration of new markets both domestic and international and identification of emerging new needs of their members and catering to them will be some of the challenges before the co-operatives in the near future.

Co-operatives need not own every facility that they require and need not perform every function that they must undertake to cater to the demands of

their members. Some of the services/facilities could be procured by co-operatives through backward linkages with other organisations including other co-operatives and some of the functions like exports could be handled through forward linkages with other specialised organisations if all such linkages are in the interest of their members. In some cases, agribusiness co-operatives may find it desirable to float a company for handling exports. For example, in Japan, many co-operatives have floated companies for handling foreign trade. In a nutshell, to survive and grow in the new era, co-operatives will have to operate more like a business enterprise than as a socio-economic entity.

Co-operatives in India have not been quality- and cost - conscious for a variety of reasons including government protection and patronage. Both quality of products/services and cost of production or providing services depend, to a large extent, upon the type of technology adopted. In most cases, most modern technologies can improve the quality and reduce the cost of production and hence must be acquired and adopted by agribusiness co-operatives somehow or the other. Agribusiness co-operatives have a disadvantage in this area vis-à-vis their competitors; they do not have as easy an access as their competitors to international markets for technology, capital and management. Unless this disadvantage is done away with, co-operatives will find it increasingly difficult to compete with private sector companies—both national and foreign.

Co-operatives will also need to be redesigned and re-engineered in terms of their organisation structure, bye-laws, rules, regulation, and operating procedures and practices. The redesigning exercise should be aimed at making co-operatives robust, and flexible so as to be able to cope with the emerging issues and challenges and attain and retain financial viability. The core of the new design should be business interests of members of the co-operative concerned regardless of their socio-economic status and political affiliations (Shah 1995a:262-66). The exercise will need to be taken up with the support and advice of management experts specialising in organisation behaviour and strategic management.

6.2 Lack of Professionalism in Management

In the new era, co-operatives are going to face growing competition from domestic and foreign companies, particularly in the agri-business sector. The

competition poses a major threat to co-operatives that are used to thriving on government-conferred privileges including monopolistic status and huge grants and subsidies. There is ample evidence now available to show that this is already happening in processing and marketing of food products such as milk powder, ice cream, fruit drinks, and so on. In view of this, it is now essential for the survival and growth of co-operatives that they are professionally managed.

In the absence of professional management, money, manpower and material resources of co-operatives worth thousands of crores of rupees are wasted annually. For a country like India which has the largest network of co-operatives in the world, it is a matter of pity that its co-operatives are so grossly under-managed, mismanaged, or not managed at all. It is our conviction that if we could professionalise the management of our co-operative enterprises, then we could promote equitable and sustainable rural development at a much faster rate than in the past using the same amount of resources.

One of the main reasons for the failure of co-operatives to attract and retain professional managers is their inability to hire professional managers at the open market rates. Most of the co-operatives in India, especially the primary co-operatives at the village level, are small in terms of size of their business turn over and net profits. Hence they cannot afford to hire professional managers. For example, at present (in year 2000) the average gross emoluments offered to a fresh rural management graduate by a co-operative dairy union are around Rs. 12,000 per month whereas most of the private sector agribusiness firms offer as much as Rs. 20,000, or even more. This disparity makes it very difficult, if not impossible, for the agribusiness co-operatives to attract and retain professional managers. This has been the experience of the Institute of Rural Management, Anand (IRMA) with the placement of its graduates over the last 10 years, or so.

The government control and patronage has also become an obstacle to induction of professional managers in the co-operative sector. The co-operatives are not free to hire professional managers; they are forced to follow the government rules for recruitment and promotion of their staff. The government procedure and promotion policy are not only rigid and archaic but also prone to tempering by politicians and other vested interests.

Consequently, co-operatives cannot attract and retain professional managers, even if they are willing and able to do so. Besides, the government officers deputed to head co-operatives are not accountable to members of the co-operatives and do not have any stakes in the co-operatives. Accountability to members and not to some remote political or bureaucratic persons is an essential part of democratic governance and professional management of the co-operative. It involves developing and operating transparent accounting and administrative systems and giving an account to the Board of Directors and through them to the members of the co-operative. On the top of it all, they are posted and frequently transferred at the whims of the politicians, particularly the Ministers in-charge, Co-operative Departments. Their average tenure rarely exceeds three years.

The inability of small co-operatives to hire professional managers leaves them into a quandary: their small size and low turn over become both a cause and a consequence of lack of professionalism in management. It is only with the help of some benevolent external agency such as a philanthropic donor that such co-operatives can get out of this impasse. The help could be in the form of management subsidy made available to the co-operatives until they become financially strong enough to afford the market price of professional managers.

