WOMEN INDUSTRIAL COOPERATIVES AN ANALYSIS OF ITS STRUCTURE, PERFORMANCE AND GROWTH IN KANNUR DISTRICT

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CERTIFICATE

Certified that this thesis titled ***"Women Industrial Cooperatives – An Analysis of its Structure, Performance and Growth in Kannur District"***, being submitted to Cochin University of Science and Technology, for the Degree of Doctor of Philosophy in Economics, is a record of bonafide research carried out by C.Padmini under my guidance and that it has not been submitted in part or full for any other degree of any University.

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Chapter - I

The Women Industrial Cooperatives – An Analysis of Its Structure, Performance and Growth in Kannur District

Introduction

In the Madras Cooperative Manual, the cooperative society is defined as "a voluntary association of persons having equality of rights for the attainment in common of some purpose intimately connected with their own economic well-being with a view to the equal distribution of the advantages desired among themselves'' (Madras Cooperative Manual 1947). Though cooperatives have been in existence in India for a century now, it has not been possible to arrive at a definition of cooperatives that is generally accepted, but the common principle is an association of members coming together in pursuit of a common economic objective. The origin of Cooperative movement in India can be traced to the famous report of Sir.Frederik Nicholson (1895) that led to the passage of the first ever Cooperative legislation in 1904.The Maglegan Committee (1914) and Royal Commission on Agriculture (1928) had a bearing on the growth of cooperatives and the role of cooperatives in agriculture in India. In the pre-independent India, the size and growth of cooperative societies were very low. Till 1910 the cooperatives were meant primarily for the development of agriculture sector. However the Cooperative Act of 1912 recognized the role of non-credit societies particularly industrial cooperatives in the country. Though the cooperative movement was introduced in the Cochin State in 1910 (Report, Cochin Banking Enquiry Committee, 1920), a common Cooperative Act was passed only in 1951, after the State of Travancore and Cochin had been integrated in1949. However the common cooperative law for all regions including Malabar was enacted in 1969 (Kerala Gazettee notification, 1969). After the formation of the State, the cooperatives in Kerala have shown a thorough diversification into new areas including industrial sector. This was mainly due to the strong support extended by the Government of Kerala in the form of financial stake in the cooperative sector. The role political parties, especially that of the left has, had a significant impact on the

formation of cooperatives in Kerala. The freedom fighters and political leaders like A.K.Gopalan, K.Kelappan, P.Krishna Pillai and others were the main early initiators of cooperative movement in the state. Needless to say, Kerala's general environment was very much conducive for the speedy growth of cooperatives.

Within a short span of time, cooperatives became popular in the traditional industries as a better means of employment for the poor. More over the trade unions took keen interest in the formation of cooperatives on the presumption that cooperatives are less prone to complete closure than private factories (Raja Gopalan, 1996). For instance, the handloom cooperatives in Malabar during 1950's were formed by converting the crisis ridden private factories on the verge of closure (Nambiar, 1972). Till 1970, the government did not recognize its due importance in the economy. However during the general crisis in the economy in 70s, government began to consider cooperatives as a resilient system to support the peasants, artisans, workers and consumers and hence extended financial assistance, subsidies and other concessions.

The cooperative movement in Kerala, though began with credit societies, has been thoroughly diversified into new areas including industrial sector. After the formation of the state, the cooperative sector became popular in the traditional industrial sector as a better means of employment to the poor. During the two decades (1981-2000) the industrial cooperatives in the state has undergone tremendous changes in the structure and composition by expanding the coverage to non-traditional industries including women. With the implementation of Women Industries Programme in the state during 1979 - 80, the cooperative sector has been given more emphasis so as to integrate women in the development activities. Besides, the government included "empowerment of women through cooperatives", as one of the major thrust areas of the draft five-year plan, so as to evolve collective solidarity or leadership among women, which is a gradual process.

Even though the number of industrial cooperatives in Kerala has recorded a substantial improvement over the years, its mortality rate has been high just like in the rest of the country. However on the categorization of industrial cooperatives on

the basis of locality like central, southern and northern districts, a major segment of industrial cooperatives in the northern district are found to be in good working condition, although the majority are located in southern and central part of the state.

This phenomenon in the northern districts was observed in the case of women industrial cooperatives also. This is partly on account of the worker's initiative and partly, the support extended by the political leaders and trade union. Thus political patronage and network connection has been a major influencing factor in their growth and survival. Though patronage based on religion is common in Kerala, it is not so pronounced in Kannur; instead politics is the dominant patronage source. It was observed that 46.3 percent of the units in Kannur have political patronage and 35.2 percent have non – political, and the rest operate with no patronage at all.

In Kannur, of the total women industrial cooperatives, 61 percent of them are working as garment making units. Out of the total garment making units 54.5 percent have extensive socio political network in their activities. In both groups (cooperatives with network and without network), the garment making units are distinctly operating in three types of activity, such as those work as contract units, those operate as manufacturing units and those units work as contract cum manufacturing activities simultaneously.

This study deals with the structure, performance and growth of women industrial cooperatives in Kannur. The structure of cooperatives refers to its general features such as nature of working, product mix, capital structure and general problems they confront in their activities. The performance analysis relate with financial structure (financial liquidity and solvency), and financial performance. The financial performance involves, the analysis of variables such as profitability both gross and net per capital invested, efficiency in terms of cost of production structure, employment generation and income earned by the workers and productivity which is related with value addition per unit and per worker. The combination of general structure, financial liquidity and financial performance together account for a substantial part of the growth and survival of cooperatives. This is done on group wise based on network, product wise and activity cum network basis. Further, women

cooperatives are discussed separately under two special categories viz., cooperatives with political network and cooperatives with social network. The comparative analysis was carried out in order to discuss the relevance of the two types of network and its impact on the structure and performance of women cooperatives. The socio - political network analysis has been done by using the same variables with which group wise comparison is carried out.

Problem Statement

The cooperative movement has assumed a great significance in Kerala. Being considered a means of upliftment of marginalized, the government has extended considerable financial support to the cooperatives. The political parties and several groups also have shown keen interest in the growth of cooperatives.

The women industrial cooperatives in Kannur has provided employment for more than thousand women workers directly and about 2 to 3 times of employment indirectly. The government helped the women cooperatives in the form of financial stake as well as several concession and incentives. About 73.1 lakh rupees have been mobilized as government share capital by the women industrial cooperatives in Kannur and about 24.48 lakh was obtained as grand and subsidy. Annually on an average they produce output worth more than 20 lakhs in Kannur. Because of these, there is a need to understand the structure and functioning of cooperatives in Kerala.

Although a lot of literatures on inter firm collaboration and economic and social embedded ness has accumulated, it does not seriously discuss the role of net working in enhancing the performance of cooperatives. An understanding of the growth performance of the cooperatives is particularly important from a policy point of view. Similarly, as cooperatives are highly politicized, it will be useful to understand to what extent political networking has helped the cooperatives to achieve impressive performance. As socio religious group are also active in the cooperative movement, the role of social network in enhancing performance needs careful scrutiny. Keeping these concerns in mind, this study purports to analyze the structure and growth performance of the women industrial cooperatives in Kannur

district. The role of political and social networks in the performance of cooperatives is of key importance in this study.

In other words the study makes an attempt to examine the reason for the inter and intra unit differences in the overall performance of women industrial cooperatives in Kannur district in relation to the dynamics of net working in general and political and social net working in particular so as to identify its pressures and possibilities as reflected in the structure, performance and growth.

The focus of the study is on women industrial cooperatives in Kannur district as discussed at great length in this study, the industrial cooperatives are taken up keeping in view there possible contribution to the growth of the economy by providing motives to the poor and the marginalized. Since women being the brunt of social exclusion more than any other under privileged sections, the study of women industrial cooperatives attracts special attention. The reason why Kannur was chosen as the locale is the political activism in Kannur in general and the keen interest political parties and socio religious organization have evinced in particular in promoting cooperatives.

The objectives set for this study are the following

1. To understand the general features, structure and nature of working of women industrial cooperatives.
2. To analyse the financial structure and performance of women cooperatives product wise and also based on networks within and between the groups.
3. To examine the productivity, income generation, employment creation and the over all efficiency of women cooperatives as also the inter group differences.
4. To assess the impact of socio – political networks on the structure and performance of women cooperatives; and finally
5. To develop a policy approach to strengthen the working of women cooperatives drawing on the implications of the findings

The following main hypotheses has been advanced in this study:

1. **The major hypothesis**

   The inter group differences in the performance of women industrial cooperatives are governed more by the existence of networking and linkages than the conventional structural factors such as capital structure, product mix, labour –skill, organization etc.

2. **Inter locking hypothesis**

   1. There exist significant efficiency differences between groups.
   2. The inter group differences in terms of financial structure is more favourable to firms with networking.
   3. The performance of units with political network is more efficient than that with social network and no network.
   4. There exist significant differences between groups in incomes earned by workers

      In order to pursue the objectives, the performance of women cooperatives was examined in terms of the following.

      a. Financial structure using current ratio, acid test or quick ratio (short term financial liquidity) and debt equity ratio (long term financial structure)
      b. The productivity of the cooperatives was analysed with respect to labour based on value addition and the percent share of capital used per unit of value addition.
      c. An analysis of the structure of cost of production taking into account the labour charge, raw – material cost, depreciation and establishment and contingencies of each group.
      d. The profitability of the women cooperative society gauged by the volume of gross profit, gross profit per unit of capital employed and profit per unit of sales. In addition the efficiency of the

cooperative was measured using the analysis of return on investment.

e. A detailed analysis of employment and wages with respect to all the group of women cooperatives in Kannur district.

The growth of industrial cooperatives in Kerala is given in table – I.1. It is remarkable that within a period of 20 years the number of units increased by more than five times.

Table – I.1.
Growth of Industrial Cooperatives in Kerala-(from 1979-80 to 1999-2000)

Year	No. of Units	Change as Number of times based on 1979-80
1979-80	482	1
1980-81	528	1.09
1981-82	1291	2.68
1982-83	1316	2.73
1983-84	1365	2.83
1984-85	1388	2.88
1985-86	1515	3.14
1986-87	1515	3.14
1987-88	1515	3.14
1988-89	1516	3.14
1989-90	1516	3.14
1990-91	1520	3.15
1991-92	1592	3.3
1992-93	1775	3.68
1993-94	1918	3.98
1994-95	2081	4.32
1995-96	2193	4.55
1996-97	2259	4.69
1997-98	2384	4.95
1998-99	2447	5.08
1999-00	2506	5.2

Source: Economic Review, Govt. of Kerala, Various issues

Chart – I.1

That is, the number of industrial cooperatives increased from 482 to 2506. A peculiar feature of industrial cooperatives in Kerala is its regional concentration and its relatively low dormancy in the northern districts. The district wise distribution of industrial cooperatives as on 2000 shows that 25.5 percent of them are located in northern part, while 35.2 percent in the central part and the rest 39.3 percent in the southern part of the state (Table 2 &2A). Out of the total working societies, 32.8 percent is in northern districts, 27 percent in central districts and 40.1 percent in the southern districts of Kerala. However, of the total cooperatives registered in this region the percent of working cooperatives is more in the northern part (52.4 percent). Similarly, out of the total sick units the Northern districts accounts for only 10.5 percent, which is less than that in the other two parts (i.e., 41.4 percent in the central part and 48.1 percent in the southern part).

Though women cooperatives were in existence as early as 1923 in Punjab (Metha, 1975), its actual progress in size and operation in India began after 1980. The promotion of cooperatives for women was one of the major steps towards emancipating them in the main stream of economic activity and uplifting their status in the context of a very low work participation rate (Government of Kerala, 1974).

Table – I.2.
District wise distribution of Industrial Cooperatives as on 2000

District	Total Societies	No. of Cooperatives working	No. of Cooperatives Sick	No. of Societies closed
Trivandrum	329	125	125	79
Kollam	268	132	81	55
Pattanamthitta	107	47	7	53
Alappuzha	281	107	158	16
Kottayam	166	48	69	49
Idukki	102	36	21	45
Ernakulam	249	72	94	83
Trichur	217	56	115	46
Palakkad	148	64	20	64
Malapuram	145	63	5	77
Kozhikode	122	57	6	59
Wynad	76	22	15	39
Kannur	205	154	27	24
Kasargod	91	39	28	24
Total	2506	1022	771	713

Source: Directorate of Industries and Commerce, Govt. of Kerala, Trivandrum

Among the fourteen districts, the district of Kannur accounts for the largest number of working industrial cooperatives.

Table –I.2A
Distribution of Industrial Cooperatives according to Zone

Zone *	No. of Cooperatives	Percent of total cooperatives	No. of Working Cooperatives	Percent of total working cooperatives	Percent of working cooperatives to total cooperative registered	No. of Sick Cooperatives	Percent
South	985	39.3	411	40.2	41.7	371	48.1
Central	882	35.2	276	27	31.3	319	41.4
North	639	25.5	335	32.8	52.4	81	10.5
Total	2506	100	1022	100	40.78	771	100

Source: Worked out from Table-2

** Southern part – Trivandrum, Kollam, Pathanamthitta, and Alappuzha*
** Central part——Kottayam, Idukki, Ernakulam, Trichur, and Palakkad*
** Northern part—Malappuram, Kozhikode, Wynadu, Kannur and Kasargod*

Chart – I.2

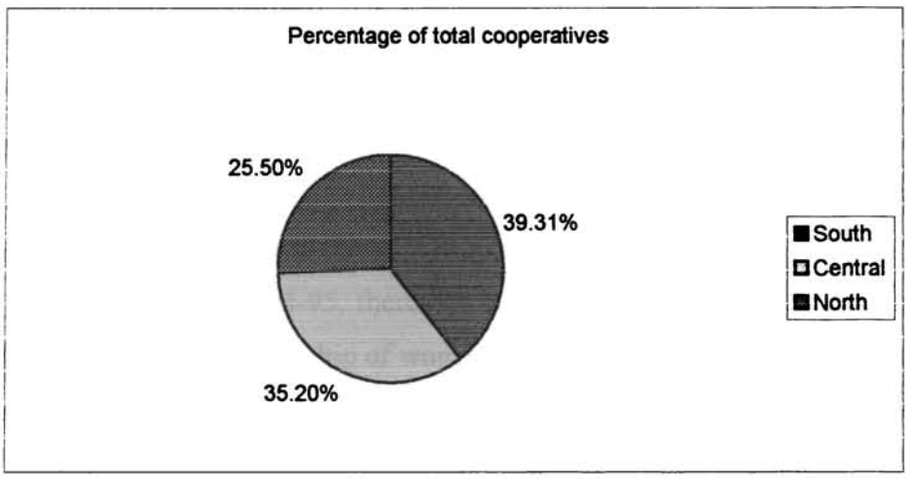


Chart – I.3

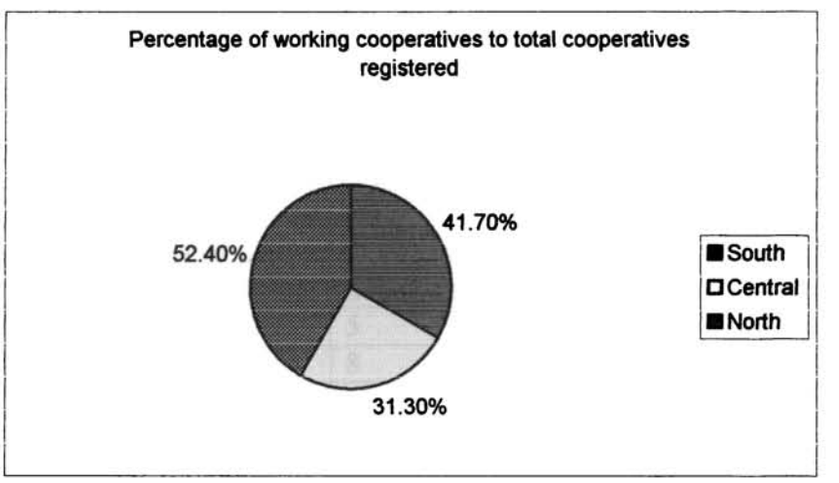
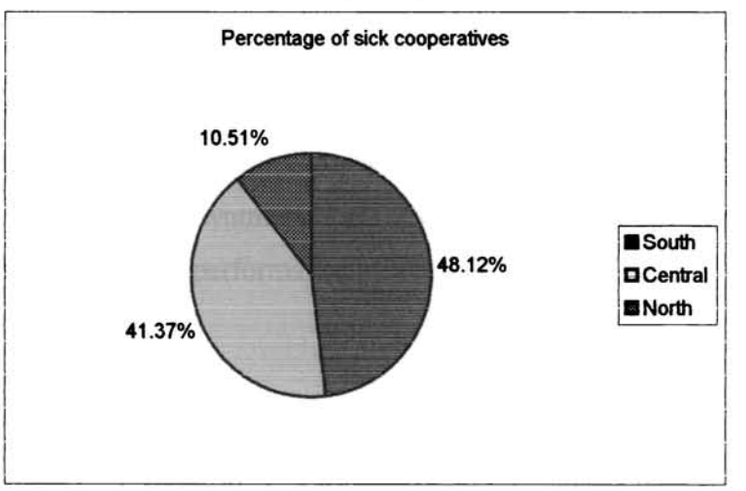


Chart – I.4



Though women cooperatives were working across the country much earlier, there has been no systematic documentation of their activities till 1988 – 89. Since 1989, the National Bank for Agricultural and Rural Development (NABARD) began to publish some data. But these data do not give details of many aspects for some states. Despite this, the only dependable source containing the details of working status of women cooperatives in the state is NABARD.

From 1989-90 to 1994-95, there has been tremendous improvement in terms of both in number and membership of women cooperatives in Kerala. But, along with the increase in the number, the number of dormant units also increased. The number of societies running on loss seems to be more than those operating under profit. The performance of women cooperatives given in table –I.3 is not quite impressive as the number of loss making units out numbers the total profit making units.

Table – I.3.
Progress of Women Cooperatives in Kerala (Non- Agricultural non- credit societies) from 1989-90 to 1994-95 (Amount. In '000s)

Year	Membership	Working Capital	No. of Active Societies	No. of Dormant Societies	No. of Societies	Societies under loss	Societies under profit	Current ratio
1989-90	34373	14750	116	5	121	79	20	1.2:1
1990-91	33126	15053	126	8	134	80	23	0.9:1
1991-92	33620	17995	133	16	149	90	32	0.9:1
1992-93	45355	26035	289	39	328	154	40	0.9:1
1993-94	45355	26035	299	39	328	154	40	0.9:1
1994-95	53182	42605	335	52	387	227	39	0.9:1

Source: NABARD. Various Issues

From the Table – I.4, it is seen that not only the profit per society but also the working capital available per society too declined from 121.9 to 110 during the same period. Thus the progress of women cooperatives in Kerala has been only in terms of numbers and not in terms of performance.

Table –I.4.
Performance of Women Cooperatives in Kerala (Average) from 1989-90 to 1994-95 (Amount in '000s)

Year	No. of societies	Members hip per society	Working capital per society	Asset per society	Liabilities per society	Profit per society	Loss per society
1989-90	121	284	121.9	122	120	9	12.5
1990-91	134	247	112.3	103	110	7.6	13.9
1991-92	149	226	120.8	121	133.6	11.2	22.3
1992-93	328	138	79.4	79.4	86	30.7	16.8
1993-94	328	138	79.4	79.4	86	30.7	16.8
1994-95	387	137	110	110	116	6.1	26.6

Source: Calculated from the NABARD, Various Issues.

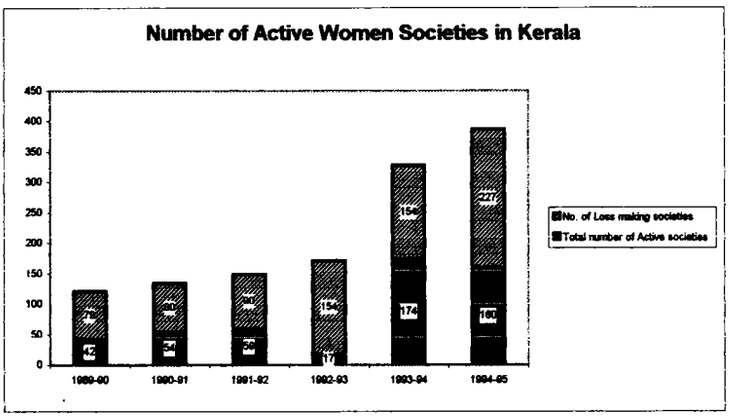
Though the performance of women cooperatives has been rather sluggish, a good number of societies are active (either profit making or working). The percent of active societies works out to be 40. (Table –I.5)

Table –I.5.
Active Women Societies in Kerala. (1989-90 to 1994-95)

Year	No. of Profit making societies	No. of Societies neither loss nor profit	Total number of Active societies	No. of Loss making societies	Total No. of Societies
1	2	3	4(3+2)	5	6(4+5)
1989-90	20	22	42	79	121
1990-91	23	31	54	80	134
1991-92	32	27	59	90	149
1992-93	40	134	17	154	328
1993-94	40	134	174	154	328
1994-95	39	121	160(40)	227(60)	387(100)

Source: Calculated from NABARD, Various Issues.
(figures in bracket shows percent)

Chart – I.5



The assistance of government in the form of subsidies and concessions has been a major factor for the societies to be active without closure. For the period from 1989 - 90 to 1994 - 95, subsidy released to Kerala shows substantial increase from 0.45 in 1990 - 91 to 3.23 during 1994 - 95 per society. Out of the total subsidy, the percent share of Kerala is very high (table –I.6). On an average, for the period 1991-95, Kerala was able to obtain 41.7 percent of the total subsidy provided by NABARD to all the states in India. The progress of women cooperatives so far discussed was mainly about the non-agriculture non-credit societies managed and owned by women. More detailed secondary data on industrial cooperatives owned by women are not available.

Table – I.6.
Share of Subsidy to Women Cooperatives – Kerala for the period – 1990 – 91 to 1994-95 (Amount in '000s)

Year	Total subsidy in India	Total subsidy to Kerala	Subsidy per society in Kerala	Subsidy to Kerala as percent to total
1990-91	132	55	0.45	41.7
1991-92	327	217	1.62	66.4
1992-93	1743	458	3.07	26.3
1993-94	1779	458	3.07	25.7
1994-95	2573	1251	3.23	48.6

Source: Calculated from NABARD, Various Issues

The Department of Economics and Statistics reported in 1980, that Kerala had 66 women industrial cooperatives (Man power series, 1980). Between 1980 and 1986 no data on women industrial cooperatives were published. From 1987 onwards, the Government of Kerala publishes data regarding the annual growth of cooperatives but without any continuity. According to the Government of Kerala, in 1991, there were 243 women industrial cooperatives in the state. But according to NABARD Kerala had only 134 women societies. In 1998, the Evaluation of Women Industries Programme including women cooperatives were carried out by the Planning Board.

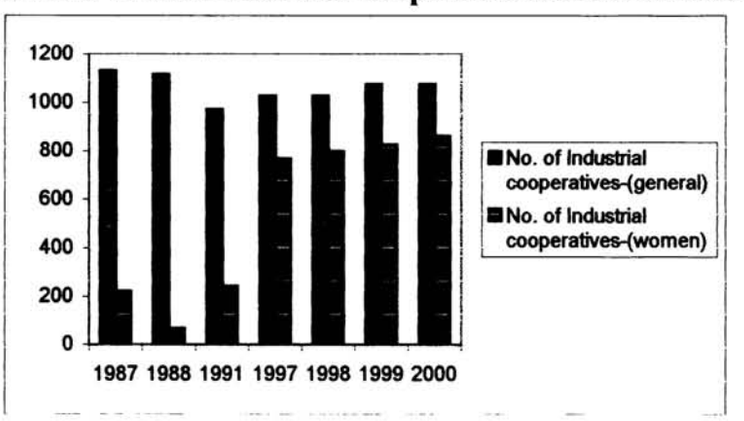
Table –I.7.
Growth of Women Industrial Cooperatives-Kerala- Year wise

Year	No. of Industrial cooperatives-(general)	No. of Industrial cooperatives-(women)	Total Number of cooperatives
1987	1130	221(15)	1469
1988	1116	68(5)	1305
1991	970	243(17.4)	1397
1997	1028	767(35)	2193
1998	1026	797(35.3)	2259
1999	1075	825(19.7)	2384
2000	1074	861(35.2)	2447

Source: Economic Review, Various Issues, Govt. of Kerala, Trivandrum
(figures in brackets show percent to the row total)

This shows the lack of a systematic documentation of information about the status of women cooperatives in Kerala. The available secondary information on women cooperatives in Kerala is summarized in Table –I.7.

Chart – I.6
Growth of Women Industrial Cooperative societies in Kerala



The district wise data on women industrial cooperatives shows the spatial distribution of the units. Just like industrial cooperatives (general), the women industrial cooperatives too, are concentrated in some of the southern and central parts of the state. But the mortality rate is high in the southern part than in the northern part of the state (Government of Kerala, 1998). Among the northern districts, Kannur district performs relatively better. This was partly on account of the worker's initiative and partly the support obtained from the political leaders and trade unions (Rajagopalan, 1996). The district wise details show that the share of women industrial cooperatives (given in Table –I.8) has increased from 15 percent to 35.2 percent during the period 1987 –2000.

The political interest in cooperatives was more visible and present in the initiative of political leaders, and their efforts contributed a lot to the shaping of the cooperative movement (Krusch, 1996). Inspite of the onslaught of economic reforms during the last five years, the relevance of cooperatives does not take a back seat, though there may be a shift in priorities to be assigned to various sectors of the economy (Kumar, 1998). The rationale for the existence of cooperatives arises from the nature of perception of development. (Kulandai Swami, 1994).

Table –I.8.
Share of Women Industrial Cooperatives in the Total: District wise percentage in Kerala.

District	1987	1988	1991	1994	1997	1998	1999	2000
TVM	0.6	0.3	0.3	3	3	3	4	4
KLM	2	2	2	3	3	3	3	3
PTA	0.6	0.6	1	1	3	3	3	2
ALPZA	2	2	3	2	3	3	3	3
KTM	0.8	0.3	0	1	3	3	3	2
IDKI	0.6	0.7	1	1	1	1	1	2
EKM	1	1	1	1	8	8	7	5
TCR	3	0.8	3	2	2	2	2	4
PGHT	0.6	3	1	1	2	3	3	3
MLPM	1	1	1	1	1	2	2	2
KZD	0.6	0.7	0	1	1	1	1	1
WYND	0.4	0.5	0	1	1	1	1	1
KNR	2	2	2	2	3	3	3	3
KSGD	0.2	0.6	0.6	1	1	1	1	1
Total	15	5	17.4	21	35	35.3	34.6	35.2

Source: Calculated from Economic Review, Various Issues, Govt. of Kerala, Trivandrum.

However, the importance of cooperatives in organizing people, enhancing productivity and in promoting equitable distribution of profits, participation of women in cooperative movement has been limited due to illiteracy, cumbersome procedures of registration of cooperatives, inadequate financial support, marketing facilities and lack of effective leadership (Falendra and Gupta S.K, 1997). The collective forum for women needs to build collective solidarity or leadership, which is a gradual process to emerge as, empowered (Sharma, 1998). This has prompted the government to include "empowerment of women by mobilization of women in cooperatives" as one of the major thrust areas in the draft five-year plan (Sisodia, 1998). The Kerala Dinesh Beedi which employs large number of women workers, so far outflanked the degeneration tendencies through a creative mix of work place empowerment and supervision (Franke, Thomas Isac and Pyarelal Raghavan, 1998)

Obviously there has accumulated over time considerable literature on the theoretical and empirical aspects of cooperatives globally and locally. Let us consider the theoretical literature first.

Theoretical Issues

The theoretical models developed by Vanek (1970), Reddy Rami (1977), Stephen (1984), Tewari (1996) and others postulated cooperatives just like any profit motive private enterprise selecting a least cost combination of inputs and output for the short period. Since the cooperatives are collective organizations, they try to maximize income per member by equating marginal productivity with income. Any increase in the number of members is allowed only if the existing members are made better off. Hence membership is restricted in a labor-managed firm below the level of full employment in order to maximize the income per member (Vanek, 1970). But Reddy Ram's (1977) model emphasizes economizing the use of productive resources in order to minimize cost and maximize income per member. However Stephen (1984) modified the basic model of labor managed firm by emphasizing the fixation of wage rate of the members at that level where, the marginal product and opportunity cost are equated in order to maximize the income per member. However there is no

difference of opinion among these economists with regards to the tendency of the cooperatives in the long run. Because of the entry of new firms, output increases, but demand will not equate with supply, as a result, price falls and ultimately extra profit disappears, the income per member falls. To avoid such a situation, the authors stated different approaches in a labor-managed firm. Vanek argues the restriction of the size of membership or employment and a technical substitution of capital for labor to increase the income per member in the long run. Reddy Rami's model argues to opt for one of the two solutions to maximise profit, i.e., either restriction of the size of membership or the size of output through restricted use of raw- materials. Stephen (1984) on the other hand recommends the restriction of membership by equating the demand for and supply of members at the going rate of wages, which will equate marginal product with their opportunity cost. However, this model does not rule out the possibility of the creation of two or more categories of members (non-members and members) if they follow the opportunity cost principle. Several writers (Cornforth and Allen Thomas, Abell and Mahoney, 1988) noted the negative impact of such categorization of labourers on commitment and solidarity that are treated as the determinants of success of cooperatives along with the occurrence of organizational degeneration if non- members are hired. Tewari(1996) on the other hand, stated the irrelevance of cooperatives in a perfectly competitive market in the long run, who also agree with other authors regarding the aim of labor managed firms, i.e., maximization of income per member. He developed a model of cooperatives in an imperfect market, for the short period where the cooperatives have a better chance of increasing the welfare by increasing the output and lowering the price without affecting the income of the members (wages). But to reduce the price, the cost of inputs other than labor must reduce, or the price of output must increase, so that member's income (wages + part of surplus) is maximized. In the long run, because of new entry, supply exceeds demand and in such a situation, either a price cut per unit or output per member will not maximize the welfare of the members, though the cooperatives try to obtain the maximum price possible for their products. This is because, if there is a price cut, profit declines, and consequently surplus falls and a

cut in output per member reduces the use of productive resources which will affect their income. A similar model developed by Marshall and McCormack (1986) by stating the tendency of the cooperatives to restrict the size of employment and output in order to raise the income of their members.

Thus the theories indicate that under perfect competition in the long run the cooperative form of organization restricts membership and reduces the size of employment in order to earn higher income per member. But membership restriction may lead to erosion of capital base where the member's share forms the base of government stake in the cooperatives. It also argues (Tewari), that even under imperfect competition, the chances of increasing welfare to the members are quite dismal, on the other hand, it maximizes the welfare of the collectives.

Thus the cooperative models clearly brings out the possibility of not only declining employment but also the reduction of welfare of individual members without discarding the possibility of increasing welfare to the cooperatives, rather than individual economic interest.

Based on the theoretical frame work, Ellerman(1984) and Levin and Jackal(1984) examined the legal structure of cooperatives. Ellerman while comparing the legal structure of a neo classical firm with that of a worker cooperative asserts the superiority of the latter over the former in terms of the income per worker. The model states that a worker in a conventional firm receives only wages, where as in a cooperative, a labor receives not only wages but also a part of economic profit. More over the author emphasizes the social content embedded in the cooperatives such as trust, mutual help and reciprocity which are treated as valuable ingredients of social capital as the additional adjectives of cooperatives. Levin and Jackal examined the legal structure of the two basic principles of cooperation, viz., principle of voting right and the right to profit. The authors argue that the right to govern must be assigned to the organization and the right of profit to workers, as it is the surplus value of their efforts. This does not rule out the fact that the cooperatives retain a part of the value addition in the form of reserves as statutory and other reserves against asset depreciation and other provisions for future liabilities.

Efforts have been made to explain the mergence of cooperatives in terms of the theory of transaction cost (Williamson Oliver-1985, Coarse- 1937, Buchanan and Tullock-1965). The cooperatives minimizes the transaction costs involved in doing the business and their survival depends on their ability to retain their comparative cost advantage. The above review of the theoretical studies brought to focus the following discussion issues.

1) Relative merits and de-merits of cooperative form of organization.
2) Conflict between output and employment in the cooperatives.
3) Conflict between employment and income.
4) Flexibility of cooperatives as an alternative form of organization.
5) Welfare consequences and
6) Transaction cost and its implication to productivity in cooperatives.

This study covers the following empirical works on cooperatives. Different authors in various countries of the world have examined various aspects of cooperatives. The existing literature shows the wide popularity of cooperatives all over the world.

The overall performance of cooperatives has been assessed, using different indicators. A comparative study of the performance of small-scale producer cooperatives in four developing countries (India, Peru, Indonesia and Senegal) observed the inappropriate skill mix of the members as one of the main reasons for the poor performance. (Abell and Mahoney-1988). The authors also pointed out that the main cause for the early demise of the cooperative was capital starvation. The success of cooperative was on the other hand due to the high levels of solidarity and commitment of the workers in addition to the stable product market. The poor levels of skill of majority of workers adversely affected the performance of cooperatives in U.K. (Cornforth, et.al., 1988). It was reported that the economic performance of cooperatives are strongly influenced by the external condition such as labor, capital and product market. The poor productivity and wage levels in cooperatives failed to retain competent persons in management.

In countries like Italy, France, U.K and USA, the performance of Producer Cooperatives was assessed on the basis of four pairs of variables such as employment and output, incentives and productivity, investment and finance and formation and survival rate. These were compared with conventional firms (John, Derek Jones and Putterman, 1993). In France and Italy, profit sharing was found to be statistically significant and had a positive effect on productivity. But in U.K, it was not systematically related. It was found that the financial participation and proportion of work force have positive effect on performance. The low rate of formation of producer cooperatives in Western Countries was due to capital shortage. At the same time, the reasons for the success of Italian Cooperatives is argued to be consortia of net work of financial institutions to the cooperatives (Ammirato Piero, 1996). Another study in Italy (Smith, 1994) highlighted the organizational comparative advantage of industrial cooperatives in relation to other firms with respect to the innovative activity, significant quality differentiation in relation to other firms and in the use of specialized corporate alliance. A study of Worker Cooperatives in USA (Jackal and Crain, 1984) found that the success of worker cooperatives depends on the personnel and organizational flexibility particularly the willingness to adapt the tools needed to survive.

The historical and organizational significance of cooperatives was examined by Joan Vincent in Uganada, Hopkins Nicholas in Tunisia & Egypt, Tadeusz in Poland and Attwood & Baviskar in the African Countries of Uganda, Kenya and Tanzania. Joan Vincent's historical account (1968) of Cotton Cooperatives in Uganda highlighted the ambivalent attitude of the colonial government and suppression of the efforts of the local leaders by the government. Hopkin Nicholas (1976) showed the organizational influence of cooperatives that act as political and economic mediator between local people and the State. Because of the lack of integration of cooperatives with local politics, it tended to develop hostility in surrounding communities in Tunisia, where as in Egypt, due to fuller integration with local political and economic life, it developed as an indigenous organization.

In Poland, thirty years of post- war experience with workers cooperatives found that democracy was inversely proportional to the size of cooperatives (Tadeusz, 1981). The historical and organizational significance of a group of cooperatives centered in Mondragon - Spain Basque Province was examined by Thomas and Logan (1982). They found the high levels of solidarity and commitment between and within the cooperatives as the main reasons for their success in addition to a network of institutions formed as a mutually supporting structure for the cooperative factories. The study observed the capability and potentiality of cooperatives not only to maintain the existing jobs but also in creating additional jobs. In some of the African Countries, the promotion of cooperatives was considered as instruments for bringing about socialism. At the same time the study (Attwood & Baviskar, 1988) reported that in Uganda, Kenya and Tanzania, the cooperatives became the hotbed of political conflicts, administrative inefficiencies and corruption of all kinds.

Studies on cooperative principles and values found that cooperatives could develop high levels of solidarity and interest in members in cooperative affairs (UN Research Institute, 1972). The study of cooperatives in fourteen rural communities of Iran, Pakistan and Ceylon found that the solidarity of a group is related to the degree of occupational and class homogeneity and the interest of members as against heterogeneity and diverse interest. This indicates that homogeneity and solidarity are very closely related and at the same time, the size of cooperatives and the level of solidarity have an inverse relationship.

In Spain, the member's belief in cooperative values reduced uncertainty in relation to each other and in business. The cooperatives were designed according to "business principle" and "society's principle" which reduced transaction cost for members in their interaction (Nilson, 1996)

A study on the financial performance of worker cooperatives in Sweden (Lars & Sevensson, 1981) reported the tendency of the cooperatives to put additional earnings into higher wages rather than investment which resulted in poor financial performances due to mismanagement of resources as well as low margin kept for future investment in the form of reserves.

The above review reveals that the cooperatives pose many questions and several challenges. As an organization, its relevance is still very meaningful. However, the conceptual as well as the empirical dimensions discussed depends on specific economic content and country situations. In the next section, the major studies in the Indian context are discussed.

Indian Studies

This section covers, first the studies on the general aspects of industrial cooperatives to be followed by studies of different kinds of cooperatives and then on specific aspects of industrial cooperatives including women.

In Western India, the cooperatives emerged not because of government initiative but due to the interest and initiative of the people (Story of Anand in Gujarat). The study that explained the reasons why the cooperatives flourished in Maharashtra and Gujarat (Attwood & Baviskar, 1991) found three main reasons for the relative success of cooperatives viz.,

1. The dominant position of peasant castes, the Marathas in Maharashtra and Patidars in Gujarat have created a favourable ground for the emergence of cooperatives.
2. In the case of milk and sugar cooperatives (in Gujarat and Maharashtra respectively), the need for heavy investment compelled the big farmers to create alliance with smaller ones and
3. The freedom enjoyed by the cooperatives and rewards available to their leaders made it possible for innovative and dedicated leadership to emerge.

Thus the above study cited the contribution of the dominant caste of Marathas and Pattidars to the success of cooperatives in western India due to the special ethnic structure and leadership. Along with, all the cooperatives in these states are associated with prestige, patronage and power.

Several instances have highlighted the relevance of the cooperative sector as an alternative economic organization in providing employment and maintaining a

healthy industrial relations through collective ownership and democratic administration. A study by [illegible] Sen (1995) examined the pros and cons of worker's take over of the private factories by forming industrial cooperatives on the verge of its crisis like Kamani Tubes Company in Mumbay, Kanoria Jute Mill near Kolkota(1993) , Sonali Tea Estate(1997) , the New Central Jute Mills, Ganges Printing Ink, Durabari Tea Estate and fiteen other units in Kolkota as an experimental ground for the role of management in industrial relations on democratic principles.

Several people examined the nature and problems of Handloom cooperatives from time to time in different parts of the country. The issues raised by most of the studies were more or less the same, i.e., scarcity of raw- materials, problems of marketing and finance. The Textile Enquiry Committee under the Handloom Development Programme reported (1959) that the handloom cooperatives face problems such as scarcity of raw materials, inefficient management and paucity of funds and recommended to extend concessional finance for production, sales and wage payment to workers. In 1967, the Programme Evaluation Organisation of the Planning Commission highlighted the same problems. Also they observed absence of linkages between Primary and Apex societies as the main cause of failures in marketing.

Acute financial crisis was observed to be the main problem of Weaver's Cooperatives in Bihar (Choubey, 1978), where as Venkatappa (1977) found inefficiency in the organizational set up such as problem of management and poor administration as the main problems of weaver's cooperatives in Karnataka. In Utter Pradesh, a study (Trivedi and Rajindra Singh, 1982) reported that the cooperatives lacked democratic participation and were subjected to massive exploitation by private traders in marketing their products. Again marketing was observed (Gangadhar and Raji Reddy, 1982) to be the main problem of Warrangal Carpet Industrial Cooperative. More over, the study found that, huge capital was blocked as inventory and as a result, they face shortage of working capital. A study on the growth and performance of Primary and Apex Weaver's Cooperative in Tripura, which examined (Ray. 1997) its historical background underlined the main reasons for the poor

performance such as the dependence on external market, lack of proper marketing channel, absence of professional management, poor infrastructure and poor quality of dye products. The role of cooperatives for the development of technology in the weaving clusters was examined by [illegible] Biswas(1998). It was pointed out that though weaving cooperatives provided the stimulus for technological development by developing new designs and looms, they failed to make further advancement through the externalities created by them in the subsequent period. As a result, private artisans and master traders benefited from the technological improvements.

Just like Handloom Cooperatives, the performance of Sugar Cooperatives examined by Ghuman and Anil Monga in Punjab (1987), Swamy and Ramachandran in Tamil Nadu (1988), and Dawar in Haryana and Punjab (1990). These studies reported that the financial and physical performances were poor causing heavy loss. The study by Swamy and Ramachandran found the poor capital structure and rising cost of production as the main problems of cooperative sugar factories in Tamil Nadu. In Haryana, the main problem was reported to be poor labor productivity, despite the higher quality of raw materials in Haryana than in Punjab.

In most of the studies, the financial performance of cooperative was measured with the help of ratio analysis such as liquidity ratio and profitability ratio. The liquidity ratio indicates the financial strength of the cooperatives. While examining the financial strength of sugar cooperatives in Aurangabad (Nikham, 1986) with the help of ratio analysis, it was found that they relied much on external funds and the financial structure was not sound as it was highly geared. In Andhra Pradesh, the financial performance of the Cooperative Spinning Mill was examined by Rayudu(1987). The study found that the financial structure was very weak and was dependent on high doses of borrowed funds to finance their activities. The same conclusion was arrived by Thanulingam and Gurumoorthy(1987) in their study of 30 handloom cooperatives in Tamil Nadu.

The economic efficiency of Milk Producer's Cooperative was examined using financial ratios for the period 1989-94.(Waris and Choudhary, 1997). The financial

efficiency was below the standard norm and the capital structure was very poor. The studies on tea cooperatives, rice, cotton processing and diary cooperatives also found similar tendencies. The study on Tea Producer's Cooperative in W. Bengal (Bowmik, 1983) brought out the influence of a particular political party in structuring the power relation in cooperatives. The study noted that the same party which was unhelpful to the worker's cooperative when the workers took over the Sonali Tea Estate, actively supported worker's cooperative in another tea estate in the neighboring area where its party workers were in control.

A study on worker participation and performance of cooperatives was carried out by Muthuswamy(1981). The performance of industrial cooperatives influences the nature of ownership and worker's participation is a significant factor in the success of cooperatives (Elayath, 1984).

From the above studies in the Indian context, it appears that, though policy planners have suggested cooperative form of organization, its viability as an alternative form of organization has been far from satisfactory. It may, however, be admitted that the isolated success was confined to a few sectors such as traditional industries. Even here, creative endeavors are found missing. In this context, it is instructive to look at the Kerala experience in the arena of cooperative endeavors.

Kerala Studies

In Kerala almost all studies were undertaken on traditional industries such as handloom, coir and beedi industries. The studies on handloom cooperatives in Kerala (Kutti Krishnan-1985, Raja Gopalan-1986, Manuel-1987, Tony Joseph-1988, Raghavan-1995) primarily concentrated on the nature of handloom cooperatives in Kannur and Trivandrum and the differences involved in the organization of production, marketing, structural differences of cost and profit between the South and North Kerala. The study (Raja Gopalan) found that cooperatives in Kannur were more organized than that in Trivandrum and when the former depended on foreign markets, the latter depended on local market.

A study on the dynamics of industrial cooperatives (Raghavan) traced the historical evolution and growth of beedi, handloom and coir cooperatives. The study observed the context of the emergence of these cooperatives in Kerala. It was noted that the trade unions were weak in handloom and was controlled and dominated by vested interests, while the coir cooperatives were formed by the genuine interest of the workers. The beedi cooperatives emerged as the outcome of worker's self defense. At the same time, profit making societies were very few, despite very high government support. It was also found that strong initiatives from below have greatly influenced the efficiency of industrial cooperatives.

A study on the performance of coir cooperatives noted the low worker productivity because of low level of mechnanization (Kumar, 1999). But a similar study (Varkey, 1981) observed shortage of raw materials (husk) as the major problem of coir cooperatives. Also, the workers were paid more than their productivity even when operating on loss.

Krusch(1996) investigated the pros and cons of the cooperative alliance in Kannur district by examining the working of eleven industrial cooperatives selected on the basis of geography, product and gender. The study found that the political patronage and conflicts over prosperous cooperatives have given a new dimension to cooperative activities.

In the context of Kerala, as seen in the above review, industrial cooperatives have been largely confined to the traditional industries. Though involvement of gender in cooperatives has been a recent phenomenon, a few studies are available on them also.

Women Cooperative

The following are some of the works done on women cooperatives in general. This will be followed by a review in the Indian Context.

In Indonesia, the 'Setia Budi Wanita Multi Effort Cooperative 'followed a system of mutual sharing of risk of loan taken by members. According to this study reported (Seoijetno, 1981) this kind of mutual sharing of risk helped to enhance the

mutual trust and solidarity among women workers. In Malaysia, cooperatives offered equal opportunities to men and women in sharing the benefits. However, the study by Pathima and Rosnah(1981) noted that women were reluctant to accept leading role in established cooperatives because of their pre- occupation with problems related to home and family responsibilities.

Similarly the experience of women cooperatives in Philippines brought out the low participation of women in cooperatives due to their value system which force them to their tradition of confining to home (Rosario Lazaro & Rosalina Santos, 1981). The Women Agriculture Cooperatives in Japan are working through networking in the Urban and Rural sectors in order to exchange their experience in both sectors. The study (M D' Cruz, 1981) found that Japanese Cooperatives were engaged in raising the status of women. On the other hand Machiko Yajima and Nabuhikorito (1990) found that women cooperatives were also formed in Japan as a protest against industrial pollution and as an alternative system to provide safe food and environment to the over industrialized society. The integration of women in the cooperatives, which is based on the principle of equality, was found to be a better means of economic empowerment of women in Nigeria (Chikwendu, 1995). A study on the role of institutional linkages between women cooperatives and Cooperative Support Organization in China found that the institutional linkages encouraged the growth of women cooperatives activities. The study (Langen Chen, 1999) noted that Chinese women in rural areas have increasingly adopted cooperatives as a form of organization to address the problem of access to resources, credit, job training and participation in the main stream as an organized force. However, the study addressed two major issues that were central to the development of cooperatives such as- government legislation to define legal frame work and secondly, establishing gender inclusive policies to increase the access to credit to women's income generating activities.

The above review suggests that literature on women industrial cooperatives are relatively less, compared to that on the mainstream cooperatives. This probably reflects the low share of women cooperatives. It may however, be admitted that the

existing studies reviewed above indicates a positive influence of cooperatives on empowerment of women.

Women Industrial Cooperatives in the Indian Context

The women's participation in modern dairy development in Kheda district of Gujarat was analysed by Jain et.al., (1976). It showed that a majority of women members have little involvement in the management of the cooperatives. Also the new technology of making butter and ghee that have long shelf life in these modern dairy cooperatives has not been acquired by any one of the women workers. A study sponsored by UNICEF (Indian Cooperative Union-1980) on income generating activities of women particularly SC/ST in agro based industries (handloom and handicraft) identified the reasons for the success of Lijath Pappad and for the failures of Sikki Grass Handicraft. The success of Lijath pappad was due to the managerial and supervisory skill of women and men and the innate skill of women in the region to roll fine pappad, where as the Sikki Grass Handicraft (Bihar) has failed due to weakness in production, marketing and field procurement.

Two major studies (Rukmayi- 1981 and M D'Cruz-1985) on women industrial cooperatives in Bangalore working as the ancillary units of Indian Telephone Industry and Bharat Elecronics brought out the potentiality of women industrial cooperatives for the up lifting of women who were also entitled to all social security measures. Because of the linkage with their parent unit, women cooperatives experienced neither the raw- material nor the marketing problems. Besides M D'Cruz(1985) emphasized the following factors for the success of women industrial cooperatives at Bangalore such as-

1. Patronage of management in Indian Telephone Industry.
2. The devoted service of ITI Officers.
3. Cordial relation between the cooperative and the ITI.and
4. Assured supply of raw material to the cooperative by the ITI.

Thus the participation of women in cooperatives enabled them to become part of development activities. However, a study by Riba (1981) observed that just like any other industry, the performance of cooperatives also depends on availability of raw materials, skill of their workers and market demand.

The performance of Self Employed Women's Association (SEWA), Gujarat enabled women to develop a sense of empowerment through collective action (Lalitha & Sara, 1995). The study also shows that women in cooperatives lack managerial skill and access to resources particularly finance and market. Again the cooperatives were able to encourage habit of thrift among women and accelerate the pace of empowerment (Rao, 1996). It was also found that participation of women in democratic organization s supported by modern information and technology helped in transferring equal relation among women with men.

A study by Singh (1999), brought out some of the problems of women handloom cooperatives in Imphal such as marketing, inadequate raw materials, low productivity, low earnings and lack of training facilities. In Tamil Nadu, the Manappad Women Worker's Palm Leaf Industrial Cooperative was found to be an earner of foreign exchange through export of palm leaves abroad. Rajan, Gowri and Renuka (1999) noted that the operations of palm leaf cooperative have not polluted the environment or destroyed the flora and fauna of surroundings. However, the operational efficiency of the cooperative was far from satisfactory, as it could not ensure adequate return to the shareholders.

The above studies though a few clearly indicate that women cooperatives can go a long way as a means of providing sustainable livelihood to the women and the marginalized.

In the Kerala context, only two studies have been carried out on women cooperatives. The main problems of women industrial cooperatives in Kerala identified by Das (1982) were poor capital base, inadequate cooperative education, uneconomic scale of operation, absence of marketing channel, absence of linkages, lack of diversification and poor membership. The other study by Joseph and Sarada (1988) was on the level of women participation in cooperatives in the Trichur District

Primary Agricultral Credit Society. It was found that the share of women in membership was satisfactory, but women were not getting their due share in benefits.

The review attempted above suggests that more evidence on the performance of women cooperatives is necessary at the regional level to appreciate the problems they face and suggest effective policies for action.

From the review, it follows that cooperatives that have network with other institutions operate more or less efficiently. The network acts as the organizational metaphor to sustain competitiveness in the face of the globalisation process (Axelsson and Easton, 1992). Different views have been raised with regards to the interpretation of the term network. Some argues inter firm network as an "intermediate" or "hybrid" form of organization with respect to market and firm (Jarrillo, 1985; Thorelli, 1986; Williamson, 1991), where as others define it as a pure organizational form different from those of both market and firm (Casson, 1995; Powell, 1999). Firm's linkages are mobile, task and functions are subject to decentralization or recentralization according to the needs of the principal firm, changes in demand and other technological developments. The nature of network and the nature of the relationship depend on the trust or power among and between the firms.

A large body of literature has offered evidence of successful small and medium sized enterprises in Italy and elsewhere, which have the local network (Paniccia, 2002). Among the major firms in the world today there is perhaps none that 'goes it alone', rather the tendency is entering into cooperative alliance, which is arguably a pre requisite for successful global competition (Campbel, 2000). The inter firm linkages are remarkably varied on the basis of their fundamental motivation in terms of contractual forms - why do they do, or where do they occur in the value added chain. The inter firm network is of different varieties such as horizontal and vertical, social, political, economic or business. These networks have either backward linkages or forward linkages or both with other institutions that ultimately promote firm's efficiency. The present study attempts to examine the overall performance of women industrial cooperatives in Kannur district with special focus on the role of networking and its impact on firm level performance.

Method of Study

The above-mentioned analysis was carried out in order to assess the dynamics of network effect on the performance and structure of women cooperatives in Kannur, by systematically grouping the women cooperatives in to

a. Women cooperatives with network and without network
b. Grouping the women cooperatives based on the products they manufacture so as to ascertain the inter product difference in their performance.
c. Grouping the garment cooperatives into three sub groups viz., cooperatives working as contract units, operating as both contract units as well as manufacturers and those working as manufacturers were analysed separately on the basis of networking.
d. The women cooperatives were grouped into cooperatives with political network and with social network so as to differentiate the impact of the two types of network on performance.

Tools

The study used statistical tools such as ratios, percent, averages, charts and diagrams. In addition discriminant analysis was used (both simple and multiple) to identify the most discriminating variables that differentiate the inter group and intra group performances.

Data Source

The data for the study have been obtained from both secondary and primary sources. The Annual Reports of the Cooperative Department and the Kerala Economic Review have been a great source of secondary data. A good deal of the data used in this study has also been obtained from audit notes and reports, which are the unpublished official records of the Cooperative Department. For comparative purpose the activity wise analysis was done for the period 1991 – 2000, product wise analysis was done for 1993 – 2000 and socio – political networking was carried out

for the period 1994 – 2000. This study follows the definitions of various concepts as used in the Annual Survey Industries.

The study covers all women industrial cooperatives registered at the district industries center, Kannur that currently exist. Out of the fifty-four units in Kannur, four units that manufacture leather products were formed during 1999 – 2000. Since the data on these units are not available for a sufficiently long period, these units have not been considered for the study. Due to paucity of data, product wise analysis is limited to garments, printing and food cooperatives. The study uses both primary and secondary data. The primary data were collected through a structured questionnaire and most of the secondary data were obtained from audit reports, audit notes and balance sheets.

Period of data collection--- The primary data was collected during the year 2000 and the survey took 6 months from July to December 2000.

Phases--- The data for the study have been collected in three phases, viz.,

Phase-I – In the first phase, the list of women industrial cooperatives were collected from District Industries Centre, Kannur. The details of working units were collected from the four cooperative circle office working under the Assistant Registrar of Cooperatives in Kannur, Taliparamba, Koothuparamba and Thalassery.

Phase-II—In the second phase, the working units were identified from the Audit Inpectors and Taluk Industries Officers (women) of different areas from the Audit department of the cooperative circle office and taluk office respectively from the three taluks of Kannur district such as Kannur, Taliparamba and Thalassery.

Phase-III—during the third phase, the units were visited frequently to create a good rapport with them so as to obtain necessary information accurately.

During this phase, details of performance were gathered from the audit reports and tentative balance sheets along with the primary survey on the nature of their working.

Scope of the Study

The study area is confined to Kannur district and the method of study is census method.

Selection of Area for study.

Kannur district selected for this study because of the following reasons

1. The district has a strong footing on cooperative lines both in industrial and non – industrial activities.
2. Studies in the past on industrial cooperatives in Kannur district (Kuttikrishnan, 1985; Rajagopalan, 1986; Raghavan, 1995; Krusch, 1996) emphasized the presence of congenial atmosphere for the growth of cooperatives through effective leadership.
3. The patronage of political parties to the cooperatives as a promoter and facilitator in the district has been more pronounced.
4. All types of cooperatives envisaged in our study are functioning in this district.
5. The success story of Kerala Dinesh Beedi, the greatest democracy at work in the district due to economies of net working in achieving success has been highly commented by Scholars.