There is one more alternative, and perhaps better, way out of this impasse and that is producing bare-foot co-operative managers on a very large scale to meet the needs of small co-operatives. This can be done by reorienting and equipping the existing Institutes of Co-operative Management and Junior Level Training Centres for training bare-foot managers. National level management institutes like the IRMA and Vaikunth Mehta Institute of Co-operative Management, Pune, could help with developing appropriate curricula for the purpose, training of teachers/trainers, and preparation of appropriate teaching and training materials.

6.3 Excessive Government Control and Political Interference

Rural co-operatives in India and other developing countries were created through enactment of laws by their governments as an instrument of purveying production inputs including credit, marketing of agricultural produce, and delivering other benefits such as subsidies and doles. Thus, instead of being

member-created, member-owned and member-controlled voluntary associations of people engaged in a business of their members' common interest, co-operatives virtually became an appendage of the government. This deprived the co-operatives of the benefits that accrue from members' initiative, missionary zeal, experience, and feeling of ownership.

Co-operation in India pre-dates the co-operative legislation. Indeed, it may be argued that genuine co-operation has diminished with each succeeding piece of co-operative legislation. This process began with the colonial administration which wanted to ensure that the 'natives' did not make off with funds. To do this, they created the post of Registrar—perforce an Indian Civil Service officer—who did not allow the co-operatives a really autonomous status. After Independence, and particularly in the last two decades or so, co-operative legislation has been rewritten and amended so as to vest with government virtually total management authority and operational responsibility, leaving only accountability with the co-operatives. Consequently, today, in most states, legislation and rules govern what clearly belongs within the bye-laws of individual co-operatives. Government may, *suo motto*, amend the bye-laws of a co-operative; amalgamate or divide co-operatives; hold or not hold elections; veto, annul or suspend a co-operative's decisions; appoint its own officers to manage co-operatives; and nominate, suspend or remove committees' members without cause. Such laws are inimical to the essential nature of the co-operative and professional management. Reservation of managerial positions for civil servants virtually precludes professional management accountable to the members. Insinuating the government into co-operative management opens the door to political interference.

Government contribution to the equity of co-operatives and government guarantees for loans advanced to co-operatives have many serious repercussions such as government interference in the management through their nominated representatives on the Boards of Directors/Management Committees of the co-operatives, taking over of management of co-operatives on flimsy grounds, and appointment of government officers as Chief Executive Officers (CEOs) of apex level co-operatives. For example, in March 1998, the elected Boards of Management stood superseded in 10 out of 28 SCBs, 8 out of 19 SCARDBs, 99 out of 367 DCCBs, and 104 out of 745 PCARDBs in as

many as 11 States (NABARD 1999:20). In Tamil Nadu, for example, the successive state governments have not allowed the co-operatives to hold elections for the last over two decades or so with the result that the co-operatives there are governed by government officials rather than by elected boards. Until 1978, Tamil Nadu had vibrant and successful dairy co-operatives exemplified by Erode and Salem district co-operative milk producers' unions. But their progress and growth was hampered by the supersession of their elected boards by the government in 1978. The government control forced the dairy co-operatives to offer artificially low prices to milk producers and to charge low prices to (urban) consumers which led to their poor performance (Shah 1995b:101-113). Thus government control has led to the loss of democratic governance of co-operatives by elected representatives of their members and poor performance of co-operatives.

Co-operatives were dragged into the realm of party politics when they caught the attention of unprincipled politicians who began to see them as vehicles for political mobilisation and as the key to vote-banks. In States such as Maharashtra, Tamil Nadu and Andhra Pradesh where the co-operative movement had registered its early successes even before Independence, thanks to the services of enlightened leaders of public opinion and men of impeccable integrity, governments started tempering with the managements of co-operative societies mainly for political support which the ruling parties were intent on mustering through the co-operatives. The Agricultural Credit Review Committee (1986-89) popularly known as the Khusro Committee referred to the increasing officialisation and politicisation of (credit) co-operatives culminating in virtually depriving them of their vitality as well as their democratic and autonomous character.

There has been a lot of debate on whether government support for co-operatives and government intervention in their management are desirable or not. There is no consensus emerging out of this debate. Government financial support is justified on the ground that co-operatives cannot raise capital directly from capital markets and that their members are poor and hence cannot contribute as share capital all the money that is needed by their co-operatives to run their business efficiently. The latter is especially true in the case of agricultural processing and marketing co-operatives such as sugar co-

operatives and milk co-operatives which require crores of rupees for establishing and operating their procurement, processing and marketing facilities. Government interference is justified as a means of ensuring checks and balances, safeguarding the interests of the poor members and preventing misappropriation of public money. However, in practice, the involvement of the state in promoting co-operatives and its interference in their functioning have reduced the co-operatives to being an appendage of the government's development apparatus (Shah 1995b). There is need for research aimed at examining the implications of withdrawal of state support to co-operatives and exploring alternative sources of financial support to them.

Co-operatives need to be provided a level playing field to withstand the growing competition in the new era. India's leading co-operators such as Verghese Kurien, LC Jain and Mohan Dharia argue that it is only private companies that are reaping the benefits of liberalisation, thanks to the corporate-friendly government that has modified the existing legislations and administrative and financial rules and procedures with a speed unprecedented in the India's recent history to remove various controls on the corporate sector. The co-operative sector, clamouring for freedom from the government, the bureaucracy, the archaic law and politicians, is yet to be liberated and given the freedom that it needs to compete with the private corporate sector. The Central government has been dilly-dallying over the issue of modification of the Multi-state Co-operative Act as per the recommendations of the Brahma Prakash Committee report incorporated in the Model Act prepared by the Planning Commission. The new/amended Co-operative Acts should ensure that, as in the Andhra Pradesh Mutually-Aided Co-operative Societies Act, 1995, autonomy is restored to co-operatives wherever they are not dependent on the government for equity. Co-operatives need the same freedom to conduct their affairs as is available to their competitors. How to secure such freedom and liberation from government controls is the biggest challenge that all co-operatives including agribusiness co-operatives face today.

We have co-operatives that have succeeded despite the odds. But they are the exception that proves the rule that an oppressive law stifles the soul of our people. Co-operation will only succeed in India if we have laws in every state that allow co-operation to be practiced in its democratic substance, namely, the

supreme role of the members and accountability to them. It is, therefore, necessary to create an enabling/facilitating legal environment in which co-operatives can not only survive, but in which they will thrive and face competition with confidence. The proposed amendment to the Company Law providing for establishment of producers' companies is a good development in this direction.

6.4 Lack of Good Leadership

Good leadership is a pre-requisite not only for creating and nurturing a co-operative but also for providing a vision, and inspiring and guiding both the members and the management so as to enable the co-operative to achieve its purpose. Every co-operative needs an honest, skilled, benevolent and dedicated leader who should be preferably drawn from the group of cardinal stakeholders (Parnell 1995:53). Good leadership is needed for both members' representatives constituting the Board of Directors/Management Committee and for professionals including managers. In most agri-business co-operatives, the members' leader is designated as Chairman/Chairperson or President. His primary role is to unite the membership, articulate their needs and aspirations and insulate the co-operative from unnecessary interference by politicians and other vested interests. Good leaders also play an important role in attracting and retaining good professional managers and technicians. An outstanding example of this is provided by Amul, whose founder Chairman—late Tribhuvandas K Patel, a leader par excellence—not only attracted Verghese Kurien, a manager par excellence, to work with Amul but also retained him for over 20 years.⁵

In Maharashtra, eminent public leaders including social reformers and political leaders played an important role in fostering and strengthening the co-operatives in general and sugar co-operatives in particular from the very beginning. In the erstwhile Bombay province, the first Chairman of the Apex Bank was Sir Vithaldas Thakarsey and G.K. Gokhale was a member of the first Board of Directors of the Bank. G. K. Devdhar devoted his energies largely to the establishment of rural co-operative societies in the province. Other leaders of standing such as B.V. Jadhav and V.G. Kale also took keen interest in the co-operative movement. Later Vaikunth L. Mehta and D.R. Gadgil also

contributed significantly to the growth and development of co-operative movement in the state, the latter guided and assisted the sugar co-operatives for over two decades (Gadgil 1975:166-168).

When and where good leadership is absent in a co-operative for whatever reasons, a leadership vacuum is created. It is not uncommon when such a vacuum is filled in by the Chief Executive Officer or the top management group who then hijacks the co-operative for self-aggrandisement. Sadly, this is what has happened to most of the co-operatives in India. There is a need to create and maintain pools of potential co-operative leaders to fill in the vacuums at all levels. The leadership development function is so critical to the success of a co-operative that it cannot be left to chance. Proactive positive action is required to be initiated by the Boards of Directors of co-operatives to ensure that there is a constant flow of good leaders in their co-operative and that the bad leader is replaced by the good one in the shortest possible time and that professional managers manage the co-operative in the best interest of its members.