Theoretical Framework

The study on **'Women Industrial Cooperatives – An Analysis of its Structure Performance and Growth in Kannur District'** analyses within the framework of network in general and socio political network in particular.

Conceptual Definition

Networking

An enterprise network is an organizational form designed to obtain competitiveness and advantages and is characterized by complex reciprocal, cooperative rather than competitive and relatively stable relation between legally

independent though economically inter dependant enterprises (Harl, 1986). Networks are identified between firms and within firm. In this study 'network' is conceptualized as general network without categorizing any firm on the basis of either political or social. The structure of networking in Kannur operates with a wide variety of networking such as **vertical, horizontal, vertical horizontal blend**, social, political and economic or business. Relation within an enterprise or between enterprises is based on different type of contract. The horizontal inter firm relation is one between firms that are engaged in the same product market and in the present context between women cooperatives. Vertical inter firm relation are between final production unit and raw material supply of firms. The vertical linkages emphasize greater inter firm cooperation as reflected in high levels of trust, solidarity and long-term contracts. In vertical relationship production systems are both internalization and quasi externalization. Internalization means that the enterprises undertake additional activities hither to transact through the market.

Political Networking

Political network refers to linkage with political parties either directly or indirectly, promoted by party members or workers as members of politically affiliated union or party workers.

Social Networking

Social network refers to linkage with voluntary organisations, particularly the Christian church in the present context.

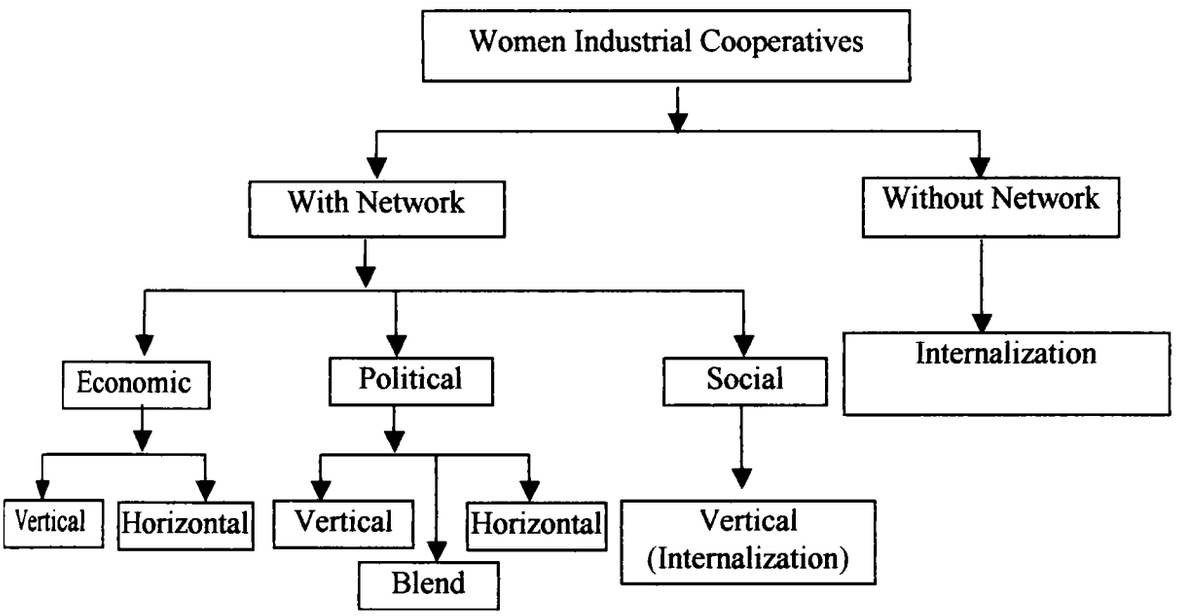
Concepts

1. Output: Sales plus opening balance minus closing balance.
2. Sales: -- Income of the unit from sales which is credited in the revenue side of the balance sheet.
3. Equity =Net worth (Share capital +Reserves Surplus – Deficit stock+ deficit loss)

4. Working capital = Share capital+ deposits+ borrowing + statutory reserves – fixed capital
5. Current assets = Cash in hand+ cash at bank+ closing trade balance. Current liabilities =Advance due from cooperative + interest payable+ other liabilities
6. Quick Assets = Cash in hand =+cash at bank
7. Total cost =Purchase + wages+ depreciation+ establishment and contingencies
8. Value addition = Gross profit+ wages $_+$interest

All the variables used in this study were converted in to constant prices based on 1970 – 71 prices.

Chart – 1.7
Framework of Women Industrial Cooperatives in Kannur



Organization of the Study

The study is organized in six chapters. In the first chapter along with the introduction of the topic, the problem, the objectives, hypothesis, methodology and literature review are given.

The second chapter deals with the structure, nature of working and the growth of women industrial cooperatives in Kannur district. The structure refers to the type of products they manufacture, the nature of linkage, whether political or social, and the work linkage with respect to the type of activity they undertake.

The performance and growth of women industrial cooperatives is analysed in the third chapter. This chapter discusses the differences in the performance (group wise) in terms of value addition, profitability of both gross and net and cost structure. Fourth chapter discusses the employment generation, income earned by the workers and the financial features.

Fifth chapter discusses the impact of socio political networking and its operational features. In this chapter the relevance and structure of socio political network is given. Besides this the performance indicators are analysed so as to ascertain the operational features and their impact on the two groups. Chapter six gives summary and conclusion.

Chapter – II

Structure of Women Industrial Cooperatives in Kannur

In this chapter, a detailed analysis of the structure of women industrial cooperatives is carried out. There are more than 11000 small and medium sized enterprises in Kannur district, of which a majority are small-scale industries working in the traditional sector concentrated on textile based industries (CMIE, 2000). The industrial cooperatives in Kannur constitute a small but a significant segment of the small scale sector.

Cooperative Movement in Kannur

Historically during the 8th - 18th century, in the principality of Chirakkal Raja, people were well organized under a cherry (local self help group) and were given training in martial arts (Krusch, 1996). With the advent of the nationalist movement, many of these local groups assumed the form of cooperative endeavors (Krusch, 1996). The early initiators of cooperative movement were mainly freedom fighters like K.Kellappan, T.P.Raghava Menon, P. Krishan Pillai, A.K.Gopalan and others. Though the first Cooperative institution was formed at Kasargod and Thalassery on May 31st, 1912, the movement made headway only after 1940 (Menon, 1972). The poverty of farmers and the great depression resulted in declining prices in the early 30's. After the II World War, prices began to rise. As a result Consumer Cooperatives and Production cum Consumer Cooperatives were formed in Malabar area for the procurement and distribution of food grains at reasonable price. After independence, the movement got impetus from the national government by the setting up of special societies. They were initially with unlimited liability and became multi purpose and then service societies with limited liabilities.

During the post independence period, the left wing political parties, particularly the communist party saw the cooperative movement as an effective vehicle for radical social transformation. So the history and development of many of the cooperatives is associated with political activism. In 1936, Chirakkal Taluk Karshaka Sangham was formed to protect the interest of the poor peasants from

landlords. This ultimately led to the well-known Kayyur struggle (1946), which witnessed the hanging to death of four communist activists (Krusch, 1996). In 1946, under the Madras Cooperative Societies Act, the Kannur Producer and Consumer Cooperative Society was formed which was later converted into the Kannur Spinning Mill in 1956. It started production in 1964. However, the rise of labor movement under the cooperative umbrella was a real threat to the vested interests in Kannur. At the same time cooperatives offered a platform to the political parties to organize and forge ahead. The militant political parties saw the cooperative society as a dual weapon as workers in industry and as members of the cooperative society as the dedicated party workers. By 1974, the number of societies in the district rose to 598 covering all types of societies of both credit and non-credit. From 1974 onwards Kannur came to be known as the center of cooperative culture with a firm footing(Krusch, 1996). Among the cooperatives 38 percent of cooperatives consists of agricultural credit societies and non-agricultural non-credit societies constitute only 17.6 percent (Rao and Sambasiva Rao, 1979).

The administrative structure of the cooperative sector in Kannur is distinct from the rest of the state. Against the usual system of one cooperative union for each taluk, Kannur district alone has four-circle union offices viz., Tellichery, Koothuparmabha, Taliparamba and Kannur in the three taluks of Tellichery, Taliparamba and Kannur, each under the control of an Assistant Registrar of cooperatives. The working status of cooperative societies in the four-circle areas shows that 94 percent of societies in Tellichery are working. It may be noted that Kannur area has the largest number of cooperatives in the district.

Industrial Cooperatives in Kannur

The industrial cooperative societies in Kannur recorded an annual average growth of 5.9 percent for the period 1985 – 2000, while that for the state, as a whole was only 5.1 percent. The district has the maximum number of working industrial cooperative in the state (Padmini, 1998). The linkage created by the cooperatives, particularly under Dinesh Beedi has given a new dimension to cooperative

management and ethics in the district. However, it may be seen from the data (given in Table – II.1) that the importance of industrial cooperative societies has been on the decline in Kannur during 1985 – 2000.

An important aspect of the cooperative movement has been the integration of women in the development activities. With the implementation of Women Industries Programme, designed to uplift the economic and social status of women through self-employment with government stake and other financial assistance, the number of women units both in cooperative and non-cooperative sector has increased.

However, women industrial cooperatives in Kannur district has the 6th position in descending order with a share of 7.7 percent, compared to other districts in Kerala.

Table – II. 1
Share of Industrial Cooperatives in Kannur as Percentage of State Total(1985-2000)

Year	Percentage share of ICS*	% share of SSI	Ratio of ICS to SSI (Kannur)	Ratio of ICS to SSI (state)
1985	7.9	12.5	0.63	4.4
1987	8.4	11.6	0.72	3.8
1989	8.5	11.00	0.77	3.2
1991	10.6	7.1	1.49	2.00
1995	9.4	5.4	1.74	1.5
1997	8.9	5.8	1.53	1.7
1999	8.4	5.6	1.5	1.5
2000	8.4	5.1	1.65	1.1

Source: Calculated from Economic Review various issues Govt. of Kerala, Trivandrum.
* ICS:--Industrial Cooperative Society

This indicates that the participation of women in the industrial activities on cooperative lines has not yet obtained proper momentum. But the women units working in cooperative sector are comparatively more than those in non-cooperative sector (Table-II.2).

In Kannur district as on June 2000, there were 1228 Small Scale Industrial units promoted by women, out of which 66 were industrial cooperatives. Though the number of units under Women Industrial Programme (here after cited as WIP) and Women Industrial Cooperative Societies (here after cited as WICS) are growing, the

percentage of units working under WIP in the total SSI and the percentage share of WICS to the total units working under WIP has declined to 51.9 percent and 10.3 percent from 64.5 percent and 18.3 percent respectively during the 90s (table-II.3). Thus the status of women units in Kannur shows a declining trend during the period 1990 – 2000.

Table – II.2
Relative Status of Women Units in the Cooperative Sector (Percentage to state total)

District	(Ref. year 2000) Industrial Cooperatives		(Ref year 1992-93) Non-Industrial Cooperatives		(Ref year-2000) Non-Cooperatives	
	Percentage of WICS to TICS	Percentage of WICS to TWICS	Percentage of WNICS to TNICS	Percentage of WNICS to TWNICS	Percentage of WNC to TNC	Percentage of WNC to TWNC
TVM	3.7	10.7	1.7	18.6	2.00	11.7
KLM	3.1	9.00	0.7	7.9	2.1	12.3
PTA	2.1	6.2	0.3	3.3	1.2	6.3
ALPZ	2.7	8.00	0.1	2.00	1.7	10.1
KTM	1.6	4.8	0.3	3.3	1.6	9.4
IDK	2.3	6.7	0.3	13.1	0.9	5.1
TCR	3.4	10.00	0.2	5.5	1.5	7.9
PLKD	2.6	7.7	0.5	7.00	1.4	8.1
KKD	0.9	2.8	0.0	6.4	1.00	5.8
WYD	0.7	2	0.6	3.00	0.6	3.6
KNR	2.6	7.7	0.3	2.4	0.5	3.2
KSGD	0.8	2.5	0.2	2.1	0.4	2.2
KERALA	35.2	100	8.9	100	17.4	100

Source: (1) Calculated from Economic Review (2000)
(2) Hand book on Cooperative Movement in Kerala, 1992-93.
WICS = Women Industrial Cooperative Society
TWICS = Total Women Industrial Cooperative Society
WNICS = Women Non Industrial Cooperative Society
TNICS = Total Non Industrial Cooperative Society
WNC = Women Non Cooperative
TWNC = Total Women Non Cooperative
TICS = Total Industrial Cooperative Society

Locationally, the WICS in Kannur are more or less evenly distributed in the three taluks such as Taliparamba (18), Kannur(16) and Tellichery(20).

Table –II.3
Growth of Women Industrial Units in Kannur as Percentage of WIP to SSI and WICS (1990 – 2000)

Year	No of SSI (women)	No of SSI under WIP	Percentage of WIP to SSI	No of WICS	Percentage of WICS to WIP
As on 1990	203	131	64.5	24	18.3
90-91	290	162	55.8	26	16
91-92	325	197	60.6	34	17.2
92-93	429	227	52.9	38	16.7
93-94	530	259	48.8	39	15.1
94-95	613	296	48.3	50	16.9
95.96	720	325	45.1	55	16.9
96-97	891	346	38.8	63	18.2
97-98	1033	557	53.9	66	11.8
98-99	1156	570	49.3	65	11.4
99-2000	1228	638	51.9	66	10.3

Source: Economic Review, various issue Govt. of Kerala, Trivandrum.

Structure of Women Industrial Cooperative Societies in Kannur District

Just as in other parts of the state, in Kannur also, WICS are engaged mostly in garment making. In addition, printing, food processing and leather processing activities are carried out by women cooperatives. The activity wise distribution of units show that out of 54 units, 61 percent works in garment making and 28 percent in printing related and the rest in leather and food products. Some of the women cooperatives have survived for more than 40 years through diversification of products, such as from manufacture of confectionary into garment making. The concentration of units in garment making was probably due to its sustained demand, low skill requirement, easy entry, relatively small capital requirements and easy availability of assistance and incentives from the government. However, the growth of units in the district became faster only after 1990. The growth and age wise distribution of women industrial cooperatives in the district indicate (given in Table - II.4) that 53.7 percent of them were established during 1990 – 2000 and as such very old units were rather few (7.4 percent having more than 40 years old) in the district. The growth and survival of small cooperatives depends on the political patronage and

links. Though patronage based on religion is common in Kerala, it is not so pronounced in Kannur; instead politics is the dominant patronage source (Krusch, 1996).

Table –II.4
Growth and Age Wise Distribution of Women Industrial Cooperative Societies in Kannur District

Year	No of units	Percentage	Age	Cumulative No.	Percentage
Upto to 1975	4	7.4	> 40	4	7.4
1976-80	6	11.1	> 20	10	18.5
1981-90	15	27.8	≤ 20	25	46.3
1991-2000	29	53.7	≤ 10	54	100
Total	54	100	–	-	-

Source: Assistant Registrar, Cooperative circle office Kannur district

The promoter wise distribution of units indicates that 46.3 percent of them have political links, 9.3 percent have social links and the rest 44.6 percent have no linkage at all. About 60 percentage of the women cooperatives with political patronage was established during 1991 – 2000; and out of 29 women units formed during 1991 – 2000, 15 were set up with political linkage. The promoter wise and period wise distribution of women cooperatives is given in table-II.5.

Table – II.5
Promoter Wise and Period Wise Distribution of WICS (as on 2000)

Year	Promoter				Total
	Political	General	Religious	Khadi	
Up to 1980	6 (24)	3 (18.8)	-	1 (12.5)	10 (18.5)
81-90	4 (16)	4 (25)	4 (80)	3 (37.5)	15 (27.8)
91-2000	15 (60)	2 (56.2)	1 (20)	4 (50)	29 (53.7)
Total	25 (100)	16(100)	5 (100)	8 (100)	54 (100)

Source: Survey details Figures in brackets show percentage

The cooperatives in Kannur are generally small with informal inter relations and they are integrated horizontally and vertically. The horizontal linkage refers to the relation between women cooperatives who are the direct competitors in the same product market, but decided to submerge at least some parts of their competitive exposure through cooperative alliances. Similarly, the vertical inter firm relations

involve a rationalization of a number of supplier firms linked at successive stages of production in the "value adding chain". Firms in such an organization of production are not likely to be direct competitors. The vertical linkages emphasize greater inter firm cooperation, as reflected in higher levels of trust. Thus in vertical integration, a few firms move into leadership position by tightening their relations with a handful of reliable sub contractors and firms specialized in complementary activities for the supply of a diversified range of products. This phenomenon is known as network of firms. In a network analysis, the object of explanation is neither people/ organization nor states rather it consists of a set of relations, which have both form and content (Burt Ronald , 1982). The most important steps in any network analysis are to delineate a concrete population of social objects and are one or more types of relationships connecting them (Thomas and John Skvoretz, 1986). The inter personal network may prove very helpful for understanding how movement participants develop common interest and belief that facilitates collective action (Knoke, 1990)

Members of a cohesive group are linked directly to one another by many intense mutual ties. They are structurally oriented towards their internal reference groups to appropriate thoughts and deeds. The women industrial cooperatives in Kannur operate through linkages of various dimensions, such as political, social, economic, horizontal, vertical and a combination of both vertical and horizontal. The political network is referred to as a connection of cooperatives with political parties of local, state or national level; where as social network refers to the linkage of cooperatives with the church. The political network functions in several ways such as:-

a) Mobilization of finance from the government as well as from NABARD and loan from commercial banks, though the linkage with party workers.
b) Forward linkage (marketing) from women industrial cooperative to business establishment and trade centers in cities and towns, through the network of personal and political contacts in the area with wholesale or retail traders.

c) Mobilization of job works for the women cooperatives from other cooperative institutions like banks, hospitals and other institutions in the organized and unorganized sectors through the local committee members of political parties.

d) Backward linkages (procurement of raw materials) in procuring the textile fabrics and other materials required for the cooperatives by the party workers so as to reduce the production cost when it is obtained from where it is cheaper.

Thus, the women cooperatives in Kannur district, which have political network are able to obtain easy finance, raw materials at cheaper rate, mobilize job works and market the products with the supportive strength of the political party. These linkages function between cooperatives (horizontal) as well as between cooperatives and private sector (vertical). Thus political networking enables the cooperatives to reduce their transaction cost, which would otherwise have been high in the uncertain market conditions. Cooperatives have generally failed in operating with the market forces, which are very volatile. The women cooperatives in Kannur may be categorized into homogeneous and heterogeneous groups.[1] Homogeneity and social capital[2] are closely related and is considered as the essential ingredient for the development of cooperative organization (Grootaert and Deepa Narayan, 2001). Assistance flows directly and more easily due to political patronage to the cooperatives of homogeneous group than to the heterogeneous group.

In social network, the linkages are vertical by way of the mobilization of job works for the garment cooperatives from other institutions.

1 Homogenous and heterogeneous groups are classified on the basis of either same or different ideologies among the members of the cooperative societies.

2 The term social capital has been brought in recent years by Bourdieu (1986), Coleman (1988), Ostorm (1998) etc. Social institution based on trust and reciprocity and agreed norms and rules for behavior can mediate this kind of unfettered private action. Although there are different descriptions of it have been identified such as: - relation of trust, reciprocity and exchanges, common rules, norms and sanction and network connection among groups.

The job related with school uniform is obtained from educational institutions through the church priest and these linkages are only between church to church. Once it is mobilized this job is assigned to the women cooperatives, which are linked with the church. Thus with respect to social network, the cooperatives are less embedded than with respect to political network. The distribution of women cooperatives according to the linkage in Kannur district is given in Table – II.6.

Table –II.6
Distribution of Units According to Linkage and Products

Product	Type of linkage							
	Political		Social		Others		Total	
	No.	Percent	No.	Percent	No.	Percent	No.	Percent
Garments	21	63.6	3	9.1	9	27.3	33	100
Printing	3	20	2	13.3	10	66.7	15	100
Food					3	100	3	100
Leather	1	33.3			2	66.7	3	100
Total	25		5		24		54	

Source: Survey Data.

From the table – II.6, it is shown that out of 54 units in Kannur, 25 work with political linkage, 5 with social linkage and the remaining 24 units have no network of any kind at all. The magnitude of social and political networking is shown in chart – II.1 and 2. The political link chart shows the difference in the method of treatment by the party to the homogeneous and heterogeneous groups.

The chart clearly shows that political networks are denser and wide spread than social networks. The linkage both social and political activates through contracting and sub contracting of jobs, mobilized from cooperative societies and other institutions. The contract works are mobilized either vertically or horizontally or by both. In the social network, the sub contracting took place by vertical linkage only. On the other hand, in the political network, jobs are mobilized through vertical and horizontal. These linkages are inter firm business relations that promote sub contract works. Sub contracting is a business practice where the firm offering the sub contract (order placing firm or contractor) requests another firm (order receiving firm or sub–contractor) to undertake the whole or parts of the work according to agreed specifications, which are mostly provided by the firm offering the sub contract.

Chart – II.1

Political Network of Women Cooperatives.

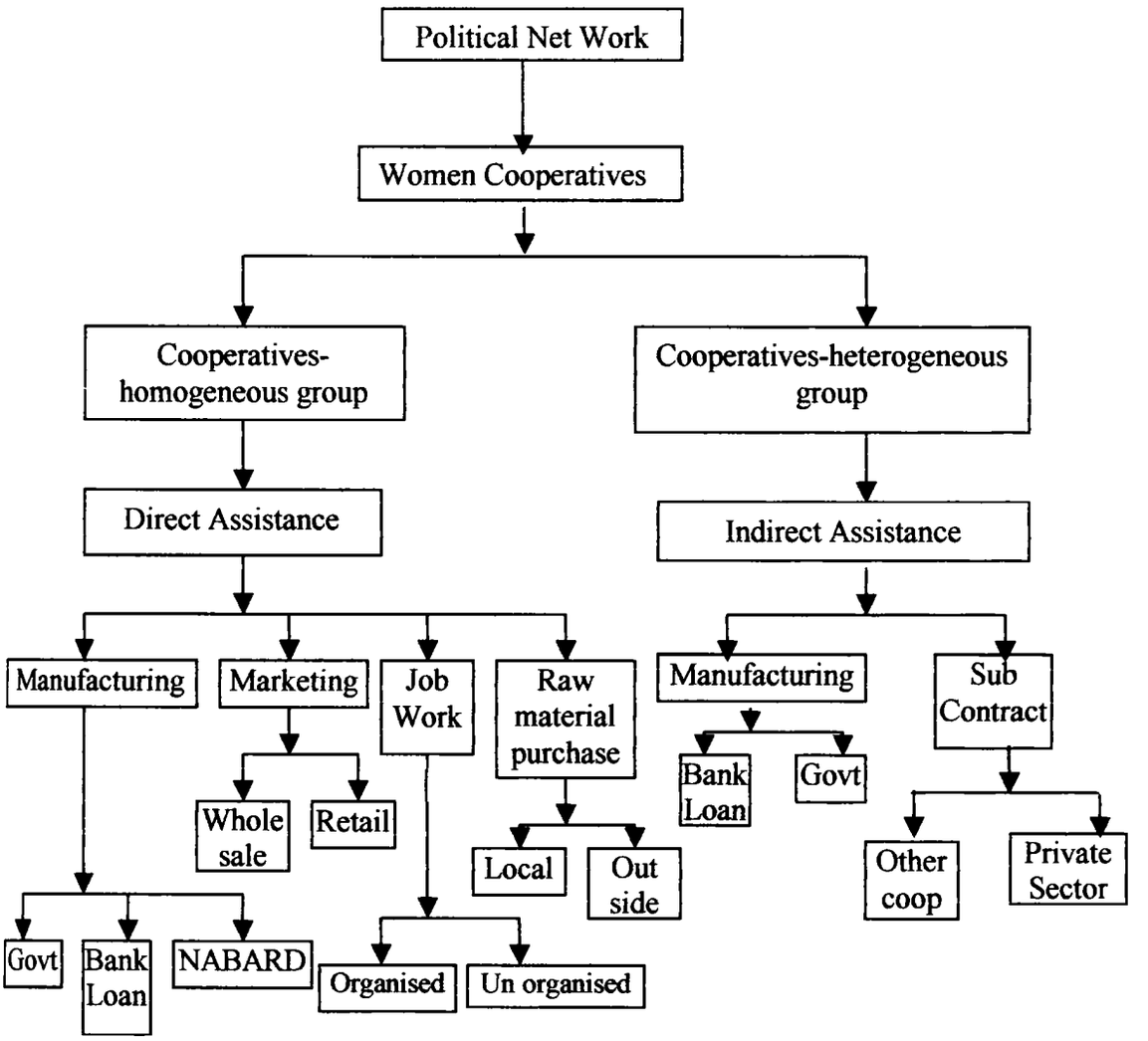
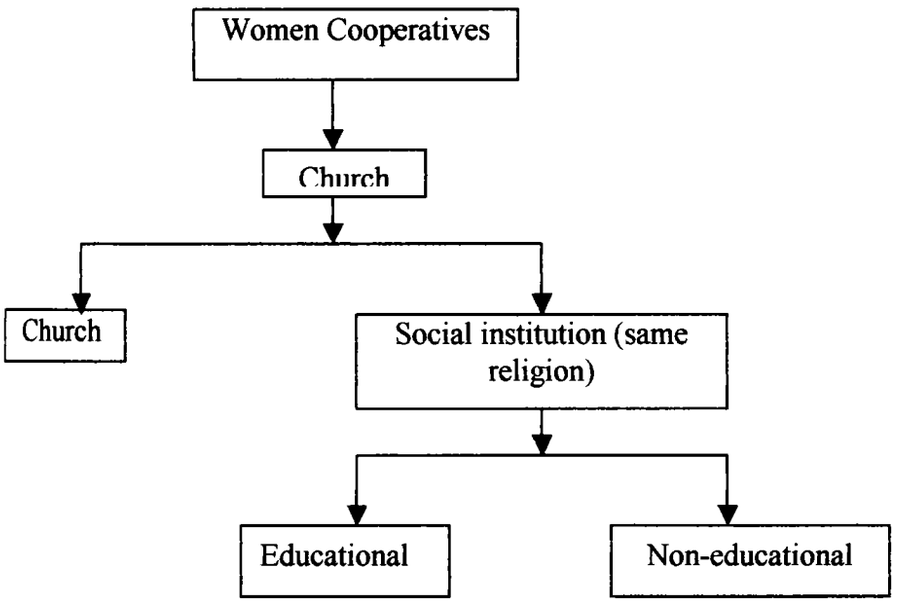


Chart – II.2

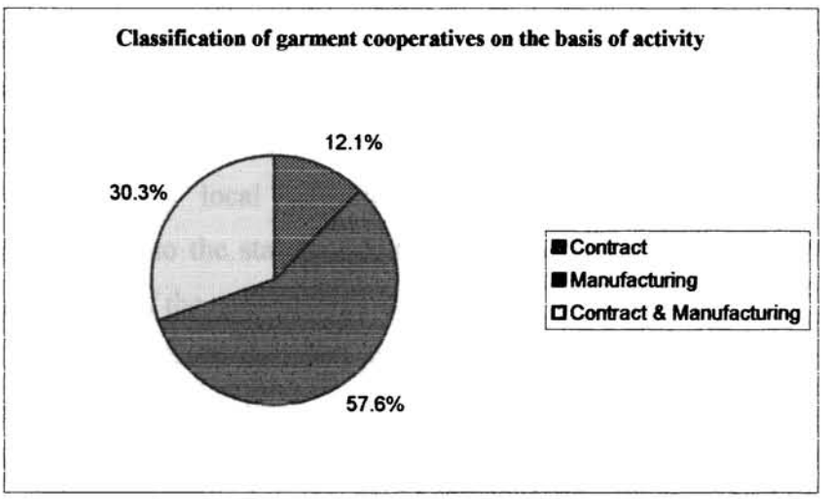
Social Network of Women Cooperatives in Kannur



For small firms, network with larger firms very often provides additional opportunities for growth. In addition to that, working as sub contractors often means an assured level of business with its accompanying benefits such as regularity in payments and risk avert transaction. The role of sub contracting as a risk sharing arrangement was shown in several studies (Kawasaki and McMillan, 1987; Anasuma and Kikutani, 1992) and the sub contracting firms tend to have higher rates of accumulation although they have lower profit margins compared with the independent firms (Lyons and Bailey, 1993)

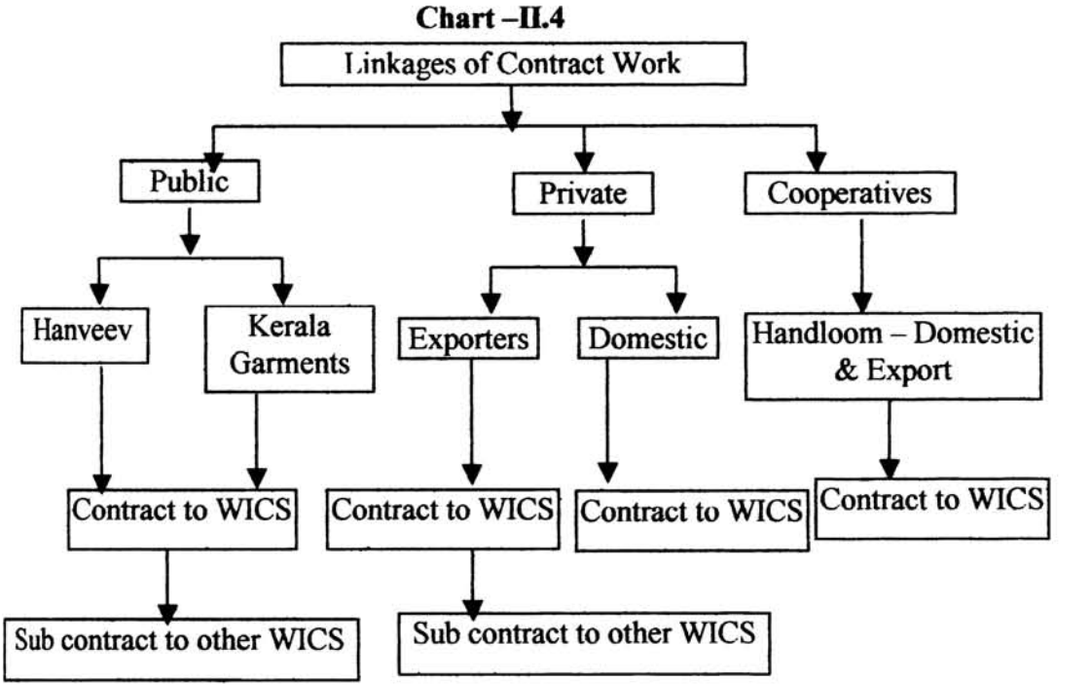
An important feature of women cooperatives in Kannur has been the existence of different type of work such as direct manufacturing, contract work and both contract work and manufacturing simultaneously. In garment cooperatives, 12.1 percent do contract work, 30.3 percent engage in contract and manufacturing the remaining 57.6 percent engage in manufacture alone.