However, it is not easy to ensure the availability of honest, enlightened, and efficient leaders on a continuing basis. Although India is a big country with one billion people, good leaders are short in supply and those who are good do not come forward easily to take up the leadership roles. Elected leadership positions in co-operatives are mostly honorary and this is a big constraint on the ability of co-operatives to attract and retain good and honest leaders. These days, it is unrealistic to expect a good leader to expend his time and energy working for an organisation without any compensation. So, it is high time that co-operatives adequately compensated their elected leaders for their services. But as the opportunities to make money at the cost of the co-operative are too many and the temptations to do so too strong for the leaders to resist, requisite checks and balances and a system of timely and regular audit by an independent and reputed authority are necessary to ensure clean operations and management. Furthermore, a culture of constructive criticism of the leaders in power and a close monitoring of their activities by those who are in the opposition group or party are also desirable for healthy growth of co-operatives.

6.5 Loss of Focus on the Prime Objective and Growing Alienation of Members

Managing a co-operative is very much similar to managing any other investor-oriented business enterprise in a market economy in so far as the process of management is concerned. The difference lies in the hierarchy of the objectives pursued by them. The prime objective of a co-operative is to provide maximum possible benefits to its members whereas that of an investor-oriented is to maximise returns to its investors. One of the potential threats to the survival and growth of a co-operative arises when it loses or dilutes its focus on its prime objectives. The loss or dilution of focus may occur when there is a leadership vacuum, or when the co-operative expands its business operations over a wider geographic area, or when the government imposes certain social obligations such as supply of liquid milk at administered (lower-than-the market price) price to urban consumers in the case of dairy co-operatives. Such a lack or dilution of focus often results in an alternate stakeholder group taking over the control of the co-operative or hijacking it. It also results in an unholy alliance between the elected leadership and the top management which is antithesis of professionalism in management.

There is growing evidence in India and many other developing countries that a sizeable proportion of members feel betrayed by their co-operatives. Members believe that they cannot influence decisions, that the power of decision making is too often exercised by the manager and that the principles of co-operation are not practiced in their co-operatives. This alienates them from their co-operatives. Member apathy and alienation are growing over time and the number of faithful members declining (Craig 1992:3). These problems reflect the lack of appropriate management development in co-operatives as also dilution of the prime objectives of co-operatives.

Historically, co-operatives in India as also in other countries emerged in response to economic and social exploitation of underprivileged sections of society. Their main objective was to reduce the exploitation and thereby improve the lot of their members; maximising profit was never the predominant goal. In the new environment, co-operatives will have to compete with other forms of organisations on their own without any government protection and support. To compete successfully, they must provide services

and other benefits to their members at competitive (market) prices. This requires that their predominant goal now should be to maximise their profit so as to be able to provide the requisite services/benefits to their members. The profit maximising goal may conflict with their social development goal and in fact, in many cases, these two goals are conflicting now and it is very difficult to reconcile them. There is growing consensus among scholars, co-operators and policy makers that agribusiness co-operatives be treated as purely business organisations and that the existing co-operative laws be amended so as to provide an enabling environment for the transformation to take place. Now that the Companies Act is likely to be amended to provide for registration of producers' companies, it seems to us that in future, more and more agribusiness co-operatives will need to be registered as producers' companies in order to be able to function as business enterprises free from unnecessary government controls and political interference.

6.6 Poor Board-Management Relations

Most of the agribusiness co-operatives in India start as small enterprises and rely upon their members to carry out the functions of management. However, as a co-operative grows and its business becomes larger and complex, it requires professional managers. One of the most commonly cited reasons for the failure or poor performance of agribusiness co-operatives is poor Board-Management relations. But since in a genuine member-controlled co-operative, it is the members who elect the Board of Directors who, in turn, have the power to appoint and dismiss their managers, we have to blame the members for the existence of any substandard management. Therefore, the most important task of the Board of Directors of a co-operative is the appointment, direction and monitoring of its managers, and, if necessary, their dismissal and replacement (Parnell 1995:135-6). If the Board is not willing or is not able to do this job, the co-operative is doomed to failure, or at best it becomes manager-controlled and therefore subservient to their personal interests. There are innumerable examples of co-operatives in India which are controlled by their managers and not by the elected representatives of their cardinal stakeholders. Such co-operatives, even when they are financially successful, are antithesis of genuine member-controlled and democratically governed co-operatives. Therefore, a pre-requisite for the success of a co-operative is the

establishment and fostering of good working relationship between its board of directors and senior management. The board should take care of democratic processes and members' problems and insulate the managers from political interferences and the managers should concentrate on business management and delivering maximum possible benefits to the members.

6.7 Lack of Performance-based Reward Systems and Poor Work Environment

Like government servants, co-operative managers regularly get their salary, annual increments and promotions irrespective of their performance. There are no incentives for good performance and no punishment for poor performance. Now there is increasing recognition all over the world that salaries of administrators and managers should be linked to their performance. A two-axis system of payment is suggested for this purpose, namely, payment of some fixed salary and some variable rewards. The fixed salary could be set at a level that is needed to attract professional managers to work for co-operatives and the variable rewards may be paid in proportion to the level of performance achieved by managers so as to retain them with the co-operatives. For payment of variable rewards, it will be necessary to develop some quantifiable measures of performance. As a rule of thumb, co-operative managers may be paid 80 per cent of the market rate of salary as fixed and the remaining 20 per cent as variable depending on their performance. This would promote excellence in management and discourage poor performance.

Given their small size of business turn over and lack of opportunities for expansion, most co-operatives cannot assure their managers any prospects of career advancement. For example, even in the co-operative dairy unions which are considered to be better managed than other types of co-operatives, it is not uncommon to find a typical employee with a degree in dairy technology, or veterinary science, or agriculture working in the same scale of pay for 10-15 years, or even more. When a young rural management graduate is inducted in such an organisation at the middle level and placed above those who have put in 15-20 years service and who have technical qualifications, it is but natural that the young manager is not welcome in the organisation. The more experienced and more elderly colleagues try to find fault with the young manager who is not only novice but also arrogant in many cases and create

conditions that the young manager finds difficult to cope with. In most cases, in the absence of any formal training in professional management, the CEO also looks at the young manager with suspicion, does not appreciate what the young manager does or can do and does not provide him the much needed guidance and moral support. As a consequence, most young managers leave the organisation within months of joining.

Most of the co-operatives in India are small-scale enterprises and even the big ones were small when they started. In small co-operatives, the leadership and management functions are invariably combined and performed by the Secretary/Manager. Members' representatives have a fair degree of involvement in the day-to-day running of the co-operative. Many important decisions are taken informally based on the whims and fancies of the Chairman or Secretary. There are no fixed working hours and no reporting and monitoring systems in place. The office rooms lack in basic amenities and are poorly equipped and the premises are not clean. Most of the employees hardly put in more than 2-3 hours of work per day; they spend most of their time in gossiping and/or doing their personal work. The Chairmen and the members of the Board interfere with the functions of professional managers and as a matter of fact, in most cases, they take over those functions. Big co-operatives such as district level unions are over-staffed, thanks to the interference by local politicians in the matters of recruitment, promotions, and transfers.

7.0 CONCLUDING REMARKS

Rural development is affected by a multitude of factors including institutions and organisations. Co-operatives as a form of organisation are widely prevalent in both developed and developing countries of the world. They are considered an important instrument of rural development in developing countries including India. Since their birth in 1904, co-operatives in India have treaded a long and arduous path. Now, they occupy an important place in India's rural economy in terms of their membership, business turn over, and contribution to the socio-economic welfare of their members., and hence rural development. They have performed well in some sectors in some places and badly in many other places. But the fact remains that most of them have survived, albeit with a rather heavy dose of oxygen in many cases, for over 90 years and there is no reason for anyone to believe that they will all die in the near future.

Despite their overwhelming importance in India's rural economy, most of the co-operatives are, however, not financially viable due to a variety of reasons and suffer from many other internal and external constraints. The major constraints include lack of professionalism in management; lack of good leadership; archaic co-operative law and excessive government control; small size of business and hence inability to afford the services of professional managers; and internal work culture and environment not congenial to professionalisation of management. Co-operatives could have a bright future in India in the new era if they are transformed into member-owned autonomous organisations governed by the elected representatives of their members, managed professionally and liberated from unnecessary government controls.

Endnotes

1. The authors are respectively RBI Chair Professor-cum-Director and Research Associate, RBI Endowment Unit, Institute of Rural Management, Anand-388 001. The authors are thankful to Dr. B.S. Baviskar for his valuable comments on an earlier draft of the paper. The views expressed in the paper are authors' own and do not necessarily reflect those of the organisation with which they are affiliated.
2. Most of the statistics about co-operatives cited in this section of the paper are taken from 'Going Steady Despite Handicaps - Co-operative Sector in Indian Economy', FE Research Bureau, Financial Express dated April 9, 1996.
3. For details of a few recent studies, see the Indian Journal of Agricultural Economics, Vol. 51, No. 4, October-December 1996, pp. 712-823 and R. Rajagopalan (ed.) (1996) Rediscovering Co-operation, Vol. II, Institute of Rural Management, Anand.
4. See Kamath (1996); Singh (1999b:207-209); and Singh (1998) for details of Anand-pattern dairy co-operatives including their evolution, growth and performance.
5. Dr. Verghese Kurien, after having a short stint at a derelict Government Research Creamery in Anand, was about to leave Anand in search of a better job in a metropolitan city when Tribhuvandas K Patel approached him and persuaded him to work for Amul. The duo worked together for over two decades and built Amul from a stage when it collected only 250 litres of milk per day from two societies to the present stage when it collects nearly 8 lakh litres of milk per day in flush season from more than 900 societies.