Chart – II.3



Women cooperatives undertake contract work from handloom societies, private traders in local area as well as from exporters. The nature of contract work and sub – contracting depends on social links, political connection and trust. They mediate between and within the cooperatives. Chart – II.4 shows the business network in Kannur that consists of a combination of both vertical and horizontal linkages.

Chart –II.4



Thus obtaining of more job work, finance mobilization, marketing and raw material procurement are carried out through business linkages engendered in political network. Finance mobilization consists of government stake, concessional assistance from NABARD and institutional loans. Through the connectivity of cooperative workers with local committee members of political parties, the requirement is informed to the state committee, and the state committee positively responds if the workers of the cooperatives are dedicated party workers.

In the case of business network, job works are obtained through this local committee of political parties. The members of the local committee approach the establishment or firms offering the sub contract, either directly or through head of the local self-government institutions (panchayat / municipality chair person) who are important party functionaries. In the same way, the local committee members assist the women cooperatives in marketing of their products. Raw materials required for the women cooperatives, which have political linkage, are procured from the neighbouring places at cheaper rate through their connectivity, which could be personal or institutional. The network operation is shown in chart – II. 5, 6, 7 and 8.

Chart – II.5
Finance mobilization through political linkage

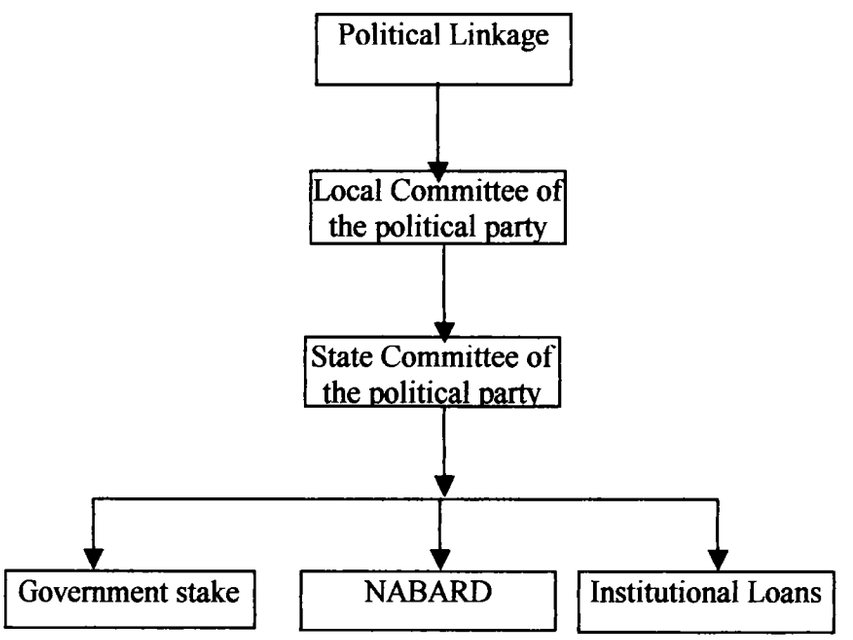


Chart – II.6

Business Network through political linkage

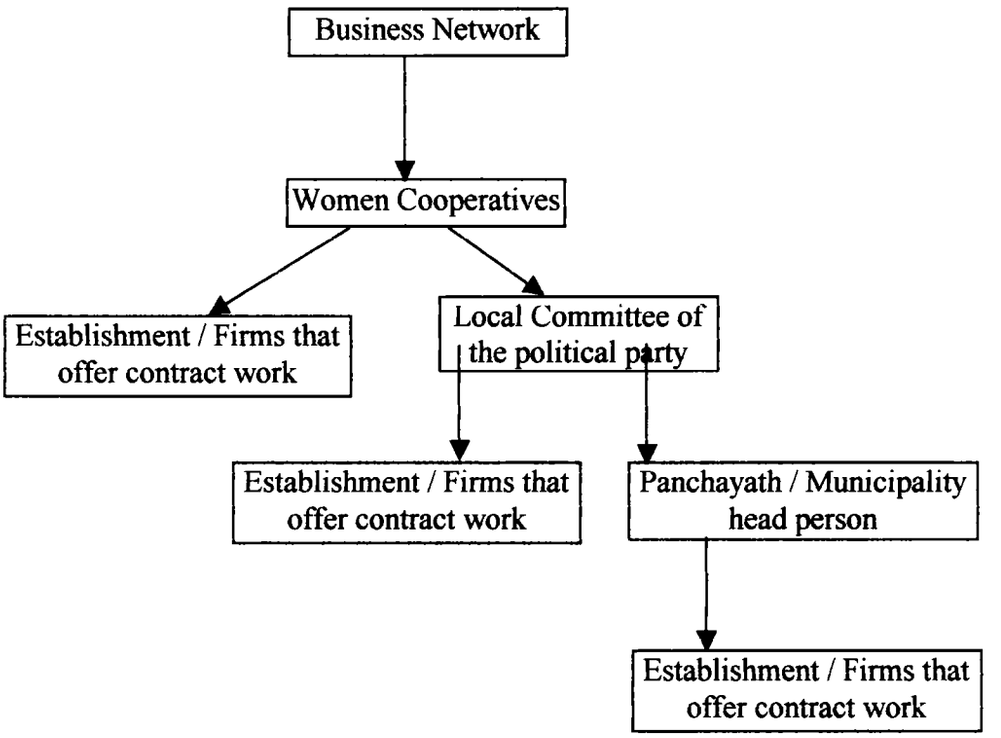


Chart – II.7

Marketing (Forward Linkage)

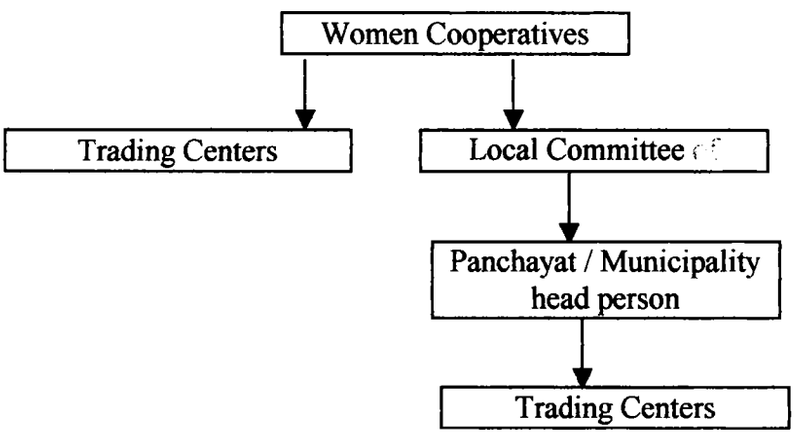
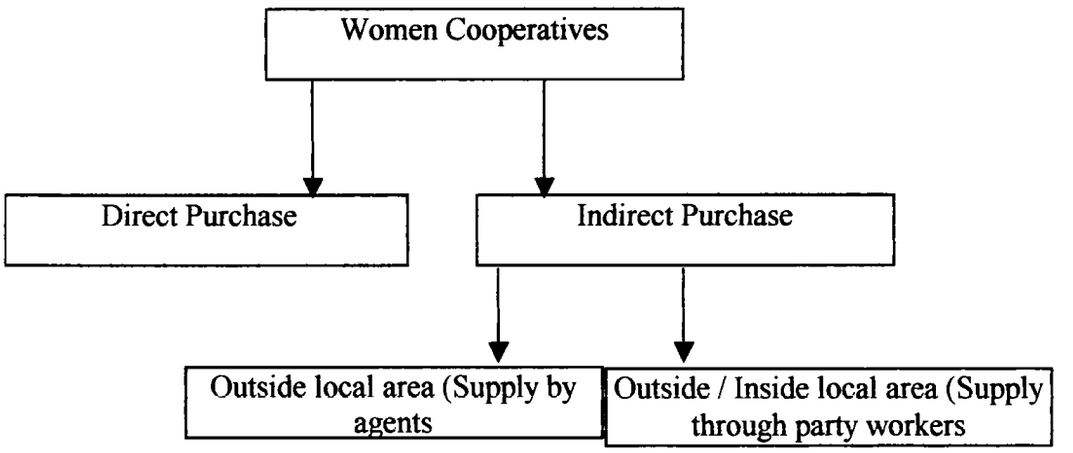


Chart – II.8

Backward Linkage



All these charts indicate the various "nodes" – to borrow an expression, those slightly out of context, from the Global Commodity Chain Analysis – involved in the network and their dense nature. While these networks clearly reduces the transaction costs for the cooperatives which are part of the network, those which do not have membership in the network have to go it alone. Such cooperatives have to acquire all these by themselves and hence their performance is seriously affected.

This is not to say that in Kannur all the women industrial cooperatives are doing contract work. Among those garment cooperatives, which have network connection, 42.9 percent are doing manufacturing work, 38.1 percent are engaged in contract work partially and the remaining 19 percent are concentrated fully on contract work. Not only the women cooperatives, which have network connection, but also those, which do not have network at all are doing contract work. Out of the total women garment cooperatives with out network 16.7 percent are doing contract work partially and 83.3 percent are engaged in manufacturing work. However, the extent of contract work carried out by this group has been very low when compared to those with network. The distribution of women cooperatives on the basis of product, network and activity is given in table – II.7.

The table shows that out of the total women industrial cooperatives in Kannur district, 55.6 percent have network, of such cooperatives 83.3 percent have political network and the remaining 16.7 percent have social network. More over 46.7 percent

of the women cooperatives have developed business network using their political or social linkages (given in Table – II.8).

Table – II.7
Distribution of Women Cooperatives according to Product, Network and Activity.

Product	No. of units with net work				No. of unit without network				Grand Total			
	C	C & M	M	Total	C	C & M	M	Total	C	C & M	M	Total
Garments	4 (19)	8 (38.1)	9 (42.9)	21 (100)	-	2 (16.7)	10 (83.3)	12	4	10	19	33
Printing	6	-	-	6	9	-	-	9	15	-	-	15
Food	-	1	-	1	-	2	-	2	-	3	-	3
Leather	-	-	2	2	-	1	-	1	-	1	2	3
Total	10	9	11	30 (55.6)	9	5	10	24 (44.4)	19	14	21	54

Source: Survey Data
C= Contract work, C & M = Contract and Manufacturing, M= Manufacturing only

Table –II.8
Distribution of Women Cooperatives according to type of Network

Sl.No	Type of network	No. of units	Percentage
1	Units with political network	25	83.3
2	Units with social net work	5	16.7
3	Total units with net work	30	55.6
4	Units with Business cum political net work	14	46.7
5	Units with out network	24	44.6
6	Total unit (3+5)	54	100

Source: Survey Data

So far our discussion was centered on the structure of women industrial cooperative societies in Kannur with respect to the nature of linkages. Since linkages influence the performance and growth of women cooperatives, the next chapter discusses the differences in performance in relation to some of the basic performance indicators such as value addition, profit (gross and net) and cost variation, taking into account the nature of their output, type of linkages etc.

Chapter – III

Performance and Growth of Women Industrial Cooperatives in Kannur

The most appropriate measures of performance of cooperatives need necessarily be the same as those of private enterprises because the two organizations are based on different principles. Wealth creation is an objective that cooperatives have in common with conventional firms. But profitability as a measure of efficiency is not suitable for cooperatives. This is not to say that cooperatives should not be profitable. This approach differs from the conventional measures in three respects (Cornforth; Allen Thomas et.al., 1988) such as

1. Value added rather than profit
2. Return to labor rather than return to capital
3. Maximizing idea is replaced by measuring a set of related variables such as value added per labor, average wage, and the relation between these two. Value added per worker and capital gives a clear picture of the efficiency of the enterprise.

However most of the research and policy statements concerning the operation of industrial cooperatives have explicitly adopted profitability as the criterion of success even though there are other attributes attached to cooperative organization such as commitments, motivation, solidarity, mutual help and others (the so called attributes of social capital). In this chapter the discussion is concerned with performance and growth of women industrial cooperatives in Kannur district by using also some of the performance indicators which are commonly used in any enterprise evaluation.

Before analyzing the performance indicators some of the general features of women cooperatives in Kannur are discussed below.

Structure of Membership

The membership pattern in the women industrial cooperatives in Kannur has been quite distinct. In the old societies (formed before 1980), the size of membership

has been very large compared to the young units (formed between 1980 and 1990) and very young units (formed after 1990). The government has been encouraging to form small units rather than large units since 1980, as it was mandatory as per the government policy, to provide employment to at least 70 percent of its members. As a result, the cooperatives limited the size of membership, and consequently the size of firms. It enhanced the value of share capital so as to avail the maximum stake[1] from the government.

Consequent to this phenomenon, the average share capital of young and very young units is comparatively greater than that in old units, and accordingly this has enabled to improve the capital base of the young units. The distribution of units according to age, membership structure and capital base is given in table – III.1

Table – III.1
Distribution of Units according to Age, Membership and Capital Base

Type of society	No.of units in %	Average members (No)	Member's share (lakh)	Govt share (lakh)	Total share (lakh)	Average per unit (lakh)
*Old	18.5	123	1.23	2.78	4.01	0.4
**Young	27.75	86	3.68	12.18	15.86	1.06
***Very young	53.75	23	15.97	58.16	74.16	2.55
Total	100	59	20.88	73.12	94	1.74

Source: Survey Data

**Units formed before 1980* ** *Units formed between 1980 and 1990*
*** *Units formed after 1990*

Size of Firms

The distribution of government equity participation shows a comparatively high concentration in few units in Kannur district i.e., more than 50 percent of the units have received only below Rs. one lakh capital from the government where as 5.6 percent of the units obtained more than Rs. three lakhs (Table – III.2). This further highlights the small size of majority of the cooperatives in terms of investment or capital employed. The size of firms could also be measured on the basis of the number of workers per unit. About 63 percent of the units have less than ten workers per unit where as only 37 percent employ more than ten workers.

1 Units registered under women industrial programme are eligible for a maximum of 6 ½ times of paid up capital or 3 ½ lakh whichever is less

Table – III.2.
Distribution of Units according to Size of Employment and Government Share Capital.

Item	No .of units	Percentage
1) Equity (government share) < 1 lakh	29	53.7
1 – 3 lakh	22	40.7
> 3 lakh	3	5.6
Total	54	100
2) Size of workers(no). < 10	34	63
>10	20	37
Total	54	100

Source: Survey Data

Incentives to Women Cooperatives

Besides equity participation, the government provides various concessions to women cooperatives in the form of grants and subsidies. Of the total 54 units about 85 percent of the units has availed of managerial grant, 63 percent machinery grant and 44 percent rent subsidy. Out of the total incentives released to women cooperatives in Kannur district, 50.8 percent was used as managerial grant, 27 percent for purchase and maintenance of machinery and the rest as rent subsidy, furniture subsidy, building grant and others (given in table – III.3)

Table – III.3
Distribution of Units According to Incentives Availed

Sl. No	Type of incentives	No. of unit availed	Amount used (in '000)	As percentage of the total incnetives
1	Managerial grant	46 (85)	1245	50.8
2	Machinery grant	34 (63)	661	27
3	Building grant	6 (11)	410	16.8
4	Rent subsidy	24 (44)	91	3.7
5	Furniture subsidy	3 (5.5)	38	1.6
6	Land subsidy	2 (3.7)	3	0.1

Source: Survey Data

(Figures in bracket show percentage of total units availed under each incentive scheme offered by government)

Major Problems of the Cooperatives

It has been observed that the women cooperatives societies face a number of problems. Fifty seven percent of the units reported finance as their premier problem, followed by marketing. Only 30 percent of the units reported marketing as their foremost problem. This was due to the less risky nature of the contract work under taken by the cooperatives in Kannur. This is because as Gunn argues, although in a different context, the democratically managed firms exist in relative isolation even when they have institutional supporting structures; they have to compete in market with firms that do not share their commitments (Gunn, 2000). Most of the sales are carried out on credit. Sales through credit result in a squeeze of working capital and this tended to inhibit their routine activities due to shortage of running capital. Unfortunately, the cooperatives have rare exposures to trade fairs and this has tended to the localization of their products, without any externalities.

In addition, though there is inter firm relation, no tendency of inter unit cooperation was observed, either internal or external by women cooperatives even though one of the principles of cooperatives has been cooperation between cooperatives. Besides no uniform pricing method was adopted by any cooperative – each cooperative follows its own pricing method which is decided by the director board and it differs with respect to the percentage of margin over cost. The pricing method has direct bearing on the cost structure and marketability of each product.

It is common knowledge that price is an important factor in the competitiveness of the firms. About 59 percent of the units reported price factor as the only element to obtain greater market share over others where as only 30 percent of the units placed quality over price. The nature of the problems and factors to compete with rivals reported by the units are given in table – III.4.

The performance of women industrial cooperative societies is discussed by grouping them into several categories, so as to make possible inter group and intra group comparisons.

Table –III.4

Distribution of Units According to Nature of Problems and Competitive Factors.

Item	No.of units	Percentage
A. Nature of problem		
1. Income	31	57
2. Raw materials	3	5.5
3. Marketing	16	30
4. Power	1	2
5.Labour	1	2
6.Technical	2	3.5
7. Project implementation	-	-
Total	54	100
B. Nature of factors		
1. Price	32	59
2. Quality	16	30
3. New design	3	5.5
4. Punctuality in distribution	3	5.5
Total	54	100

Source: Survey Data

The indicators selected for the purpose are:

1) value addition (per unit of labour and share of capital per unit of value addition);
2) cost structure and gross profit to cost of production;
3) gross profit as percentage of capital employed;
4) operating profit to sales;
5) return on investment;
6) financial features; and
7) employment and wages.

All these variables are discussed taking into consideration cooperatives with network and without network. Besides, the cooperatives with network are further classified into those units with political and social networks.

Since productivity is the most important and key indicator of growth and performance, our discussion on performance starts with value addition in women cooperatives.

1. **Value Addition**

Theoretically, three intermediary factors must be considered which undoubtedly have an effect on productivity. These are

(1) the readiness on the part of employees to achieve the maximum degree of efficiency;

(2) the quality of entrepreneurial decision ; and

(3) the smooth operational process in the under taking (Thusing, 1973).

Productivity is a means for better level of economic well-being and its change is both the cause and consequence of dynamic forces operating in an economy (Nadiri, 1970).

In this study value addition is worked out from the balance sheet as well as from profit and loss account of the women industrial cooperatives in Kannur district. The study has used the gross value added concept (value of raw materials included in value added) by income approach. In order to analyse the value added at constant prices, the current value has been deflated by the corresponding wholesale price index of that particular industrial product. Due to data limitations, double deflation of both inputs and output have not been done. The total number of employees is taken as the measure of labor input (Sinha and Sawney, 1970). Total employees include all categories of workers such as skilled, semi – skilled and others.

The study has not attempted to refine, as Goldar(1986) did in a different context, the index either by taking weighted index of labor using remuneration of different classes as weights or by making adjustments with the labor input for qualitative changes arising out of age, sex, education, occupation etc.

Capital is an important input in the production process. The quality and quantity of capital influence not only the productivity of capital but also the labor and total output. The capital input (annual), has been calculated from the capital series in value term from the purchase value of capital assets, which is given in the balance sheet of the cooperatives. Since the measurement of real service of capital is difficult (Goldar, 1986), this study has used net stock of capital by deducting the cumulative depreciation from the purchase value. In the balance sheet, capital asset is not given

in book value; rather it is in purchase value and hence the series have not been deflated by the corresponding wholesale price index of capital goods.

In this study only average productivity per unit of labor as well as share of capital is estimated. The ratio of capital to value addition indicates the proportion of capital required to generate each unit of value added. Similarly the value addition per unit of labor is the ratio, which indicates the contribution of each unit of labor in the value addition. Since the analysis is done in various groups, the discussion starts with value addition per unit of labor group wise.

a) Value Addition Per Unit of Labor – Group Wise (General, With and Without Network)

The data show that, till the first half of the 80s, the value addition per unit of labor in the cooperatives without network has been higher than that with network. But since the second half of 80s, the picture reversed. Cooperatives with network have generated more value addition than those without network. This trend became more pronounced since 1991. This indicates that the activities of women cooperatives with network increased faster after 1991. However, compared to the 1980s, 1990s have shown a positive trend in all groups both with network and without network (Table – III.5). During the first decade (1981- 1990), the cooperatives with network have an annual average growth of 116.6% of value addition per worker. But during the second decade (1991-2000), value added per worker increased to 232%. However the corresponding figures in the cooperatives without network are 101 and 129.1 respectively (Table – III.6).

Chart – III.1

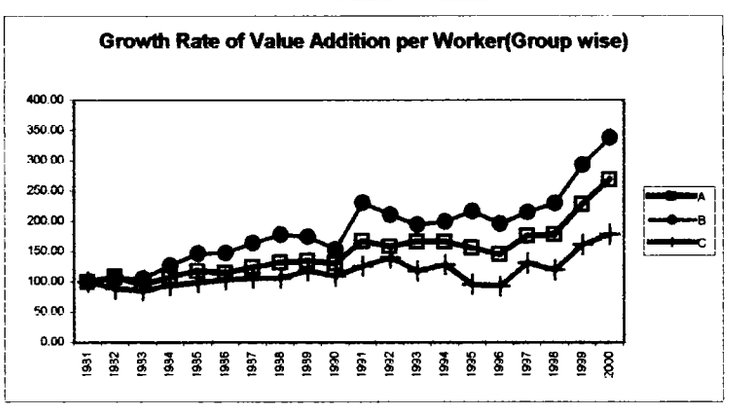


Table –III.5
Value Addition Per Labor in Women Cooperatives-Group wise (1981-2000)

Year	Value Addition per Labor (Rs)		
	A	B	C
1981	789	641	936
1982	859	676.9	832
1983	751	672.9	797.4
1984	852	810	881
1985	931.7	939.6	929
1986	907.5	946.4	971.4
1987	981	1051.8	996.2
1988	1041.5	1140	995.6
1989	1064.2	1114	1104.8
1990	1024.5	981	1021.6
1991	1317.3	1475.3	1177.7
1992	1248.8	1347.5	1305.9
1993	1314	1245.2	1103.2
1994	1311.6	1277.4	1204
1995	1234.2	1388	896
1996	1147	1254	874
1997	1386	1378.5	1223
1998	1405.4	1468.2	1120
1999	1799.6	1880.7	1507
2000	2125	2165.8	1674

Source: Worked out from Audit Reports

A=Cooperatives-General *B= Cooperatives with networking* *C= Cooperatives without networking*

The growth rate of value added during 1990's is seen to be better than that of 1980's in all the three groups. However the cooperatives with network have achieved significant growth (232.1%)during 1991-2000, where as in the cooperative without network, it is only 129.1 percent.

The above discussion of value addition has brought out significant differences between the groups such as cooperatives general, with network and without network.

Table III.6
Growth Rate of Value Addition-Group Wise(1981-2000) (Base - 1981=100)

Year	Growth rate			Decadal Growth		
	A	B	C	A	B	C
1981	100	100	100			
1982	108.87	105.6	88.89			
1983	95.18	104.98	85.19			
1984	107.98	126.37	94.12			
1985	118.09	146.58	99.25	116.62	139.994	101.121
1986	115.02	147.64	103.78			
1987	124.33	164.09	106.43			
1988	132	177.85	106.37			
1989	134.88	173.79	118.03			
1990	129.85	153.04	109.15			
1991	166.96	230.16	125.82			
1992	158.28	210.22	139.52			
1993	166.54	194.26	117.86			
1994	166.24	199.28	128.63			
1995	156.43	216.54	95.73	181.103	232.147	129.111
1996	145.37	195.63	93.38			
1997	175.67	215.05	130.66			
1998	178.12	229.05	119.66			
1999	228.09	293.4	161			
2000	269.33	337.88	178.85			

Source: Worked out from Audit Reports

A=Cooperatives-General B= Cooperatives with networking C= Cooperatives without networking

b) Value Addition Per Worker-Product Wise

As there are difference in value addition per worker between cooperatives with network and without network, there are also differences between product groups

Looking at the value addition per worker, (given in Table – III.7) it may be seen that the food processing cooperatives top the list to be followed by garments and printing. However over the period (1993 – 2000), in all the three products, value addition per worker increased. One of the reasons why value added per worker increased faster in food processing cooperatives is that the number of workers per

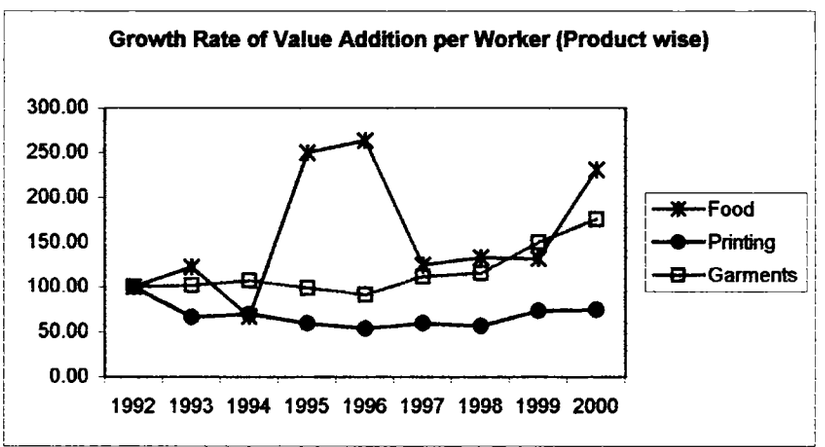
unit declined from 19 in 1993 to just 9 in 2000. In printing and garments, however, significant decline in labour employment did not happen. The growth rate of value addition per worker (See Table III.7) product wise shows that the food cooperatives have 230.8 percent in 2000 based on 1992 value. Comparing the annual growth rate of three products, food cooperatives increased by 58 percent, but in printing cooperatives the growth of value addition of per worker declined to the tune of 31.9 percent. Thus the product wise analysis of value addition shows that among the three products, average productivity of labor is more in food processing cooperatives than in printing or garments.

Table – III.7
Value Addition Per Labor - Product wise

	Value Addition per worker			Growth Rate (value addition)		
Year	Food	Printing	Garments	Food	Printing	Garments
1992	1410	1522.8	1264	100.00	100.00	100.00
1993	1722	1009.5	1290.8	122.13	66.29	102.12
1994	943	1065.3	1355	66.88	69.96	107.20
1995	3526	902.5	1251.8	250.07	59.27	99.03
1996	3709	812.5	1159.4	263.05	53.36	91.72
1997	1760	909.2	1411.6	124.82	59.71	111.68
1998	1872	856.7	1454.7	132.77	56.26	115.09
1999	1859	1113.6	1894	131.84	73.13	149.84
2000	3255	1134.6	2216	230.85	74.51	175.32

Source: Worked out from Audit Report

Chart – III.2



It was already mentioned in the previous chapter that in Kannur, the garment cooperatives are engaged in either only contract work, or only manufacturing work or in both types of work. Since the nature of activity differs, it influences the volume of value addition and consequently the share of labor in value addition.

c) Value Addition Per Worker in Garment Cooperatives according to Activity

Looking at the share of value addition per labour in garment cooperatives activity wise from 1981-90, the units engaged in contract work appear to be very low in the ladder when compared to the other two types. But after 1990, the cooperatives engaged in contract work improved.

Table – III.8
Value Addition per Labour according to Activity (Garment Cooperatives)

Year	Value Addition per labour (Rs)			
	A	B	C	D
1981	838.50	1385.38	813.11	794.91
1982	965.48	1058.11	838.70	952.87
1983	824.74	1295.69	746.64	828.73
1984	890.27	1139.57	739.27	1019.40
1985	905.48	1081.70	868.06	976.45
1986	807.33	446.27	958.96	850.30
1987	878.25	389.25	957.62	958.34
1988	954.21	373.50	959.09	1134.34
1989	954.42	294.53	1002.56	1134.40
1990	966.44	249.92	1234.14	1020.89
1991	1234.43	735.89	1401.76	1347.92
1992	1264.03	839.61	1213.40	1557.19
1993	1290.80	993.83	1334.63	1465.88
1994	1355.01	1161.12	1165.39	1466.27
1995	1251.79	1445.09	1066.25	1274.53
1996	1159.46	1371.05	942.27	1217.29
1997	1411.63	2438.62	1054.69	1217.55
1998	1454.76	2316.11	955.61	1413.67
1999	1894.00	3445.68	1135.95	1672.10
2000	2216.45	2629.62	2353.56	1807.62

Source : Worked out from Audit Notes
A = Garments General B = Garments Contract
C = Garments Contract & Manufacturing D = Garments Manufacturing

However the data given in table – III.8 show that the value addition per labor has been greater after 1990 than before 1990 in all the cooperatives classified on the basis of nature of activity. Although value addition per worker has increased during the post 1991 period, the growth was not uniform in the different activity. Based on 1981, value added in the manufacturing only units is seen to have a higher average growth rate in both decades.

The data of growth rate of value addition per worker during 1981-2000 and the decadal growth rate according to activity (Garment cooperatives) are shown in tables III.9 and III.10. From the table, it is seen that the growth rate of value addition per worker, the three activities has a positive trend during 1991-2000.

Table III.9
Growth Rate of Value Addition Per Worker in Garment Cooperatives According To Activity

Year	Growth Rate			
	A	B	C	D
1981	100.00	100.00	100.00	100.00
1982	115.14	76.38	103.15	119.87
1983	98.36	93.53	91.83	104.25
1984	106.17	82.26	90.92	128.24
1985	107.99	78.08	106.76	122.84
1986	96.28	32.21	117.94	106.97
1987	104.74	28.10	117.77	120.56
1988	113.80	26.96	117.95	142.70
1989	113.82	21.26	123.30	142.71
1990	115.26	18.04	151.78	128.43
1991	147.22	53.12	172.39	169.57
1992	150.75	60.61	149.23	195.90
1993	153.94	71.74	164.14	184.41
1994	161.60	83.81	143.33	184.46
1995	149.29	104.31	131.13	160.34
1996	138.28	98.97	115.88	153.14
1997	168.35	176.03	129.71	153.17
1998	173.50	167.18	117.53	177.84
1999	225.88	248.72	139.70	210.35
2000	264.34	189.81	289.45	227.40

Source : Worked out from Auditotes
A = Garments General B = Garments Contract
C = Garments Contract & Manufacturing D = Garments Manufacturing

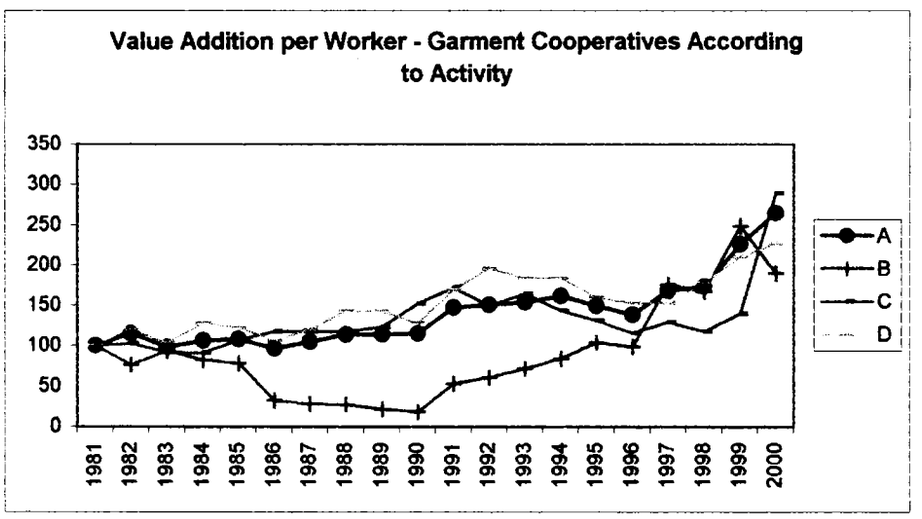
However comparing the two periods, the second period (1991-2000) is seen to be better than the first period (1981-1990). In addition in those cooperatives engaged in contract work, the value addition per labor fluctuated widely during the period 1991-2000. This was largely due to the variation in the volume of job work obtained by the cooperatives.

Table – III.10
Growth Rate of Value Addition Per Worker in Garment Cooperatives According To Activity(Decadal change)

Group	1981 – 90	1991 – 2000
A	107.36	173.36
B	55.66	125.42
C	112.12	155.23
D	121.62	181.6

Source: Worked out from Table – III.9
A,B,C and D same as in Table – III.9

Chart – III.3



As observed earlier with respect to cooperatives in general, in the case of garment cooperatives also net working has a positive impact on performance. This is mainly due to the influence of network on the type of activity that the cooperatives are engaged in.

i) Value Addition per Worker in Garment Cooperatives with Network According to Activity

Since one of the sub groups in the garment cooperatives with network started the operation only in 1991, this analysis pertains to the period 1991-2000 only, as it would enable comparison with other sub groups. The data is given in the table III.11. Among the sub groups the labour productivity in the cooperatives doing contract work only is higher than that of others. This is followed by, those doing both contract and manufacturing work. The main reason for this could be the type of activity as well as the quantity of work they do. The units doing contract work do not have to worry about marketing. What they need is a small amount of finance as working capital because the contracting firms supply the required inputs to these units. More over, due to favorable terms of contract, (because of networking) the cooperatives are able to obtain a moderate sum as advance.

Table – III.11

Value Addition per Labour in Garments Cooperatives with Network – Activity wise

Year	Value Addition per labour (Rs)			
	A	B	C	D
1991	1151	1035.69	901.47	1517.41
1992	1468.18	2356.26	1256.66	1679.62
1993	1514.50	1643.22	1342.54	1613.80
1994	1531.36	2207.01	1142.82	1760.55
1995	1622.61	2008.13	1208.49	1875.03
1996	1396.01	2285.66	1068.25	1671.01
1997	1484.07	2367.56	1140.39	939.00
1998	1554.91	2812.99	1041.18	1381.77
1999	2005.25	2061.52	1194.09	1564.09
2000	2335.10	2720.30	2495.23	1617.72

Source : Worked out from Audit Note.

A = Garments with network *B = Garments Contract with network*

C = Garments Contract & Manufacturing with network *D = Garments Manufacturing with network*

On the other hand, the manufacturing units face the problems of finance and tight competition in the market, which directly influence on the volume of work. The cooperatives that are doing both types of activities manage these problems with the

income obtained from the contract work and rescheduling their activities accordingly. The average growth rate of value addition per worker in the contract only units is 207.6, where as in the other activities it is much low. The annual and decadal growth rates are given in tables III.12 and 13.

TableIII.12
Growth Rate of Value Addition per Worker – Garment Cooperatives with Network (Activity wise)

Year	A	B	C	D
1991	100.00	100.00	100.00	100.00
1992	127.56	227.51	139.40	110.69
1993	131.58	158.66	148.93	106.35
1994	133.05	213.10	126.77	116.02
1995	140.97	193.89	134.06	123.57
1996	121.29	220.69	118.50	110.12
1997	128.94	228.60	126.50	61.88
1998	135.09	271.61	115.50	91.06
1999	174.22	199.05	132.46	103.08
2000	202.88	262.66	276.80	106.61

Source : Worked out from Audit Note.

A = Garments with network *B = Garments Contract with network*
C = Garments Contract & Manufacturing with network *D = Garments Manufacturing with network*

Table – III. 13
Growth Rate of Value Addition per Worker – Garment Cooperatives with network (Activity wise)

Group	Decadal Growth Rate
A	139.6
B	207.6
C	142
D	103

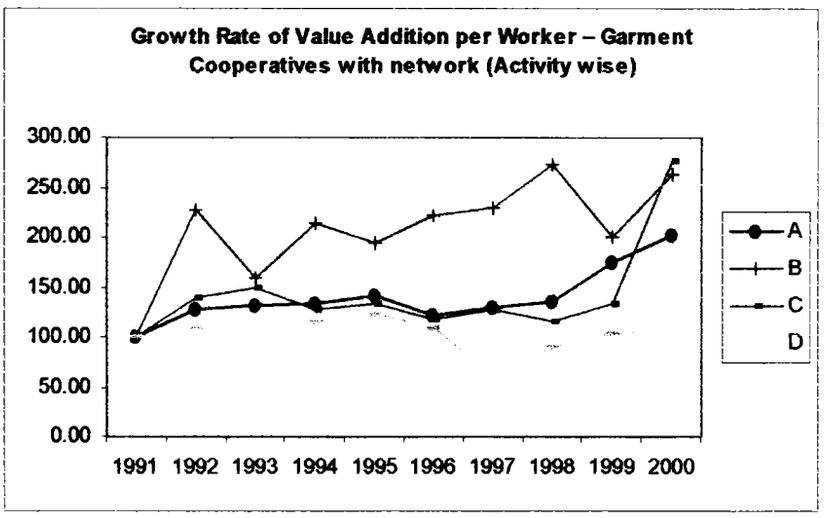
Source: Worked out from Table – III.12

A = Garments with network *B = Garments Contract with network*
C = Garments Contract & Manufacturing with network *D = Garments Manufacturing with network*

The difference in performance of garment cooperatives with network that are engaged in different activity shows the superiority of contract work in Kannur District. The impact of network on the productivity of garment cooperatives (activity

wise) per labour could be further examined by analyzing in the garment cooperative without network.

Chart – III.4



Value Addition per Worker in Garment Cooperatives Without Net Work – Activity Wise

The data given in table – III.14 show a similar tendency when comparing between groups and within the group. The share of labor appears to be very low as it seems to be almost half in the first two sub groups when compared to those garment cooperatives with network. However the value addition per labour between the subgroups of manufacturing only without network was observed to be little over than those with network. The data indicate negative growth in most of the period 1981 – 2000. In both decades the performance of this group is seem to be very poor.

The differences in the volume of value addition between the groups (garment cooperatives with and without networking on activity wise) in terms of the value addition per labour shows that the former group has been much ahead of the latter. The difference in value addition per labour is given in table – III.15. The table clearly brings out (except the last 4 years in the last column), the superiority of garment cooperatives with network over without any network. The difference in value addition per worker is more pronounced in the cooperatives that do contract work only and contract and manufacturing work simultaneously. The trend of growth rate of value

addition per worker in garment cooperatives without network indicates negative growth in those doing contract only work as well as in contract and manufacturing work. The growth rate and the decadal change is given in Tables – III.16 and 17. However in this group, those engaged in manufacturing only work is seen to be marginally better.

Table –III.14
Value addition per Labour in Garment Cooperatives without Network according to Activity (1981 – 2000)

Year	Value Addition per labour (Rs)			
	A	B	C	D
1981	1028.35	1292.34	874.62	1084.07
1982	1028.97	1027.56	943	1105.02
1983	988.78	1251.5	910.78	983.96
1984	997.09	1178.2	859.17	1093.89
1985	966.85	1156.39	950.95	952.11
1986	720.49	421.02	996.97	739.93
1987	741.8	439.12	977.91	883
1988	735.57	412.58	912.34	1009.43
1989	757.55	346.15	857.86	1268.21
1990	725.83	310.58	1154.94	912.09
1991	700.25	374.16	670.04	1035.03
1992	872.74	307.09	1147.83	1299.09
1993	818.54	226.72	1376.32	1158.07
1994	991.18	204.85	1293.39	1517.16
1995	711.91	236.45	499.54	891.79
1996	758.04	400.19	318.26	968.48
1997	1221.79	508.75	459.45	1528.87
1998	1182.18	665.81	430.92	1448.58
1999	1579.8	1367.98	839.5	1783.96
2000	1823.43	1462	1220.16	2028.31

Source: Worked out from Audit Report
A = Garments general B = Garments Contract
C = Garments Contract & Manufacturing D = Garments Manufacturing

Chart – III.5

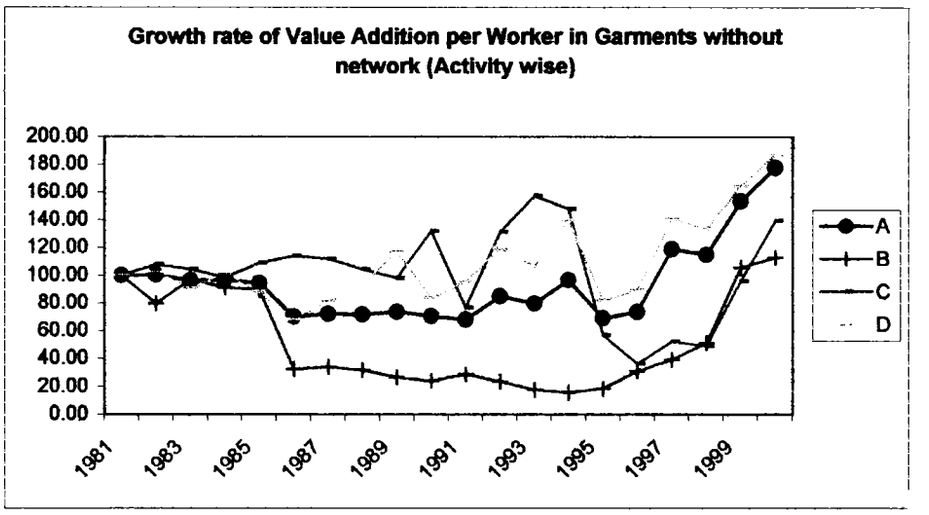


Table – III.15
Difference of Value Addition in Garment Cooperatives according to Network cum Activity wise – per Labour (1991 – 2000*)

Year	Per labor		
	C	C x M	M
1991	662	231	482
1992	2049	109	381
1993	1415	-34	455
1994	2003	-151	243
1995	1272	709	984
1996	1885	750	703
1997	1859	681	-589
1998	2147	611	-67
1999	694	355	-219
2000	1258	1275	-410

Source: Worked out from Survey Data

(*) Garment cooperatives with net work started in 1991 and for comparative purpose, data during 1991- 2000 alone was considered to calculate the differences.

(**) Difference (+) Sign indicates positive change in the cooperatives with network
(-) Sign indicates negative change in the cooperatives with network.
C= Contract
M & C = Manufacture and contract
M= Manufacture

So far the discussion was on the value addition in women cooperatives categorized into various groups and sub groups and per labor for a period of 2

decades (1981 – 2000). A comparison of the mean value in all these groups would enable to have a bird's eye view of the differences in productivity per labour so as to realize the impact of network. The data is given in table – III.18

It is evident from the above table that the cooperatives with network have a better productivity in terms of value addition per labour than those without any network.

Table III.16
Growth rate of Value Addition per Labour in Garment Cooperatives without Network according to Activity (1981 – 2000) (base – 1981 = 100)

Year	Growth Rate			
	A	B	C	D
1981	100.00	100.00	100.00	100.00
1982	100.06	79.51	107.82	101.93
1983	96.15	96.84	104.13	90.77
1984	96.96	91.17	98.23	100.91
1985	94.02	89.48	108.73	87.83
1986	70.06	32.58	113.99	68.25
1987	72.13	33.98	111.81	81.45
1988	71.53	31.93	104.31	93.11
1989	73.67	26.78	98.08	116.99
1990	70.58	24.03	132.05	84.14
1991	68.09	28.95	76.61	95.48
1992	84.87	23.76	131.24	119.83
1993	79.60	17.54	157.36	106.83
1994	96.39	15.85	147.88	139.95
1995	69.23	18.30	57.12	82.26
1996	73.71	30.97	36.39	89.34
1997	118.81	39.37	52.53	141.03
1998	114.96	51.52	49.27	133.62
1999	153.62	105.85	95.98	164.56
2000	177.32	113.13	139.51	187.10

Source: Worked out from Audit Reports

A = Garments general *B = Garments Contract*

C = Garments Contract & Manufacturing *D = Garments Manufacturing*

Table – III.17
Value addition per Labour in Garment Cooperatives without Network according to activity (1981 – 2000) (base – 1981 = 100)
Decadal Growth Rate

Group	1981 - 90	1991 – 2000
A	84.54	103.7
B	60.63	44.54
C	107.87	94.33
D	92.54	126

Source: Worked out from Table – III.16
A = Garments general B = Garments Contract
C = Garments Contract & Manufacturing D = Garments Manufacturing

Table-III.18
Value Addition in Women Cooperatives (Mean)

	Item	General Cooperatives	Cooperatives with net work	Cooperatives without net work
Sl.No		Per Labor	Per Labor	Per Labor
1	Women coops	1179	1197	1077
2	Product wise			
	a. Garments	1134	1284	970
	b. Printing	1055	1258	969
	c. Food **	2331		
3	Garment - work wise			
	a. C	1254	*2550	679
	b. C x M	1087	1075	884
	c. M	1215	1252	1184

(*) 1991 – 2000 (**) 1992 – 2000
C,C&M and M same as Table – III.15

The discussion on value addition brings out some insights into the growth and performance of women industrial cooperatives in Kannur. The women cooperatives in general seem to have performed better as they have been able to generate reasonable volume of value addition per labour. In point of fact, all the groups (product wise, activity wise and network wise) of cooperatives with network enjoyed better growth over those without network.

The discussion on value addition takes us to capital that is intimately related to the former. The share of capital per unit of value addition is calculated by dividing the total capital by total value added. Hence, the higher the proportion, the greater the amount of capital used or available per unit of value addition and vice versa. This analysis is carried out for women industrial cooperatives with network and without network followed by product and activity.

The total capital in this context refers to productive capital, which consists of working capital and fixed assets (fixed capital after deducting depreciation). The data (Table – III.19) show that it is the cooperatives with network that used a higher proportion of capital per unit of value addition than those without network. The range of the ratio varies between 2 and 9 for cooperatives with network and 1 and 5.6 for those without network.

In respect of printing cooperatives the proportion of capital employed was more than that in garments and food cooperatives. In other words, they have used more capital to generate a unit of value addition, which varies between 3.5 and 22.7 where as in the garment cooperatives it was between 2 and 5.9 and in food cooperatives still low, between 0.1 and 2.3. It indicates the poor capital productivity in printing cooperatives. The details are given in table -III.19. The share of capital in value added can be further examined with respect to activity and networks. Let us start with garment cooperatives on the basis of the three categories, viz., garments general, garments with network and garments without network, by dividing all these groups into three sub groups based on activity such as contract work only, contract and manufacture work and manufacture work only.

In the garment cooperatives (general) classified on the basis of activity, the data show that cooperatives engaged in contract work only or only manufacturing work have employed more capital per unit of value addition than those doing both contract work and manufacturing work. During 1981-2000, the share of capital varied between less than one and 7 in the case of contract work, between 2 and 4 in the case of both type of activities and between 1.3 and 4.8 in the case of manufacturing work alone. At the same time, in the garment cooperatives with network, wide fluctuations have been observed in the third sub category (only manufacturing unit).

Table – III.19 Share of Capital in Value Addition according to group, product and work wise (1981-2000)

Year	General			Product			Garments - work wise				Garments - work wise with network				Garments - work wise without network			
	A	B	C	F	P	G	C	C&M	M	Total	C	C&M	M	Total	C	C&M	M	Total
1981	3.1	5.3	1.6	-	5.9	2.8	0.6	5.3	1.6	2.8	-	11	3	5.7	1.5	0.9	3.8	1.6
1982	3.5	5.3	2	-	5.6	3.1	0.7	5.4	2.3	3.1	-	10.8	3.6	5.1	1.2	0.6	2	1
1983	4.2	5.6	2	-	6.1	3.8	0.8	5.6	3.2	3.8	-	11.6	5	6.8	1.4	0.5	2	0.8
1984	4	6.8	2.9	-	6.7	3.4	0.7	5.1	2.7	3.4	-	9.4	4	5.7	1.5	0.5	2	0.9
1985	3.6	5.5	2.6	-	7.3	3.1	0.7	3.4	2.9	3	-	4.7	4.2	4.6	0.9	0.5	1.8	0.9
1986	2.8	4.4	2	-	4.9	2.5	0.7	3	2.3	2.5	-	4	2.7	3.3	0.8	0.5	1.8	0.9
1987	2.6	3	2	-	3.5	2.2	1	2.6	2	2.2	-	3.4	2.6	2.8	0.3	0.6	3	0.9
1988	2.6	2.7	2.3	-	3.7	2	1.3	2.6	1.6	2	-	3.2	1.9	2.3	0.3	0.6	2.9	1.0.7
1989	2.9	3.2	2.4	-	4.8	2.2	3.3	3	1.5	2.2	-	2.5	2	2.2	0.3	0.2	5.4	0.4
1990	2.8	3.1	2.6	-	4.7	2.2	4	2.7	1.6	2.2	-	2.1	2.1	2.2	0.3	0.2	9.5	0.3
1991	2.8	2.5	3	-	3.8	2.4	3.6	2.8	2.1	2.4	1.3	1.8	2.2	2	0.3	0.1	0.5	0.3
1992	2.3	2	2.8	1.6	4.9	1.8	2.8	2.7	1.4	1.8	3.5	1.7	1.4	1.4	0.3	0.1	0.7	0.3
1993	4.1	4.3	5	0.5	8.2	3.5	1.3	2.3	2.3	3.5	2.5	1.4	2.6	3.6	0.3	0.2	0.7	0.4
1994	3.6	3.9	3.4	0.7	5.7	3.3	7.1	2.3	2	3	4.5	1.8	2.6	3.2	0.2	0.2	0.9	0.3
1995	4.3	4	5.5	0.3	8.4	4.2	5.3	3	2.8	3.6	3.5	2.4	3	3.6	0.3	0.1	0.4	0.3
1996	4.9	4.9	5.6	0.1	9.5	5	5	2.6	4	4.2	4.1	2.3	5.1	4.2	0.6	0.1	0.3	0.3
1997	5.2	5.8	4.4	2.3	7.8	5.9	5.4	2.4	7.8	5	4.6	2	16	5.6	0.6	0.1	05	0.2
1998	8.1	9	5	2.2	22.7	5	3.7	4.2	6.4	5.9	5.6	3	10.6	6.4	0.1	0.1	0.5	0.3
1999	4.1	4.6	3.3	2	5.1	4	6.3	3.8	5.2	4	5.6	3	9.4	4.5	0.8	0.1	0.8	0.4
2000	4.3	5	2.9	0.9	4.3	4.6	6.5	2.7	4.8	4.6	6.7	2.3	8.6	5.1	0.9	0.1	0.1	0.4

Source: Worked out from Audit Reports

A=Cooperatives - general B= Cooperatives with network C=Cooperatives without net work F= Food cooperatives P= Printing cooperatives
G= Garment cooperatives C= Contract work C&M = Contract & Manufacturing M=Manufacturing

It could be observed from table –III.19 that among the garment cooperatives (without network), the share of capital in value addition was high in the subgroup manufacturing, followed by contract work only. This points to the fact that over the period the changes in value addition have not been in tune with the changes in capital employed. Similarly, in the case of garment cooperatives without network, the proportion of capital used has been very low in all the three sub groups when compared to those with network.