References

- Agricultural Refinance and Development Corporation (1976) "Report of the Committee on Integration of Co-operative Credit Institutions," (Chairman: R.K. Hazari), Bombay.
- Anandaram, K.S. (1996) "Shree Ganesh Co-operative Spinning Mills Ltd.: A Performing Co-operative," in Rajagopalan (ed.) *Rediscovering Co-operation*. Volume III, Institute of Rural Management, Anand.
- Apte, D.P. (1996) "Sugar Co-operatives in Western Maharashtra: Causes of Success/Failure," *Indian Journal of Agricultural Economics*, 51(4).
- Apte, D.P. and S. Shankara Setty (1996) "Generating Rural Employment: Experiences of Successful Co-operative Spinning Mills in Maharashtra," in Rajagopalan (ed.) *Rediscovering Co-operation*. Volume III, Institute of Rural Management, Anand.
- Arora, V.P.S. and T.S. Bhogal (1996) "Integrated Milk Co-operatives in North-West Uttar Pradesh: Organisation, Functioning and Performance," *Indian Journal of Agricultural Economics*, 51(4).
- Attwood, D.W. and B.S. Baviskar (1987) "Why Do Some Co-operatives Work but not Others? A Comparative Analysis of Sugar Co-operatives in India," *Economic and Political Weekly*, 22(6), June 27, A-38-56.
- _____ (1988) *Who Shares: Co-operative and Rural Development*. New Delhi: Oxford University Press.
- Attwood, D.W. (1993) *Raising Cane: The Political Economy of Sugar in Western India*. New Delhi: Oxford University Press.
- Bandyopadhyay, S. (1996) "An Evaluation of Performance of a Co-operative Society," *Indian Journal of Agricultural Economics*, 51(4).
- Baviskar, B.S. (1980) *The Politics of Development: Sugar Co-operatives in Rural Maharashtra*. New Delhi: Oxford University Press.
- Baviskar, B.S. and D.W. Attwood (1998) *Finding The Middle Path: The Political Economy of Co-operation in Rural India*. New Delhi: Vistar Publication.
- Candler, Wilfred and Nalini Kumar (1998) *India: The Dairy Revolution*. Washington DC: The World Bank.
- Chadha, G.K. and H.R. Sharma (1996) "Co-operatives Succeed in Mountains Too: The Case of Bhutti Weavers Society, Kullu," *Indian Journal of Agricultural Economics*, 51(4).

- Chauhan, S.K. (1996) "Role of Inland Fishermen's Co-operatives in the Marketing of Reservoir Fisheries in Himachal Pradesh," *Indian Journal of Agricultural Economics*, 51(4).
- Co-operative Initiative Panel (1996) "State of Co-operation in India (Co-operative Year 1995-96)," IRMA Campus, Anand.
- Craig, J.G. (1980) "Managing Co-operative Organisations, Co-operative Future Directions Project," Working Paper No. 4, The Co-operative College of Canada, Saskatoon, Saskatchewan, Canada.
- _____ (1992) "Indian Co-operatives in the 21st Century: Breaking the Bureaucratic Noose," in "Governance and Management of Rural Co-operatives: Six Distinguished Lectures," delivered at the Symposium on Management of Rural Co-operatives, December 7-11, 1992, Institute of Rural Management, Anand.
- Datta, Samar K. (1996) "Strategies for Fisheries Co-operatives of Tomorrow," in R. Rajagopalan (ed.) *Rediscovering Co-operation*. Vol. II, Institute of Rural Management, Anand.
- Doornbos, Martin *et al.* (1990) *Dairy Aid and Development: India's Operation Flood*. New Delhi: Sage Publication.
- Doornbos, M. and K.N. Nair (eds.) (1990) *Resources Institutions and Strategies: Operation Flood and Indian Dairying*. New Delhi: Sage Publication.
- Doshi, R.R. (1996) "Financial Operations of Sugar Co-operatives in Kolhapur District: An Accounting Analysis," *Indian Journal of Agricultural Economics*, 51(4).
- Dulfer, E. (1974) "Operational Efficiency of Agricultural Co-operatives in Developing Countries," FAO Development Paper No. 96, Food and Agriculture Organisation of the United Nations, Rome.
- Dwivedi, R.C. (1996) "Role of Co-operatives in Rural Economy," *Indian Journal of Agricultural Economics*, 51(4), pp. 712-727.
- Gadgil, D.R. (1975) "Sugar Co-operatives in Maharashtra," in *Writings and Speeches of D.R. Gadgil on Co-operation*. Bombay: Orient Longman Ltd.
- Gautam, T.C. (2000) "Consumer Co-operatives in the New Millennium," *The Co-operator*, 38(8), February 2000.
- Government of India (1995) *Co-operative Movement in India - A Statistical Profile*. Department of Agriculture and Co-operation, Ministry of Agriculture, New Delhi.