The above analysis clearly shows that the share of capital in value addition has been more in those cooperatives with network than without network. While considering product wise, printing cooperatives was observed to be in the first position in the use of capital to generate a unit of value addition. In both, garments with and without networking, it was the manufacturing only cooperatives that used more capital per unit of value addition. The mean value of share capital used to generate a unit of value addition (group wise) is given in Table –III.20. The mean value shown in Table – III.20 indicates the extent of capital available in each group to generate a unit of value addition. Comparing the group with network with that without network, the capital availability appears to be far ahead in the former than in the latter, except in the case of printing cooperatives. Printing cooperatives used more capital (almost twice) than other products. Again the garment cooperatives with network used a higher share of capital per unit of value addition.

Table –III.20

Share of Capital in Value Addition Group wise 1981-2000 (Mean)

Sl.No	Item	General Cooperatives	Cooperatives with network	Cooperatives without network
1	Women coops	3.8	4.5	3.2
2	Product wise			
	a. Garments	3.3	4.3	0.6
	b. Printing	6.6	6.1	7.6
	c. Food*	1.2		
3	Garment - work wise			
	a. C	3.2	**4.3	0.7
	b. C & M	3.4	4.6	0.3
	c. M	3	4.8	2

Source: calculated from Survey Data

(*) 1992 - 2000 (**) 1992-2000 C, C & M and M as in table III.19

From the above discussion, it is clear that the cooperatives with network fares better than those without any network in the case of productivity in terms of value addition between the groups and the sub groups classified on the basis of nature of operations.

The level of performance[2] and growth of women cooperatives in terms of value addition per worker and share of capital in value added are classified as low, moderate, and high in table III.21

Table –III.21.

The Performance level according to Value addition and share of capital

Sl.No	Item	General Cooperatives		Cooperatives with net		Cooperatives without net	
		A	B	A	B	A	B
1	Women coops	Moderate	High	High	High	Low	Low
2	Product wise						
	a. Garments	High	Moderate	High	High	Low	Low
	b. Printing	Moderate	Moderate	Moderate	High	High	Low
	c. Food	High					
3	Garment – work wise						
	a. C	High	Low	High	High	Low	Low
	b. C x M	High	High	High	High	Low	Low
	c. M	High	Moderate	High	High	Low	Low

A = Share of capital in value addition *B = Value addition per laborer.*

[2] High = Value more than average of the three groups Moderate = Value equal to average of the three groups

Low = Value less than the average of the three groups

In the table –III.21 in columns A and B under the cooperatives without network, all the cells show 'low' status except for printing cooperatives (share of capital in value addition). At the same time, for the cooperatives with network, all the columns show high except one cell, which shows moderate. It is also observed that in Kannur the growth and performance of women cooperatives general with respect to value addition is not so poor when compared to the units without network. This is largely due to the over all influence of cooperatives with network on the general scenario. Although the value addition has been treated as one of the major indicators of performance, it is also equally important to trace the behavior of profit between groups. This indicator is used to differentiate the performance and growth level of women cooperatives, as maximization of revenue or minimization of cost is also another goal of a producer cooperative.

The maximization of revenue from sales depends on price and quantity of output. When a producer cooperative is a price taker, it cannot influence the price as and when required in the short period (Tewari, 1996). Usually prices are fixed on the basis of cost of production plus a nominal margin in a cooperative. The margin ranges from 20 to 30 percent. In most of the cooperatives, the margin is set at 25 percent. But for private enterprise, such a margin may be higher because of the difference in the organizational set up. But, at this price, there will be the problem of over supply due to the expectation of a better profit. To overcome this problem, the cooperatives have to either restrict output or reduce the producer price and distribute the dividend to members (Tewari, 1996). However this solution might give the maximum price to the producer but it will not maximize the member's welfare (Stefenson, 1996)

Among the cooperatives under consideration, there does not seem to be having any systematic effort to set the price. Instead they take the price in the competitive market. But such prices may have to be in tune with the cost of production. The cost of production is usually governed by either material cost, labor cost or administrative cost. However there exists inter group differences in the cost of production depending on the type of society, product as well as the activity under taken by each group. Since the cost of production has a direct bearing on profit margin, the discussion on profit margin shall begin with the analysis of cost of production in different groups on the basis of network.

I. Cost of Production

In this study, the cost of production is referred to as the sum of the expenditure incurred on the following items:

1. Wages – labor cost
2. Purchase – material cost
3. Depreciation – capital consumption
4. Administration – Establishment and contingency expenditure

First of all the structure of the cost of production in the women cooperatives in Kannur in general is analyzed along with the difference, if any, between the cooperatives with and without networking.

1. Women cooperatives with and without networking

From the analysis of the structure of total cost of production, it is clear that the major component of cost is purchase (the material cost) and then wages (labor cost). The cost incurred for raw materials increased from 44.4 percent in 1981 to 66.5 percent in 2000 in the cooperatives without network, where as in cooperatives with network, the corresponding figures are 49.1 and 55.2 percent respectively. At the same time the component of labor cost (wages) declined in both categories, although the fall in the former was sharper than that in the latter. The data show that (Table – III.22) in the cooperatives with network, it declined from 30 to 24.2 percent, while in the other group it fell sharply from 34.9 percent to just 10.4 percent.

Table – III.22
Cost Structure of Women Cooperatives group wise 1981 – 2000 (Percentage to total cost)

Year	Wages			Purchase			Depreciation			Establishment and contingencies		
	A	B	C	A	B	C	A	B	C	A	B	C
1981	34.20	30.00	35.00	45.60	49.00	44.40	7.90	11.90	3.90	12.30	8.90	16.80
1982	29.80	26.40	32.00	50.60	55.00	46.70	8.10	7.30	9.50	11.60	9.50	14.90
1983	27.90	22.10	34.50	53.90	62.00	42.30	10.10	10.30	10.50	10.20	8.50	13.60
1984	28.60	22.60	34.00	50.80	58.10	41.80	9.20	10.50	8.00	10.40	9.00	13.60
1985	33.00	31.20	28.60	45.00	44.50	50.40	9.30	10.50	8.40	12.80	13.80	12.90
1986	31.10	33.30	21.30	46.30	42.60	56.20	10.10	10.60	10.30	13.30	13.60	14.00
1987	30.20	28.80	24.00	42.90	41.40	51.40	11.10	12.60	9.70	16.80	19.20	14.30
1988	33.70	32.00	26.50	41.50	41.90	47.40	11.90	11.20	15.00	13.70	13.50	16.40
1989	28.30	26.60	21.70	48.60	51.70	49.40	10.40	9.80	13.30	11.20	10.60	13.90
1990	20.50	17.50	19.60	58.40	62.50	53.20	10.30	10.70	10.40	10.80	10.10	13.90
1991	21.00	21.40	12.80	57.60	56.60	65.10	14.60	16.80	11.10	11.10	11.40	11.70
1992	24.50	25.30	13.20	49.00	46.30	62.10	9.20	10.00	7.90	11.90	11.60	13.60
1993	26.10	30.40	11.00	53.30	46.50	71.00	7.80	9.00	6.60	11.40	13.00	10.20
1994	20.60	23.30	7.60	63.10	57.90	78.30	12.60	10.80	15.20	8.40	10.00	7.40
1995	20.70	24.40	9.90	57.50	55.00	65.80	10.30	8.00	13.50	9.20	9.70	9.00
1996	14.40	15.80	7.60	67.60	69.60	69.50	12.40	11.30	13.50	7.70	6.60	9.50
1997	16.90	19.70	8.30	63.40	63.30	69.80	12.40	11.00	14.30	7.40	5.60	8.30
1998	20.00	23.60	9.00	59.10	59.30	66.50	12.40	11.00	14.00	8.40	6.00	10.10
1999	21.80	24.80	10.00	54.80	57.30	58.00	12.70	12.00	13.80	10.70	5.70	18.20
2000	21.80	24.20	10.40	56.50	55.20	66.50	13.80	14.30	13.40	7.90	6.30	10.00

Source: Calculated from Audit Report

A= Women cooperatives general B= Cooperatives with network C= Cooperatives without network

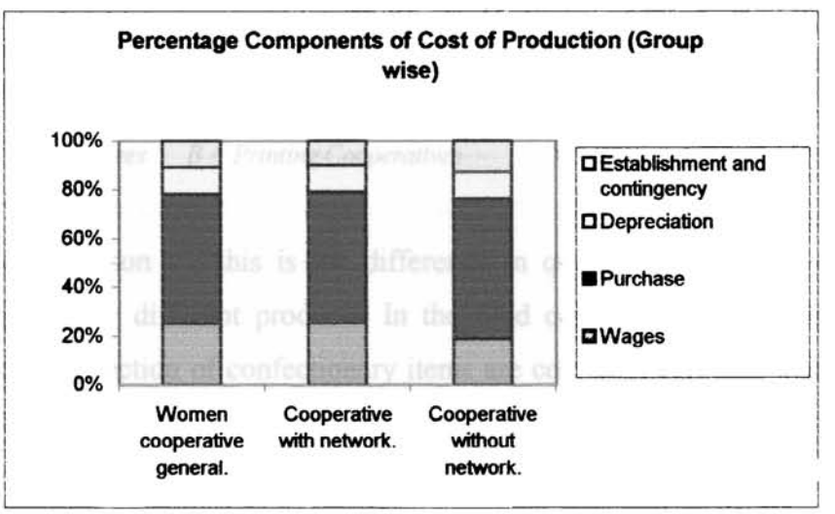
Similarly the share of administrative cost is higher in the cooperatives without network than in those with network. Thus on an average, the material cost and the administrative cost are seen to be higher in the cooperatives without network than those with network (Table – III.23). This is because the cooperatives with network are able to minimise their transaction cost involved in the purchase of raw material as they have socio political linkages. Similarly, the labourers are paid more wages per piece in the cooperatives with network than without network. From the survey, it is found that the labour cost difference range from 25 to 50 percent between the two groups. The percentage share of establishment and contingency expenditure indicates the extent of administrative cost, which is seen to be high (12.6 percent) in the cooperatives without network.

Table –III.23
Components of Cost of Production (Percentage share) 1981-2000. (Mean)

Type of society	Components of cost of Production				
	Wages	Purchase	Depreciation	Establishment and contingency	Total
Women cooperative general.	25.2	53.2	10.7	10.8	100
Cooperative with network.	25.4	53.8	10.9	9.9	100
Cooperative without network.	18.8	57.8	10.8	12.6	100

Source: Worked out from Audit Notes, Various Years.

Chart – III.6



In the units with network, it is below 10 percent. This indicates the extent of administrative inefficiency, which is directly related to the financial position of the cooperatives. The structure of cost of production differs with respect to different products and the type of activities under taken by women cooperatives.

2. Components of Cost of Production – Product Wise

The product wise analysis of the various components of cost of production gives an entirely different picture. From table –III.24 it is observed that in the printing and garment cooperatives, the major component of the cost of production is the purchase cost, where as in food processing cooperatives, it is wages. Similarly capital consumption also appears to be more in the food than either in garments or printing.

Table – III.24
Components of Cost of Production - Product wise (%)

Year	Components of Production Cost											
	Wages			Purchase			Depreciation			Establishment and Contingency		
	A	B	C	A	B	C	A	B	C	A	B	C
1992	60.20	25.00	23.20	4.60	45.30	51.30	22.30	17.50	13.60	12.80	12.00	11.80
1993	76.90	23.40	24.40	2.90	53.50	55.60	15.60	11.30	8.30	4.60	11.40	11.70
1994	44.50	26.20	18.40	6.40	57.60	65.80	34.50	8.90	7.10	14.40	7.30	8.70
1995	38.20	17.60	21.70	9.10	54.30	59.40	38.10	20.50	9.30	14.60	7.60	9.70
1996	38.90	15.80	13.80	7.80	57.60	70.80	35.60	19.90	7.40	17.70	6.80	7.80
1997	16.80	18.20	16.60	3.10	51.10	67.50	32.90	22.40	9.60	47.20	8.20	6.20
1998	41.60	16.70	19.90	5.70	50.10	63.50	20.90	24.50	9.30	31.90	8.70	7.30
1999	46.70	18.80	21.50	6.60	53.30	57.00	22.00	19.60	10.80	24.60	8.30	10.60
2000	54.10	15.20	22.10	6.60	56.00	59.10	18.00	22.80	10.90	19.40	6.00	7.70

Source : Survey Data

A = Food Cooperatives B = Printing Cooperatives C = Garment Cooperatives

The main reason for this is the difference in quantity and variety of raw materials required for different products. In the food cooperatives the ingredients required for the production of confectionary items are comparatively less than those in garments or printing. More over the ingredients used by any cooperative of food processing is also almost similar and not much difference could be seen with regard

to the quality or the price of material used by food cooperatives. But in the case of garment cooperatives, the raw materials used differ, both in price and quality and variety. Hence cost incurred on purchase of raw materials matters a lot in the total cost of production. However the cost components differ with respect to garment cooperatives engaged in different type of activity. Networking also adds to the difference.

3. Garment Cooperatives with and without Network

Between the garment cooperatives with network and without network, the data (Table –III.25) give a contrasting picture. The wage components of cost of production in the garment cooperatives without network sharply declined from 37.8 percent in 1981 to 15.7 percent in 2000. For the same period, in the garment units with network, the decline was less sharp, say, from 27.6 percent to 25.3 percent only. Though the purchase cost constitutes the major portion of production in both categories, in the garment units without network while it increased from 41.3 percent in 1981 to 66.2 percent in 2000, the corresponding figures for the other group were 51 percent and 55.5 percent respectively. After 1991, in the garment cooperative without network, the wage component has declined by half compared to the 1980s. At the same time the material cost almost doubled during 1990s. But in the garment cooperatives with network wages and material cost remained more or less stable during the 90s. All in all the wage component of the cooperatives with network has been higher than that in those without network. Similarly the major component of cost of production appears to be the purchase cost in both categories though it differs between groups.

The cost structure also differs in garment cooperatives according to the different activities they engage. The details of the cost components based on activity cum network are given in table – III.26.

Table –III.25
Components of Cost of Production (group wise) in Garment Cooperatives (percentage)

Year	With network				Without network			
	A	B	C	D	A	B	C	D
1981	27.60	51.00	12.30	9.10	37.80	41.30	4.10	16.70
1982	23.30	58.30	9.40	8.90	37.70	44.70	4.40	13.10
1983	20.40	65.50	5.60	8.50	45.40	39.50	5.10	9.90
1984	21.00	59.40	9.60	9.90	47.40	36.70	2.70	13.10
1985	30.20	44.50	9.90	15.40	38.50	47.20	2.40	11.80
1986	34.80	39.80	10.30	15.20	30.80	53.00	3.50	12.70
1987	30.00	38.00	10.40	21.60	32.80	47.30	4.90	14.90
1988	35.30	35.50	11.70	14.40	35.30	42.00	6.30	15.50
1989	27.20	51.50	10.00	11.20	31.60	48.30	6.70	13.50
1990	16.30	64.60	8.60	10.40	30.80	46.80	6.40	16.00
1991	21.40	57.50	11.00	11.00	16.50	66.90	5.70	10.10
1992	26.00	45.70	16.90	11.30	17.30	63.00	6.30	12.90
1993	31.90	44.80	10.20	13.00	12.90	72.20	5.50	9.40
1994	23.70	57.20	11.50	9.60	10.60	78.50	3.50	7.40
1995	25.50	54.60	10.50	9.40	15.50	67.00	7.20	10.20
1996	15.60	70.70	7.40	6.30	10.70	71.00	7.60	10.50
1997	20.10	62.90	11.60	5.40	10.90	75.00	6.40	7.60
1998	24.00	59.60	10.40	5.90	12.20	70.70	7.30	9.70
1999	25.40	56.20	12.70	5.60	13.60	58.70	7.00	20.70
2000	25.30	55.50	12.70	6.50	15.70	66.20	7.40	10.60

Source: Survey data

A = Wages B = Purchase C = Depreciation D = Establishment and contingencies

In the garment cooperatives engaged in only contract work, the wage components have been higher than in all other activities. Though it declined from 97 percent to 76.7 percent during 1991-2000, wages hold the major component in the cost of production in garment cooperatives with network doing contract work only. But purchase appears to be the least among all activities in both groups. To those cooperatives doing contract work, the raw materials are provided by the client unit and they need to make only the minimum purchase from outside. But for the units doing manufacturing work, the purchase component is much greater particularly in those cooperatives without network.

Table III.26

Components of Cost of Production – Garment Cooperatives according to Activity cum Network (percentage) 1981 - 2000

	Contract Only								Contract and Manufacturing								Manufacturing only							
	A				B				A				B				A				B			
ear	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
1991	97.00	1.50	1.00	1.40	41.40	18.20	15.70	23.00	28.30	37.70	15.40	18.00	5.30	78.60	6.00	10.00	25.30	56.70	10.50	7.00	22.30	64.00	3.70	9.70
1992	94.50	3.90	0.97	0.50	36.00	8.00	26.30	33.00	31.50	33.50	18.00	16.90	6.00	71.80	7.70	14.00	28.50	50.00	12.00	9.00	21.50	66.00	3.00	9.20
1993	92.90	5.00	1.70	0.40	36.90	7.30	25.50	26.00	32.90	35.20	14.30	18.30	2.90	81.40	4.80	7.00	35.90	43.00	11.00	11.00	21.90	65.00	3.30	9.80
1994	75.00	24.60	0.50	0.30	36.00	7.40	20.50	36.40	26.70	46.40	11.00	16.00	1.70	89.60	3.40	5.00	37.70	34.00	16.00	11.70	17.70	72.00	2.40	7.00
1995	68.00	31.00	0.60	0.20	27.70	12.60	24.20	37.80	22.50	56.50	10.00	11.00	3.50	72.70	9.90	14.00	37.00	31.60	16.00	14.00	18.80	68.00	5.50	7.60
1996	61.90	37.80	0.30	0.20	29.30	8.40	25.60	37.20	16.50	68.70	8.00	7.00	3.50	56.80	12.30	27.00	21.40	54.00	12.00	12.00	11.80	76.00	5.90	5.80
1997	76.90	22.70	0.30	0.10	28.80	10.80	22.40	37.60	17.70	65.80	9.00	8.00	1.70	70.40	11.00	16.00	19.00	42.00	33.00	6.20	11.70	77.00	5.30	5.60
1998	88.00	11.60	0.20	0.10	23.00	26.40	20.30	30.30	15.70	68.00	7.40	8.80	1.20	61.60	15.40	22.00	31.50	32.00	30.00	6.80	13.00	73.00	6.00	7.60
1999	87.30	11.50	1.30	0.10	21.00	28.60	20.50	29.80	9.90	69.00	13.60	6.90	6.40	58.80	13.50	22.00	31.50	29.00	31.00	8.20	14.00	60.00	5.80	20.00
2000	76.70	21.30	1.80	0.10	19.20	31.80	19.40	29.30	21.50	53.80	14.00	10.00	8.50	53.40	13.30	25.00	29.50	32.00	29.00	9.80	16.50	69.00	6.10	8.00
Average	81.82	17.09	0.87	0.34	29.93	15.95	22.04	32.04	22.32	53.46	12.07	12.09	4.07	69.51	9.73	16.20	29.73	40.43	20.05	9.57	16.92	69.00	4.70	9.03

Source: Survey Data

A = Women Cooperatives with network B = Women Cooperatives without network

1 – Wages 2 – Purchase 3 – Depreciation 4- Establishment and Contingencies

It is seen that garment cooperatives doing contract work but without any network account for a higher share of administrative cost than other groups both on the basis of activity and network. This indicates the poor administrative management in cooperatives without network.

Thus it could be seen that in the three types of activities, wage component was higher in the garment cooperatives with network. Purchase cost is seen to be the dominant factor in garment cooperatives without network. It is evident from the table - III.27. The structure of cost of production has direct bearing on the profitability of women cooperatives.

Table – III.27
Percentage Component of cost of Production in Garment Cooperatives According to Activity cum network basis (1991 – 2000) (Mean)

Type of Society	Wages			Purchase			Depreciation			Establishment and contingency		
	C	M &C	M	C	M &C	M	C	M &C	M	C	M &C	M
Garment cooperative with network	81.90	22.20	29.70	17.00	53.00	40.40	0.90	12.10	20.00	0.30	12.10	9.60
Garment cooperative without network	29.90	4.10	15.90	16.00	69.50	69.40	22.00	9.70	4.70	32.00	14.20	9.00

Source: Worked out from Table – III. 25 and 26

C = Contract M = Manufacturing C & M = Contract and Manufacturing

2. Analysis of Profitability

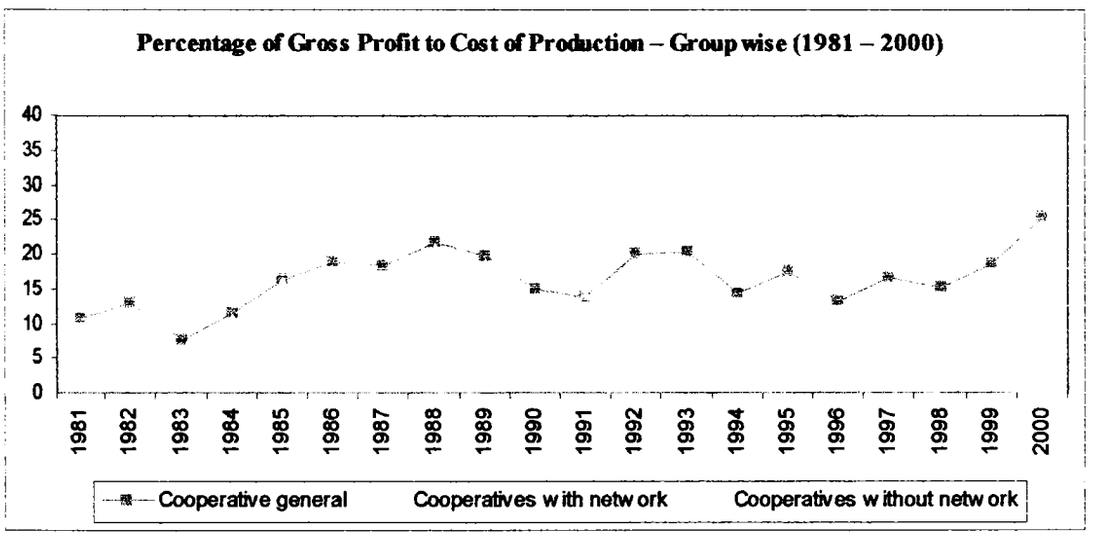
One of the indicators of the growth of any firm is profitability, which is calculated as percentage of cost of production, percentage of capital invested, and as percentage of sales. Return on investment is also analyzed as another measure of performance. We may start the discussion on profitability with women cooperatives general, then those with network and without network followed by product wise and activity cum network wise.

A) Profitability in Women Cooperatives - Gross Profit to Cost of Production

1. Percentage of Gross of Profit to Cost of Production in the Women Cooperatives – Group wise (general, with and without network)

The ratio of gross profit to cost of production is generally considered to be a measure of efficiency of a firm. The data given in table – III.28 show that in the women cooperatives (general) in Kannur, the gross profit to cost of production increased from 10.9 percent in 1981 to 25.3 percent in 2000. In units with network the percentage increased from 8.3 percent to 33.4 percent. On the other hand in the case of the units without network, it declined from 14.6 percent to 12 percent during the same period.

Chart – III.7



2. Gross Profit to Cost Production – Product wise

While considering profitability product wise, the data show that (Table – III.29) it is the food cooperatives that performed better when compared to either printing or garments. During the period 1995 – 1996, profit of these cooperatives increased by more than 200 percent. The printing cooperatives are lagging behind the garments as the profitability declined from 17.5 percent to 12 percent as against an increase from 21.1 percent to 28.2 percent in garments during the period 1992 – 2000.

Table – III.28

Percentage of Gross Profit to Cost of Production – Group wise (1981 – 2000)

Year	Cooperative general	Cooperatives with network	Cooperatives without network
1981	10.80	8.20	14.60
1982	12.90	10.10	17.20
1983	7.60	4.90	12.30
1984	11.60	10.40	14.60
1985	16.20	15.70	8.70
1986	18.80	16.30	24.20
1987	18.20	15.40	26.00
1988	21.60	20.50	27.40
1989	19.70	18.40	25.00
1990	14.90	11.00	28.00
1991	13.90	14.40	14.20
1992	20.00	22.10	19.00
1993	20.30	24.40	15.00
1994	14.40	17.70	10.40
1995	17.50	21.10	9.30
1996	13.30	16.30	6.20
1997	16.60	19.70	9.20
1998	15.30	18.90	9.20
1999	18.60	22.60	12.80
2000	25.30	33.40	12.00

Source: Survey Data

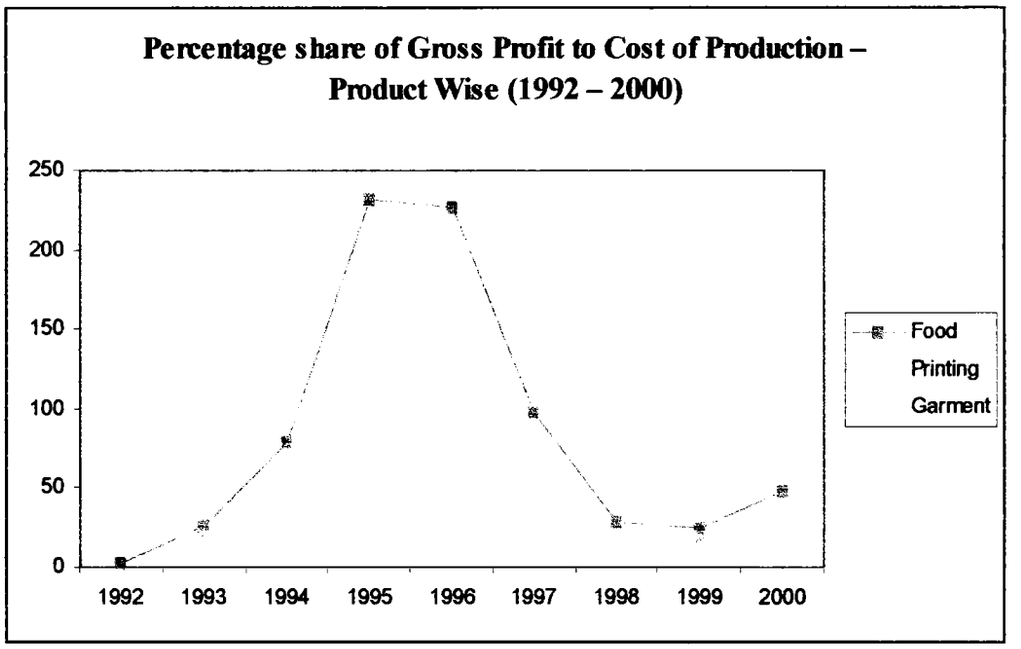
Table – III.29

Percentage share of Gross Profit to Cost of Production – Product Wise (1992 – 2000)

Year	Food	Printing	Garment
1992	2.50	17.60	21.20
1993	25.30	19.90	20.20
1994	79.40	11.60	14.50
1995	231.40	12.30	16.60
1996	226.20	9.70	12.30
1997	97.70	11.80	15.70
1998	28.70	13.30	15.10
1999	24.40	16.90	18.80
2000	47.50	12.00	26.20

Source: Survey Data

Chart – III.8



3. Gross Profit to Cost of Production – Garment Cooperatives on Activity cum Network base.

In this section the profitability of women industrial cooperatives is considered on the basis of activity and network connectivity for the period 1991 – 2000. In the garment cooperative with network (Table –III.30) the ratio of gross profit to cost of production increased from 14.5 percent to 36.6 percent and only marginally increased from 9 percent to 11.2 percent in respect of those without network. Those doing contract work with network showed a fall in profitability ratio from 90 percent to 70.1 percent where as in the case of those without network, it rose from 12.1 percent to 25 percent. On the whole the garment cooperatives with network did much better than those with out network. More or less, similar performance was presented by garment cooperatives doing both contract and manufacturing. The same is the case with cooperatives doing only manufacturing work also.

Table – III.30
Percentage of Gross Profit to Cost of Production in Garment Cooperatives – Activity cum Network basis (1991 – 2000)

Year	C		C & M		M		Garments general	
	A	B	A	B	A	B	A	B
1991	90.00	12.60	29.70	12.20	10.70	7.30	14.50	9.00
1992	87.00	11.60	32.90	25.00	24.90	10.30	24.20	14.90
1993	92.00	8.10	38.60	13.10	13.90	8.60	26.30	10.60
1994	87.00	2.90	21.80	8.30	11.30	7.50	18.90	7.90
1995	69.00	7.30	30.50	7.00	14.50	6.30	22.80	6.50
1996	83.00	22.50	18.40	2.30	15.30	5.30	17.00	4.40
1997	71.00	14.50	23.10	7.60	15.30	8.20	20.50	7.80
1998	63.00	15.00	20.80	11.70	16.30	7.30	19.30	7.40
1999	60.00	21.90	20.40	15.80	19.30	10.40	22.80	10.90
2000	70.00	25.00	68.10	19.60	19.30	10.20	36.30	11.20

Source: Survey Data

A= Garment cooperatives with network B=Garment cooperatives without network
C= Contract onlyC & M = Contract and Manufacturing M = Manufacturing only

A comparison is also made between different groups with the help of mean value of gross profit to cost of production (Table – III.31), which helps to understand the better performance of women cooperatives with network compared to those without network.

Table – III.31
Percentage Share of Gross Profit to cost of production – Group Wise Comparison (mean)

Type of society	Reference period	General	With network	Without network
1. Women Cooperatives	1981 – 2000	14.7	17.10	16.30
2. Production wise				
a) Printing	1981 – 2000	15.2	15.00	16.20
b) Garments	1981 – 2000	17.8	22.00	8.20
c) Food	1992 – 2000	56.5	N.A	N.A
3. Activity wise				
a) C	1991 – 2000	17.4	17.20	14.10
b) C & M	1991 – 2000	20	31.40	12.30
C) M	1991 – 2000	6.5	16.10	8.90

Source: Calculated from Survey Data

C, C & M, M same as table III.30

B) Percentage of Gross Profit to Capital Employed

A second measure of profitability is the profit earned per unit of capital employed, which is calculated by dividing gross profit by total capital employed in each group of cooperatives. This analysis helps to understand the firm's efficiency to generate a unit of profit from each unit of capital invested. Hence higher the ratio better the firm's efficiency.

1. Women Cooperatives – General, with network and without network.

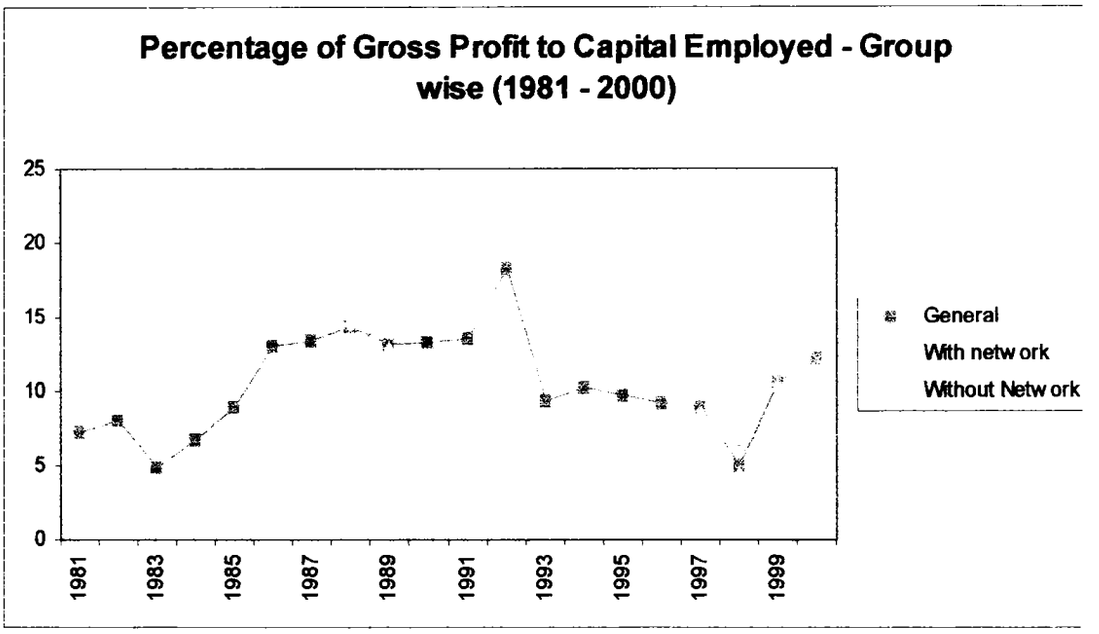
Gross profit as percentage of capital employed showed an upward trend in the cooperatives with network and a downtrend in those without network. The ratio increased from 4 percent in 1981 to 11.4 percent in 2000 in the former and fell from 15.4 percent to 12.1 percent for the same period in the latter (Table – III.32). However, it showed wide yearly fluctuations in all the groups.

Table – III.32
Gross Profit to Capital Employed – Group wise 1981 – 2000(percentage)

Year	General	With network	Without Network
1981	7.30	4.00	15.40
1982	8.00	4.90	15.60
1983	4.90	2.60	11.00
1984	6.70	5.70	8.50
1985	8.90	7.60	11.20
1986	13.00	10.20	17.90
1987	13.40	11.50	18.20
1988	14.40	14.70	14.10
1989	13.20	12.90	13.70
1990	13.30	12.40	14.60
1991	13.50	16.40	10.00
1992	18.30	22.40	13.10
1993	9.40	10.80	7.10
1994	10.30	11.40	7.80
1995	9.70	11.40	4.90
1996	9.20	10.40	4.50
1997	9.00	8.60	7.20
1998	5.00	4.50	6.30
1999	10.70	10.40	10.80
2000	12.20	11.40	12.10

Source: Survey Data

Chart – III.9



2. Gross Profit to Capital Employed – Product Wise

On product wise, the food cooperatives recorded a better performance than printing and garments. In garment cooperatives, the gross profit to capital employed declined from 25.4 percent to 11.7 percent during 1992 – 2000. But in printing cooperatives, it rose from 8.5 percent to 10.2 percent during the same period.

3. Garment Cooperatives on Activity cum Network basis

Significant difference was observed in the garment cooperatives based on activity cum network. The data show (Table – III.33) that the gross profit in the garment cooperatives without network is more than that in those with network. This is true of those garment cooperatives doing contract work and manufacturing simultaneously as it increase from 27.9 percent to 32.3 percent during 1991-2000. However in the manufacturing only units with network, the ratio declined from 11.4 percent in 1991 to 4 percent in 2000. The details regarding product wise and activity cum network is given in table – III.33.

Table - III.33

Gross Profit to Capital Employed according to Product Wise and Activity cum Network Wise (percentage) 1991 - 2000

Year	General					Cooperatives with network					Cooperatives without network				
	Garments			Printing	Food	Garments - Activity			Garments	Printing	Garments - Activity			Garments	Printing
	C	C & M	M			C	C & M	M			C	C & M	M		
1991	15.00	19.40	11.80	10.70		20.60	27.80	11.40	17.90	11.90	6.20	9.90	13.30	9.60	10.50
1992	25.40	21.00	28.00	8.50	2.50	51.80	30.10	30.30	33.20	5.20	7.10	13.40	21.80	14.00	12.00
1993	11.30	25.30	8.80	5.30	47.70	7.30	37.40	7.40	11.00	7.20	3.90	13.00	16.40	12.40	4.60
1994	12.70	19.10	9.10	5.30	90.00	10.00	30.80	6.30	12.20	6.20	1.40	14.00	21.80	15.00	5.00
1995	10.70	19.60	7.10	4.90	80.00	9.80	23.90	6.50	11.90	8.00	4.50	4.90	8.30	6.80	4.00
1996	10.30	23.80	7.30	4.00	85.00	10.50	22.40	6.40	11.60	5.00	21.90	1.20	8.70	6.10	3.60
1997	9.20	13.70	4.60	5.00	36.00	12.80	28.40	2.30	8.70	6.90	15.70	4.10	16.50	11.70	4.30
1998	6.90	17.50	4.80	1.90	18.00	6.90	18.40	2.90	6.80	1.00	3.20	2.70	15.70	7.70	5.00
1999	10.80	27.70	4.80	9.20	17.00	12.80	22.50	3.50	10.00	14.00	35.00	4.30	21.90	15.10	7.30
2000	11.70	64.20	7.20	10.20	50.00	7.10	32.30	4.10	11.30	14.00	44.30	5.70	28.30	15.80	8.80

Source: Survey Data

C, C & M and M –Same as table III.32

However, from the table III.34 the average for the period 1991-2000 shows that the profit per unit of capital invested seems to be greater in the cooperatives with network than those that without network in the case of women cooperative in general, product wise and activity cum network basis except garment cooperatives with network that do manufacturing only work. Operating profit is also often treated as a measure of firm's viability and growth because it is the net profit earned by each unit after meeting all the administrative expenses. This is because even when firms make sufficient gross profit, due to high administrative and financial inefficiency, they may incur loss. The percentage of operating profit is analysed as percentage of sales as well as return on investment.

Table – III.34
Gross Profit to Capital Employed (Comparison of Women Cooperatives – Group Wise)
(Mean 1991 – 2000)

Sl.No	Type of society	General	With network	Without network
1	Women cooperatives	11.50	10.90	10.70
2	Product wise			
	Printing	5.70	7.90	6.50
	Food (1992-2000)	47.40	N.A	N.A
	Garments	12.40	13.50	11.40
3	Activity wise			
	C	8.80	14.90	13.90
	C & M	25.10	24.90	7.30
	M	9.40	8.10	17.30

Source: Survey Data
C, C & M and M –Same as table III.33

C) Percentage of Operating Profit to Sales

1. Women cooperatives with and without net work.

During the period 1981-2000, operating profit to sales was negative in the cooperatives without network, where as in the cooperatives with network it was positive during 1991 - 2000 (Table –III.35).

2. Product wise- Operating Profit to Sales

The product wise analysis of operating profit to sales indicates that garment cooperatives were running on net profit, where as the printing cooperatives were operating under loss during 1995-2000. In the garment cooperatives, the profit increased from 3.1 percent in 1991 to 26.6 percent in 2000, where as in food cooperatives, it only marginally rose from 12.3 percent to 16 percent during the period 1992-2000. However in the case of printing cooperatives whether with or without network, there existed very little difference during 1991-2000 except one or two years. During the second half of 90s, the cooperatives without network incurred huge loss ranging from 45 percent to 99 percent. However in the cooperatives with network, though there was some loss during some of the years before 1990, it was not of any significant magnitude. (Table –III.36).

The operating profit to sales in garment cooperatives with network has been more than that in those without network. In the former group, during 1991-2000, the ratio was sluggish only in the first half of 90s, but significantly improved during the 2nd half of 90s, but in the latter they earned only smaller profits during the first 3 years and after that it began to decline and during 1995-1998, it turned out to be negative. Then again in 1999 and 2000 profit marginally recovered from loss (see table–III.36). However, the general scenario of garment cooperatives was not dismal.

3. Activity cum Network in Garment Cooperatives

The group with network doing contract work and those doing both works registered better performance in terms of operating profit to sales ratio during 1991-2000. But those engaged in manufacturing only, were operating under heavy loss except in1992. Similarly, the groups without network engaged in all the three type of activities were working under loss in almost the entire period of analysis (1991-2000). The units without network, doing contract and manufacturing activities incurred loss by more than 300 percent, (see table –III.36).

The garment cooperatives with network doing contract work have relatively better operating profit as percentage of sales. But those doing manufacturing only work have suffered heavy loss. Those having no network have poor operating profit

to sales ratio in all the three types of activities. Thus garment cooperatives doing contract work and network seem to be doing well.

Table – III.35
Percentage of Operating Profit to Sales - Group wise (1981-2000).

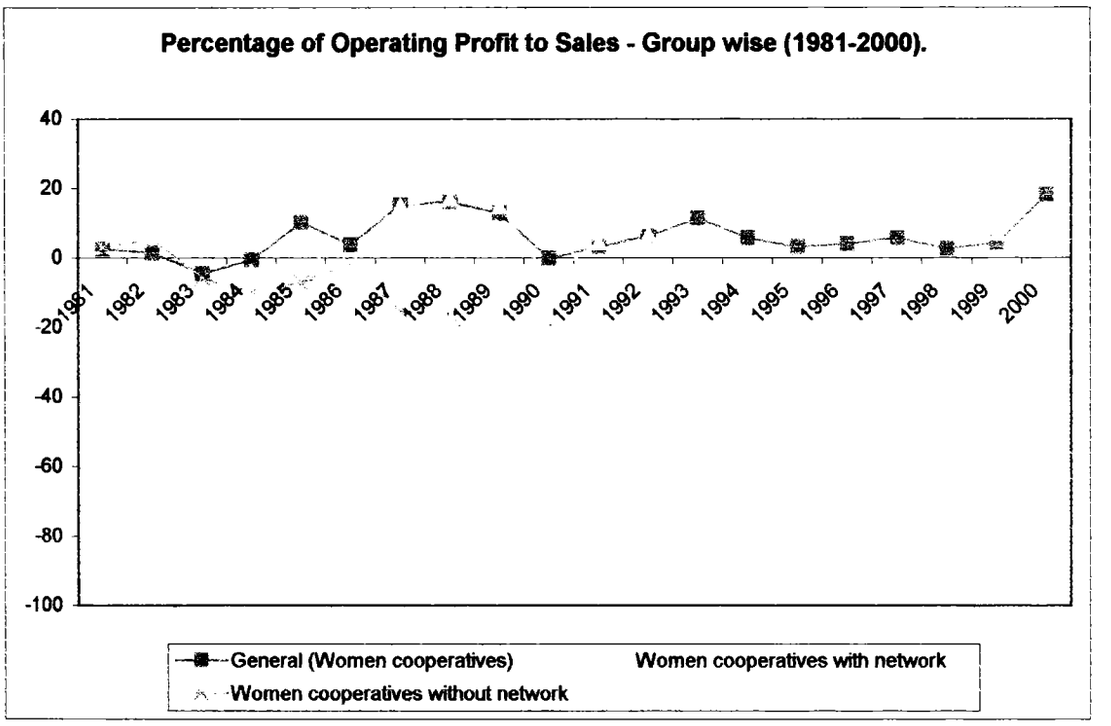
Year	General (Women cooperatives)	Women cooperatives with network	Women cooperatives without network
1981	2.50	-9.00	3.10
1982	1.30	-2.60	5.20
1983	-4.50	-8.60	-5.70
1984	-0.60	-3.60	-9.80
1985	10.20	-13.40	-7.20
1986	3.80	21.60	-1.60
1987	15.30	15.10	-15.30
1988	16.00	17.10	-16.30
1989	12.90	14.80	-32.80
1990	-0.20	-5.50	-19.20
1991	3.20	4.50	-25.70
1992	6.20	6.70	-21.40
1993	11.40	16.10	-21.60
1994	5.70	10.30	-28.20
1995	3.20	13.60	-76.60
1996	4.10	23.40	-70.90
1997	5.60	11.90	-48.90
1998	2.70	13.30	-54.00
1999	4.40	7.10	-38.30
2000	18.10	27.60	-41.80

Source : Survey Data

Table –III.37 shows that the cooperatives with network have a clear domination over those without network in all the groups except those doing manufacturing work only.

Now let us consider the return on investment, which is widely accepted as a measure of success of a firm (Prakash, 1987). Return on investment is calculated by dividing operating profit by total investment.

Chart – III.10



D) Return on Investment – Group Wise (General, Product wise, and Activity cum network basis)

1. Women Cooperatives With and Without Network.

The return on investment refers to net profit earned by the cooperatives per unit of investment. In Kannur, during 1981 – 2000, the women industrial cooperatives without network have not earned any return on investment, they were working on loss during the entire period. But those with network earned a limited profit particularly after 1985(Table III.38). After 1990, the return on investment slightly improved; but in those with no network, it declined.

Table – III.36

Percentage of Operating Profit to Sales – According to Product and Activity cum Network basis – 1991 – 2000

Year	General						With network					Without network				
	G-Activity						G					G				
	C	C & M	M	Total Garments	P	F	C	C & M	M	Total Garments	P	C	C & M	M	Total Garments	P
1991	1.30	16.60	-6.80	3.10	4.20		20.00	23.40	-10.00	3.30	-3.00	-111.00	8.50	3.30	2.50	17.00
1992	-27.20	22.30	-8.80	8.30	0.20	10.00	-18.20	24.80	9.60	8.00	-10.00	-188.00	18.50	6.70	8.90	15.00
1993	32.40	29.10	-23.90	9.80	19.10	12.30	39.30	41.50	-42.00	12.90	14.60	-376.00	10.00	-1.10	4.20	24.00
1994	28.40	22.50	-17.00	4.00	11.50	41.00	31.50	34.50	-41.00	6.80	14.20	-248.00	9.80	-2.70	0.70	8.80
1995	24.40	31.70	-31.70	5.30	-38.00	28.10	27.10	50.00	-42.00	13.80	1.10	-248.00	-6.30	-16.50	-15.70	-78.80
1996	65.70	19.40	-12.80	8.50	-51.00	68.20	13.40	32.90	-10.00	28.10	-4.70	-53.00	-31.00	-15.00	-22.00	-94.00
1997	24.70	21.60	-15.80	7.90	-45.40	68.60	26.80	25.10	-31.00	12.00	10.20	-43.00	-9.80	-0.91	-4.80	-99.00
1998	28.70	28.20	-17.20	8.10	-46.00	8.50	31.30	31.70	-26.00	14.10	-3.70	-78.00	-12.00	-7.00	-10.50	-84.00
1999	23.60	28.90	-10.20	5.50	-8.80	1.30	35.30	-2.70	-27.00	6.10	32.60	-27.00	5.20	2.70	1.10	-47.00
2000	29.10	68.90	-10.80	26.60	-44.70	16.00	30.80	73.30	-23.00	33.60	-43.50	-68.00	13.30	1.90	1.50	-45.50

Source: Survey Data

G = Garments P = Printing F = Food C = Contract work

C & M = Contract and manufacturing M = Manufacturing

Table – III.37

Operating Profit to Sales – Group wise (1991 – 2000) (mean value)

Sl.No	Type of Society	General	With network	Without Network
1	Women cooperatives	6.10	7.10	-22.70
2	Product wise			
	Printing	-19.90	-0.70	-38.40
	Food	19.00		
	Garment	8.70	13.90	-3.40
3	Activity wise			
	C	24.10	23.70	-144.80
	C & M	27.00	34.00	1.70
	M	-12.50	-20.00	2.90

Source: Survey Data

C,C&M and M same as in Table – III.36

2. Product Wise

While considering product wise, printing cooperatives have faced badly. The computerization of client units (where the jobs are obtained by printing cooperatives) has reduced the total volume of job work. At the same time administrative expenses did not decrease. Hence unit cost increased in the printing cooperatives, which affected the gross and consequently net profit. In the printing cooperatives, the return on investment declined from 0.6 percent in 1991 to (–) 1.2 percent in 2000. No significant difference was observed in the printing cooperatives with and without network. On the contrary the return on investment has varied between 1.7 percent to 6.2 percent in garment cooperatives and (–) 19.5 percent and 20.7 percent in food cooperatives (the data is given in table –III.39). With regards to the garment cooperatives comparing with and without network, it was observed that the garment cooperatives with network performed better than those without network. During the period 1991 – 2000 the return on investment increased from 1.9 percent to 6.8 percent in units with network whereas it declined from 1.2 percent to 0.8 percent in the case of those without any network. In addition the latter incurred losses during 1995 – 1998.

3. Activity cum Network

Comparing the three activities, the garment cooperatives with network doing only contract work and those doing manufacturing and contract work have obtained normal return, where as in the case of units engaged in manufacturing only, the

performance has been very poor. It operated under negative return during the entire period. On the contrary, the performance of those, which do not have any network, was dismal when compared to those with network. In all the three activity groups, without network the return on investment declined sharply (given in Table –III.39)

Table – III.38

Return on Investment – Group wise (percentage)(1981 – 2000)

Year	Women cooperatives	With network	Without network
1981	0.90	-1.90	1.90
1982	0.40	-0.60	3.10
1983	-1.30	-1.60	-3.50
1984	-0.10	-0.50	-3.70
1985	2.60	1.80	-3.60
1986	4.90	2.90	-5.60
1987	4.40	2.60	-7.90
1988	5.00	4.20	-7.00
1989	3.50	3.60	-10.20
1990	-0.12	-2.60	-6.10
1991	1.20	2.30	-10.60
1992	2.80	3.20	-8.00
1993	2.60	3.50	-4.50
1994	1.90	3.10	-11.40
1995	0.70	3.40	-11.20
1996	0.70	4.10	-12.90
1997	1.40	3.10	-12.00
1998	0.40	1.60	-11.00
1999	2.40	4.30	-11.80
2000	4.70	5.70	-13.80

Source: Survey Data

Chart – III.11

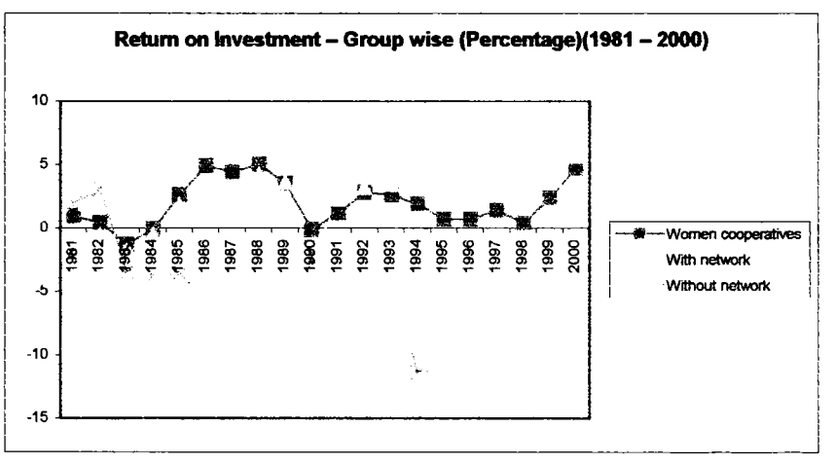


Table – III.39

Return on Investment according to Product and Activity cum Network (1991 – 2000) (Percentage)

Year	General						With network					Without network				
	G-Activity						G – Activity					G- Activity				
	C	C & M	M	Total Garments	P	F	C	C & M	M	Total Garments	P	C	C & M	M	Total Garments	P
1991	0.40	9.30	-4.20	1.70	0.60		8.10	13.50	-6.40	1.90	-0.80	-7.30	4.60	2.10	1.20	1.50
1992	-19.60	11.30	6.50	5.40	0.10	-19.50	-20.80	13.50	6.80	5.60	-1.80	-12.40	9.00	6.90	5.10	2.00
1993	4.60	15.80	-8.20	2.80	1.80	18.40	5.80	23.50	-9.90	2.90	2.70	-15.40	8.00	-1.10	2.30	1.50
1994	5.90	16.30	-12.80	2.00	1.20	54.20	7.00	19.40	-14.60	2.10	2.70	-12.60	8.00	-6.50	0.90	0.60
1995	5.80	11.30	-9.10	1.50	-3.30	23.50	6.60	15.40	-10.40	3.60	0.20	-14.40	-2.20	-6.20	-5.30	-4.30
1996	6.70	8.40	-4.70	2.00	-4.30	43.50	7.70	12.80	-2.90	5.20	-0.60	-11.20	-8.60	-7.00	-8.70	-5.80
1997	9.60	13.30	-3.20	2.40	-4.50	27.10	10.50	16.90	-3.60	3.20	1.90	-18.40	-2.20	-0.60	-2.40	-6.90
1998	5.10	8.20	-3.60	1.70	-1.70	4.90	5.80	11.80	-3.30	2.70	-0.80	-2.50	-1.00	-5.00	-3.50	-6.90
1999	10.70	5.70	-2.60	3.40	-1.60	1.50	11.20	7.30	-3.30	3.80	10.30	-8.80	0.50	2.80	0.60	-5.90
2000	5.30	21.50	-2.70	6.20	-9.20	30.70	5.60	25.40	-3.30	6.80	-14.70	-2.70	1.70	1.90	0.80	-7.30

Source : Survey Data

G = Garment Cooperatives C = Contract   C & M = Contract and Manufacturing

M = manufacturing   P = Printing Cooperatives   F = Food cooperatives

From the above discussion, it follows that the garment cooperatives with network doing contract work either partly or wholly have the possibility of survival in Kannur district than others. From table – III.40 it may be gauged that except in the case of printing and garments doing manufacturing work, the performance was not so poor. Thus women cooperatives in Kannur generally operate smoothly with the help of network. However, in most of the cases, the cooperatives were unable to utilize their full capacity due to several bottlenecks, such as lack of working capital, marketing problem, non-availability of inputs etc. It is these issue that are discussed in the following subsection.

Table III.40
Return on Investment – Group wise (1991 – 2000) (mean)

Sl.No.	Type of Society	General	With network	Without network
1	Women Cooperatives (1981-2000)	2.70	2.10	-7.50
2	Product wise			
	Food (1992-2000)	20.50		
	Printing	-2.10	-0.10	-3.10
	Garments	2.90	3.80	-0.90
3	Activity wise			
	C	3.50	4.80	-10.60
	C & M	12.10	16.00	1.90
	M	-3.30	-5.10	-0.80

Source : Survey Data
C, C & M and M same as table III.39

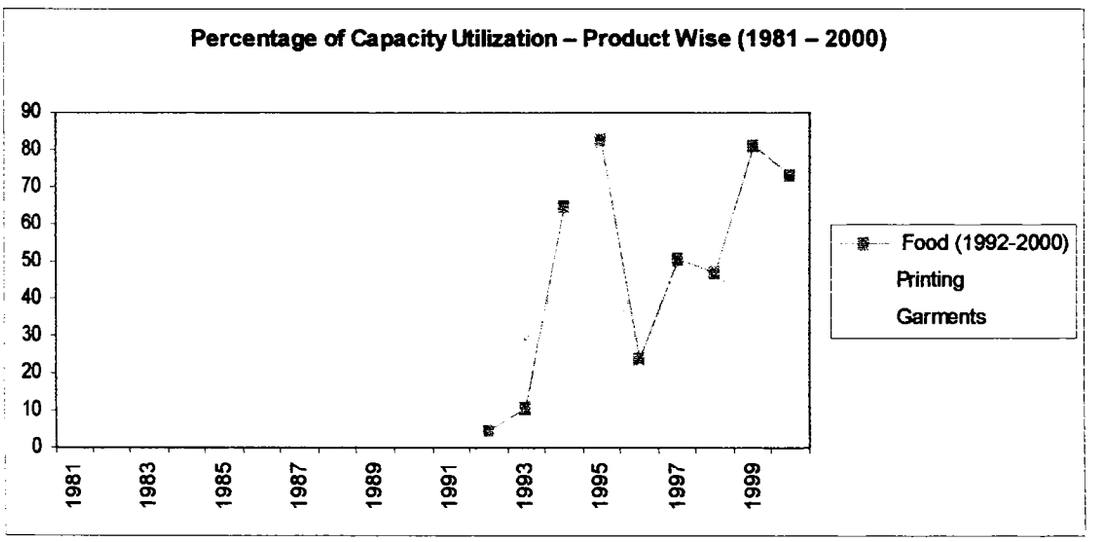
E) Capacity Utilization

The concept of capacity utilization can take two forms such as firm's capacity and machine capacity. The firm's capacity depends on the number of machines, labors and other equipments at their disposal. The machine capacity utilization depends not only on material but also on the skill, talent, time spent, motivation etc. Usually the firm's capacity is more than the machine capacity.