- _____ (1998) "Report of the Committee on Banking Sector Reforms," (Chairman: M. Narasimham), Mumbai.
- _____ (1999) *Economic Survey (1999-2000)*. Economic Division, Ministry of Finance, New Delhi.
- Gupta, P. Satyendra (1996) "Co-operative Bank and its Role in the Small Farm Economy: A Micro Level Study," *Indian Journal of Agricultural Economics*, 51(4).
- Jayalatha, C., S. Varadarajan and K. Lokanadhan (1996) "Extent of Credit Supply by Primary Agricultural Co-operative Banks in Madurai District, Tamil Nadu," *Indian Journal of Agricultural Economics*, 51(4).
- Kamath, M.V. (1996) *Milkman from Anand - The Story of Verghese Kurien*. New Delhi: Konark Publishers.
- Khodaskar, R.D. (1996) "Rural Development Through Co-operatives: A Case Study of Shri Shambhu Mahadevo Sahakari Pani Puraotha Sanstha Maryadit, Pimpalgaon (Khadki) Village (Pune)," *Indian Journal of Agricultural Economics*, 51(4).
- Koli, P.A. (1996) "Dairy Co-operatives and Rural Upliftment: An Empirical Analysis," *Indian Journal of Agricultural Economics*, 51(4).
- Kumar, B.L. (1996) "Growth and Stagnation of a Village Co-operative Credit Society: A Case Study," *Indian Journal of Agricultural Economics*, 51(4).
- Madan, G.R. (1994) *Co-operative Movement in India*. New Delhi: Mittal Publications.
- Mahammad, P.H. (1996) "Bases of Co-operation among Handloom Weavers: An Anthropological Case of the Yemmiganur Weavers' Co-operative Society," in R. Rajagopalan (ed.) *Rediscovering Co-operation*. Vol. I, Institute of Rural Management, Anand.
- Marothia, D.K. and A.K. Gauraha (1996) "Co-operative Management of Tendu Leaves: A Micro Analysis," *Indian Journal of Agricultural Economics*, 51(4).
- Mergos, George (1997) "Production Increase: Is It Real?" A paper presented at the OED-IRMA Workshop on Impact of Operation Flood, held at the Institute of Rural Management Anand, March 17-18.
- Mergos, George and H. Alderman (1987) "Production Effects of Co-operative Dairy Development in Madhya Pradesh and Karnataka," A paper presented at the IFPRI Workshop on the Economics of Dairy Development in Selected Countries and Policy Implications. Copenhagen, January 6-8.

- Mukherji, R. (1996) "Co-operatives in India's Rural Economy," *Indian Journal of Agricultural Economics*, 51(4).
- Nalini Kumar (1997) "Operation Flood Literature Review and Reconciliation," Occasional Publication 13, Institute of Rural Management, Anand.
- National Bank for Agriculture and Rural Development (1999) "Co-operative Credit Structure: An Overview 1997-98," Institutional Development Department, NABARD, Mumbai.
- National Dairy Development Board (1987) "From a Drop to a Flood," NDDB, Anand.
- Parnell, Edgar (1995) *Reinventing the Co-operative: Enterprise for the 21st Century*. Plunkett Foundation, Oxford, UK: Long Hanborough.
- Rahim, K.M.B. and Katar Singh (1996) "The Marine Fishermen's Co-operative Societies in West Bengal: An Exploratory Study," in Katar Singh and Vishwa Ballabh (eds.) *Co-operative Management of Natural Resources*. New Delhi: Sage.
- Rajagopalan, R. (1996) "Rediscovering Co-operation: A Connective Summary," in R. Rajagopalan (ed.) *Rediscovering Co-operation*. Institute of Rural Management, Anand.
- Ram Mohan and Katar Singh (1996) "The Marine Fishermen's Co-operative Societies in Kerala: An Exploratory Study," in Katar Singh and Vishwa Ballabh (eds.) *Co-operative Management of Natural Resources*. New Delhi: Sage.
- Satyasai, K.J.S. and K.U. Viswanathan (1998) "Restructuring the Co-operative Credit Structure through Integration of Short Term and Long Term Structures," *Indian Journal of Agricultural Economics*, 53(3), pp. 478-487.
- Sen, Atindra (1996) "Why Co-operative? An Institutional Explanation from the Indian Sugar Industry," in R. Rajagopalan (ed.) *Rediscovering Co-operation*. Vol. III, Institute of Rural Management, Anand.
- Shah, Tushaar (1995a) *Making Farmers' Co-operatives Work: Design, Governance and Management*. New Delhi: Sage.
- _____ (1995b) "Liberalisation and Indian Agriculture: New Relevance of Farmer Co-operatives," *Indian Journal of Agricultural Economics*, 50(3), July-September.
- _____ (1996) *Catalysing Co-operation: Design of Self-Governing Organisations*. New Delhi: Sage.

- Shanti George (1985) *An Appraisal of Current Indian Dairy Policy*. New Delhi: Oxford University Press.
- _____ (1994) *A Matter of People: Co-operative Dairying in India and Zimbabwe*. Bombay: Oxford University Press.
- Sharma, K.D. (1996) "Importance of Co-operation in Hill Farming – A Case of Lahul Hops Co-operative Society in Himachal Pradesh," *Indian Journal of Agricultural Economics*, 51(4).
- Shiyani, R.L. and D.D. Ghonia (1996) "Role and Performance of Co-operative Lift Irrigation Societies – A Case Study," *Indian Journal of Agricultural Economics*, 51(4).
- Singh, Katar (1996a) "The Emergence and Survival of Co-operation: A Review of Some Theoretical propositions," in R. Rajagopalan (ed.) *Rediscovering Co-operation*. Vol. III, Institute of Rural Management, Anand.
- _____ (1996b) "Some Contemporary Issues in Professionalising the Management of Agribusiness Co-operatives with Special Reference to Dairy Co-operatives," *The Administrator*, 41(4), October-December, pp. 135-152.
- _____ (1996c) "Rapporteur's Report on Co-operatives in Rural Economy," *Indian Journal of Agricultural Economics*, 51(4).
- _____ (1998) "The Role of Farmers' Organisations in the Context of New Economic Policy with Particular Reference to Agricultural Marketing and Agro-Processing," *Indian Journal of Agricultural Marketing*, 12(3).
- _____ (1999a) "Sustainable Development: Some Reflections," Presidential Address, *Indian Journal of Agricultural Economics*, 54(1).
- _____ (1999b) *Rural Development: Principles, Policies and Management*. 2nd edition, New Delhi: Sage.
- _____ (2000) "Challenges for Co-operatives in the New Millennium and Strategies for Coping with Them," *The Co-operator*, 32(8).
- Singh, Katar and V. Mukunda Das (1984) "Impact of Operation Flood I at the Village Level," Occasional Publication 2, Institute of Rural Management, Anand.
- Singh, Katar and J.C. Acharya (1986) "The Impact of the Madhya Pradesh Dairy Development Project," Research Report, (unpublished), Institute of Rural Management, Anand.
- Singh, Katar and Vishwa Ballabh (eds.) (1996) *Co-operative Management of Natural Resources*. New Delhi: Sage Publications.

- Singh, Katar and Virendra P. Singh (1998) "Dairy Development in India: Retrospect and Prospect," Research Paper 15, Institute of Rural Management, Anand.
- Singh, Lotan and J. Chattaraj (1996) "Enhancement of Family Labour Income through Service of Dairy Co-operatives," *Indian Journal of Agricultural Economics*, 51(4).
- Suryawanshi, S.D. and N.S. Gaikwad (1996) "Performance and Achievements of Warana Co-operative Sugar Factory in Integrated Rural Development – A Case Study," *Indian Journal of Agricultural Economics*, 51(4).
- Taimni, K.K. (1994) "Integrated Co-operatives: The Case of Sugar Co-operatives in Maharashtra," in K.K.Taimni (ed.) *Asia's Rural Co-operatives*. New Delhi: Oxford & IBH Publishing Co. Pvt. Ltd.
- Tewari, S.K. (1996) "Financial Vulnerability of Co-operatives: Analysis of In-built Causes for Some Policy Implications," *Indian Journal of Agricultural Economics*, 51(4).
- Tewary, M.M. (2000) "Integration of Fisheries and Fisheries Co-operatives in Business Development in the New Millennium," *The Cooperator*, 38(8), February.
- Vaidyanathan, A. (1996) "Agricultural Development: Imperatives of Institutional Reform," *Economic and Political Weekly*, Special Number, September, pp. 2451-2458.
- Varade, P. Sangita and B.D. Bhole (1996) "Performance and Prospects of Co-operative Spinning Mills in Vidarbha Region of Maharashtra," *Indian Journal of Agricultural Economics*, 51(4).