In this study, the capacity utilization of the cooperatives is taken as the machine capacity. The data has been collected from the project proposal of various cooperatives submitted to district industries center, Kannur at the time of the commencement of operation. The capacity utilization is calculated by dividing the

output with installed capacity of each cooperative. The data on capacity utilization of the three products (Table – III.41) showed that food cooperatives have utilized their capacity more than the other two product cooperatives. In the garment cooperatives, after 1990, the percentage of capacity utilization significantly improved, but it declined after 2000. On an average, the data show that (Table – III.42) in the garment cooperatives capacity utilization increased from 21.5 to 40.7 percent during 1991 – 2000.

Chart – III.12



On the other hand in printing cooperatives, before 1991, the utilization was 45.7 percent. But after 1991, it declined to 29.1 percent. However, it is observed that no group has been able to utilize the installed capacity even by more than 50 percent on an average. In other words, there is severe under utilization of capacity in the women cooperatives in Kannur.

Since capacity utilization is always calculated product wise, no analysis has been done, either on the basis of activity or networking. However the extent of capacity utilization is closely related to the skill of the workers as well as the time spent on work by them.

The skill for doing any job depends on the quality and the duration of training either on the job or prior to entry. The majority of the workers in the women

cooperatives in Kannur were trained before they joined the society at least for six months.

Table – III.41
Percentage of Capacity Utilization – Product Wise (1981 – 2000)

Year	Products		
	Food (1992-2000)	Printing	Garments
1981		9.00	21.40
1982		30.40	25.80
1983		53.50	22.70
1984		27.80	18.00
1985		59.70	16.60
1986		40.20	18.60
1987		52.20	18.20
1988		63.70	20.70
1989		59.90	20.90
1990		60.20	31.20
1991		31.80	31.40
1992	5.00	40.50	35.50
1993	10.70	42.70	29.10
1994	64.70	29.80	46.10
1995	82.40	21.60	21.40
1996	23.60	21.20	47.30
1997	50.50	23.60	42.30
1998	46.80	24.50	38.70
1999	80.90	28.20	66.60
2000	73.20	27.50	48.70

Source: Survey Data

Table –III.42
Capacity Utilization – Product Wise (Average) (1981 – 2000)

Type of cooperatives – Product wise	Capacity Utilization (Percent)		
	1981-1990	1991-2000	1981-2000
Food	NA	48.70	48.70
Printing	45.70	29.10	37.40
Garments	21.50	40.70	31.10

Source: Survey Data

The degree of skill required for industrial work in the formal sector of the economy varies considerably, but in general, access to a trade is not tied to formal education. The survey data show that 76 percent of the units follows job rotation and

multi skill. The practice of job rotation enables the units to avoid dependency on any single worker specialized on any stage of process and hence, in their absence, the firm could manage with the rest of the workers. However, the survey indicates that the duration of training to impart necessary skills to the women working in cooperative societies is inadequate to cope with the changing fashion and taste of the consumers.

The analysis so far done on the basis of some of the efficiency indicators brought out the difference in the growth and performance between groups, products and activity on the basis of the presence and absence of networking. Obviously, most of the indicators favoured the units with network rather than those without network. The performance level of the profitability of women cooperatives is given in table – III.43. We calculated the scores of performance in the cooperatives with network and without network irrespective of the type of activity or product. The total scores under "good" performance was 21; out of this 81 percent was scored by cooperatives with network. Under "poor" performance, 89.5 percent was contributed by cooperatives without network and 60 percent of the "average" performance is due to cooperatives without network. Thus from the analysis of the variables discussed under profitability cooperatives with network is positively differentiated from those without network. The scores of profitability variables are given in Table – III.44.

In this chapter we have discussed the performance indicators such as value addition per worker, percentage of gross profit to cost of production, operating profit to sales, gross and net profit to capital employed and capacity utilization. We have seen that there exists difference in performance and growth of women industrial cooperatives on net work, product and activity cum net work basis. In the network structure, the nature of relationship is a major determinant of control (Knoke, 1990). Network can be of different types such as political network, social network, economic network or business network. However all these network have significant relation with personal contacts. The personal contacts are sources of information and influence either directly or indirectly on the finances required to sustain the growth of women cooperatives and consequent advance on employment and wage level in an enterprise. The financial features of women cooperatives and the status of employment and wage levels are discussed in the next chapter.

Table – III.43

Performance Level According to Profitability Criterion – Group Wise

Sl. No	Variables	General						Garments																		Garments Total						Printing					
		With network			Without network			With network									Without network									With network			Without network			With network			Without network		
								C			C & M			M			C			C & M			M													
		G	A	P	G	A	P	G	A	P	G	A	P	G	A	P	G	A	P	G	A	P	G	A	P	G	A	P	G	A	P	G	A	P	G	A	P
1	Gross profit to cost of production	X				X		X			X			X					X			X			X	X				X		X		X			
2	Gross profit to capital employed		X			X		X			X					X	X					X	X			X			X			X			X	
3	Operating profit to sales	X					X	X			X					X			X			X			X	X					X			X			X
4	Return on Investment	X					X	X			X					X			X			X			X	X					X			X			X
5	Total	3	1	0	0	2	2	4	0	0	4	0	0	1	0	3	1	0	3	0	0	4	1	0	3	4	0	0	1	0	3	1	1	2	1	1	2

Source: Survey Data

G= Good A = Average P = Poor

C= Contract C & M Contract and Manufacturing M= Manufacturing

Table – III.44

Distribution of Seores according to Level of Performance.

Level of Performance	Cooperatives with network	Cooperatives without network	Total
Good	17(81)	4(19)	21(100)
Average	2(40)	3(60)	5(100)
Poor	2(10.5)	17(89.5)	19(100)
Total	21	24	45

(Figures in bracket shows the percentage to row total)

Source: Worked out from Table – III.43

Chapter – IV

Financial Features, Employment and Wage Levels of Women Industrial Cooperative Societies in Kannur

For any business, finance is the lifeblood. The financial base of cooperative societies consists of share capital of members and the financial stake by the government. In Kannur a majority of the women cooperatives are working at moderate level only. The shortage of working capital is reported to be the major problem in Kannur district. About 57 percent of the units cited finance as their prime problem. The stability of any enterprise depends on the financial features particularly the liquidity and gearing rate. It was already noted that women cooperatives in Kannur function in dynamic ways. The variables analyzed in the beginning of this chapter brought out enough supporting hints to substantiate the inter and intra group differences in performance and growth based on network. Therefore it is instructive to have a discussion on the financial features of women cooperatives in Kannur district in order to address the financial status in relation to the volume of working capital as well as the liquidity and gearing ratio, which has a direct influence on its structure and growth. Let us begin with the financial features, which indicate the financial strength of a unit against the liabilities and the credibility of the investors.

Financial Features

In the women industrial cooperatives the financial structure is examined on the basis of ratio analysis viz., current ratio, acid test ratio or quick ratio and debt equity ratio. The current ratio is calculated dividing the current assets by current liabilities and the quick ratio or acid test ratio is obtained by dividing the quick assets by current liabilities. Both ratios indicate the financial position of the units to meet their short-term financial obligation. If the current ratio appears is 2:1, usually the unit is considered to be financially safe in the short period. This indicates that the firms have two times current assets over the current liabilities. Similarly, if the quick

ratio is 1:1, it means that the firm could meet the current liabilities fully by drawing the quick assets. On the other hand, the debt equity ratio, which is obtained by dividing the net worth by the long term loans, indicates how thick the owner's cushion is, for the protection of creditors in the event of financial erosion in the long term. Though there is no rule of thumb, a ratio more than unity may be interpreted to mean that, capital structure is low geared. A ratio of 1:1 may be treated as medium geared and a ratio less than one, points to a high-geared capital structure (Prakash, 1987). In other words current ratio and quick ratios are liquidity ratios so that the assets can be easily converted into cash, where as the debt equity ratio is considered as the long-term safety to the investors. This ratio is also called the coverage ratio with its focus on solvency as a security for the repayment of long-term loans. These ratios are relevant not only in the context of private enterprises but also in the financial analysis of collective enterprises. These ratios clearly pinpoint the financial position, its liquidity and solvency and could work as the financial monitor of cooperatives too. These ratios are also used to analyse the inter unit differences so as to enable us to make a comparison between groups. This would enable us to understand the changes that took place over the period with regards to the financial situation of different cooperatives, which would provide valuable insights into the financial management. Just like the other variables, the financial features are also discussed under three groups such as general, product wise and activity cum network basis.

First we shall discuss the current ratio of different groups of women industrial cooperatives mentioned earlier. This would enable to under stand the financial structure particularly the status of short period assets over liabilities.

Current Ratio

As the garment cooperatives with network and food cooperatives were established after 1990, the comparison of financial structures (current ratio, quick ratio and debt equity ratio) of all the groups is taken for the period 1991-2000.

Chart – IV.1

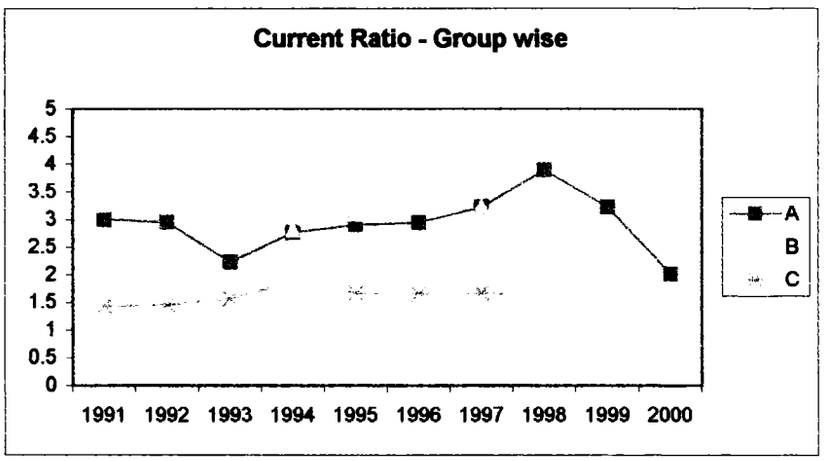


Chart – IV.2

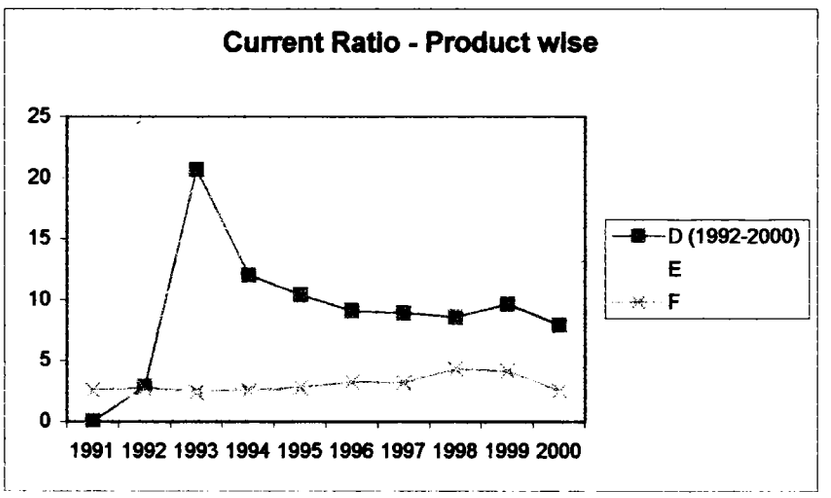


Table IV.1

A Comparison of Current Ratio-Group Wise (1991-2000)

Year	General			Product wise			Activity cum network							
							Garments with network				Garments without network			
	A	B	C	D (1992-2000)	E	F	G	H	I	J	K	L	M	N
1991	3.00	3.27	1.43	0.00	2.11	2.61	2.46	1.97	2.69	3.19	2.93	0.72	1.98	9.77
1992	2.95	3.39	1.46	2.87	2.14	2.77	2.75	4.02	2.50	3.18	2.82	0.54	2.18	6.67
1993	2.23	2.75	1.57	20.63	2.33	2.42	2.24	6.36	2.62	1.60	2.96	0.61	2.55	5.95
1994	2.76	2.82	1.87	12.01	2.97	2.53	2.35	5.03	3.08	1.73	3.05	0.62	3.40	4.88
1995	2.91	3.11	1.67	10.39	2.29	2.81	2.78	15.47	3.25	1.90	2.89	0.65	2.39	4.37
1996	2.94	3.35	1.66	9.07	1.54	3.27	3.26	21.59	3.23	2.16	3.29	0.69	2.19	4.77
1997	3.23	3.25	1.67	8.91	1.46	3.23	3.22	15.41	3.03	1.75	3.28	0.61	2.53	4.76
1998	3.90	4.65	1.62	8.55	1.51	4.33	4.75	22.91	2.89	2.93	3.15	0.57	3.74	3.99
1999	3.23	4.38	1.60	9.62	1.52	4.15	4.48	29.56	3.40	2.64	3.08	0.48	3.43	4.00
2000	2.01	2.41	1.44	7.93	1.26	2.52	2.43	3.08	3.14	2.16	2.80	0.43	2.96	3.61
Average	2.92	3.34	1.60	9.00	1.91	3.06	3.07	12.54	2.98	2.32	3.03	0.59	2.74	5.28

Source : Calculated from Audit Notes

A= Women cooperatives general *B= Women cooperatives with network*

C= Women cooperatives without network *D= Food cooperatives*

E= Printing cooperatives *F= Garment cooperatives*

G= Garments with network *H= Garments with network – contract work*

I= Garments with network – contract and manufacturing work

J= Garments with network – manufacturing work *K= Garments without network*

L= Garments without network – contract work *M= Garments without network – contract and manufacturing work*

N= Garments without network – manufacturing work

Chart – IV.3

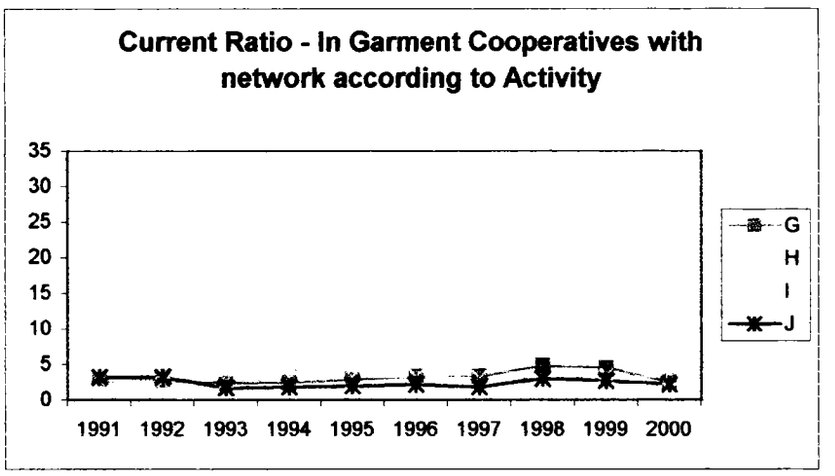
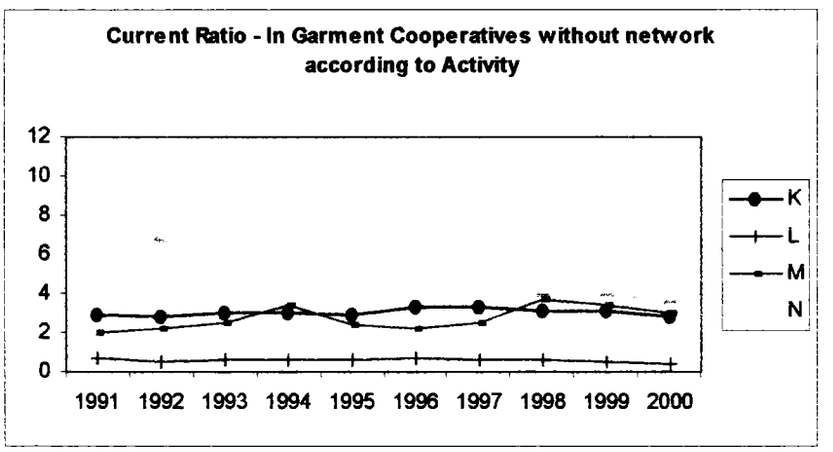


Chart – IV.4



From the Table – IV.1, it is observed that generally, the women cooperatives have enough current assets over current liabilities except one or two groups of those without network. However in most of the groups, the current ratio has declined over the period. But in food cooperatives and garment cooperatives with network that do contract work, the current ratio has increased than others. This indicates the status of short period financial liquidity of those cooperatives. Comparing the garment cooperatives on the basis of activity cum network, it is seen that those with network that do contract work only and contract and manufacturing work simultaneously have higher ratio than that of without network doing the same type of activities. Hence it follows that garment cooperatives with network are in a better position in relation to

current ratio than those that without network. Among the products food cooperatives have a higher ratio than printing or garments.

Quick Ratio

Another ratio to examine the short-term financial structure is quick ratio. This is another indictor that measures the extent of quick assets over current liabilities. This means how much quick asset is available to cover the current liabilities in the shortest time. The quick assets include cash at Bank and in hand. The details are given in table IV.2. Just like the current ratio, quick ratio is also examined for a period of 10 years (1991-2000) in the women cooperatives classified as general, product and activity cum network wise. Looking at the quick ratio, it is seen that the status of quick assets over current liabilities are dismal in majority of the cooperatives. By the year 2000, the quick ratio of cooperatives without network is seen to be 0.54. This indicates that only 54 percent of the current liabilities are covered by quick assets. But in the cooperatives with network, current liabilities are almost covered with quick assets. Among the products food cooperatives have safe financial liquidity through out the period. In the garment cooperatives on activity cum network, the units with network have better ratio than that of the units without network. Based on activities, all the sub groups are seen to be limping for lack of quick assets.

Chart – IV.5

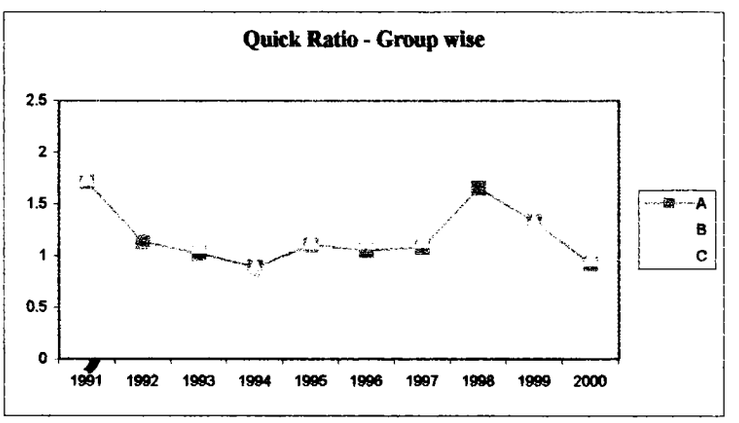


Table IV.2

A Comparison of Quick Ratio - Group wise (1991 –2000)

Year	General			Product wise			Activity cum network							
							Garments with network				Garments without network			
	A	B	C	D(1992-2000)	E	F	G	H	I	J	K	L	M	N
1991	1.71	1.75	0.49	0.00	0.91	1.07	1.1	0.71	1.09	1.63	1	0.6	0.74	2.44
1992	1.13	1.64	0.45	2.53	0.91	1.01	1.07	0.83	0.94	1.7	0.9	0.4	0.7	1.81
1993	1.02	1.10	0.55	20.40	0.93	0.76	0.76	1.48	0.81	0.8	0.77	0.45	0.7	1.2
1994	0.89	0.90	0.81	11.77	1.10	0.71	0.65	0.28	0.72	0.77	0.91	0.51	1.1	1.14
1995	1.10	1.14	0.73	9.68	0.83	0.98	0.99	3.07	1.06	0.92	0.96	0.52	0.93	1.22
1996	1.05	1.14	0.69	6.66	0.57	1.10	1.04	5.81	0.84	0.88	1.25	0.54	0.59	1.79
1997	1.08	1.15	0.62	6.09	0.53	1.09	1.09	5.44	0.85	0.66	1.09	0.46	0.83	1.47
1998	1.65	2.18	0.64	4.80	0.53	1.95	2.24	11.51	0.65	1.73	1.12	0.44	1.33	1.33
1999	1.33	1.33	0.62	3.54	0.51	1.27	1.33	6.89	0.47	1.51	1.08	0.35	1.32	1.3
2000	0.92	0.98	0.54	2.50	0.42	0.99	1	0.56	1.01	1.23	0.97	0.26	1.2	1.16
Average	1.19	1.33	0.61	6.80	0.72	1.09	1.13	3.66	0.84	1.18	1.01	0.45	0.94	1.49

Source: same as Table – IV.1

Letters 'A' to 'N' same as in Table – IV.1

Chart – IV.6

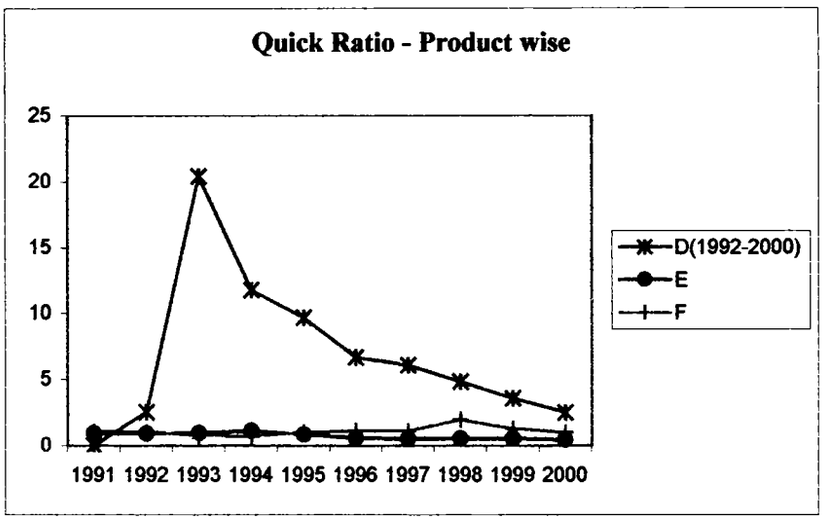


Chart – IV.7

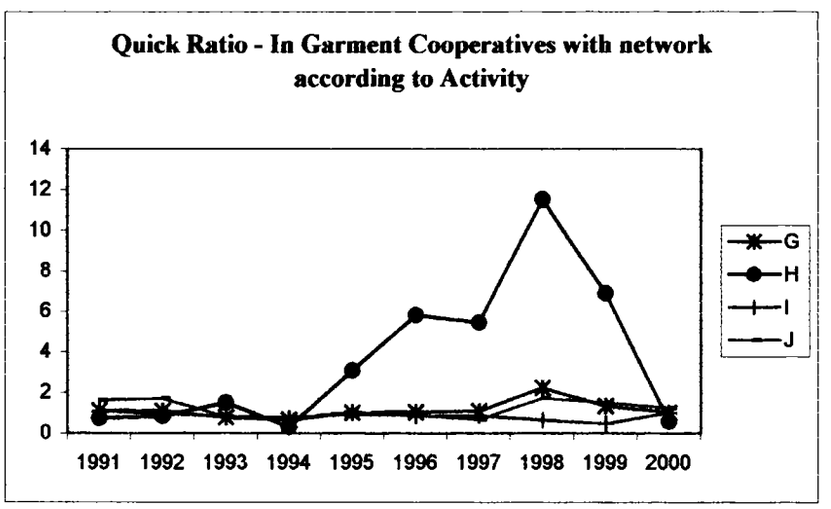
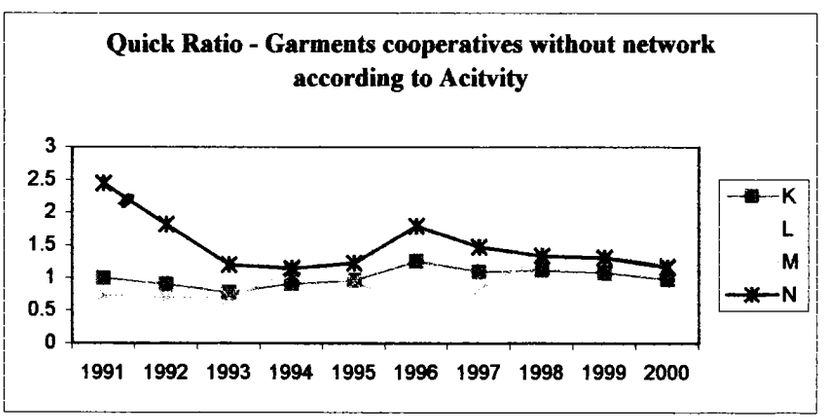


Chart – IV.8



Debt Equity Ratio

The financial solvency and coverage of long-term loans by net worth or equity of women cooperatives is analysed with the help of debt-equity ratio. The equity or net worth of any enterprise depends on its volume of share capital, working capital, and profits. Hence the size of ratio depends on both the volume of net worth and long-term loans. The debt equity ratio also indicates the financial credibility of investors in the women cooperatives. The details are given in the table IV.3

Chart – IV.9

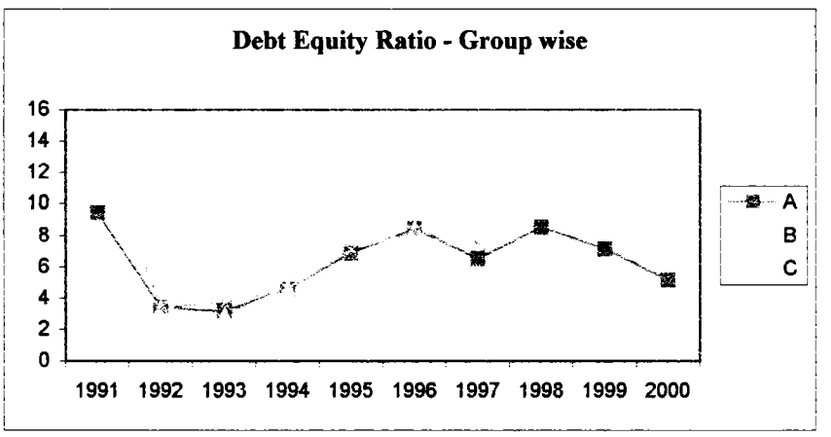


Chart – IV.10

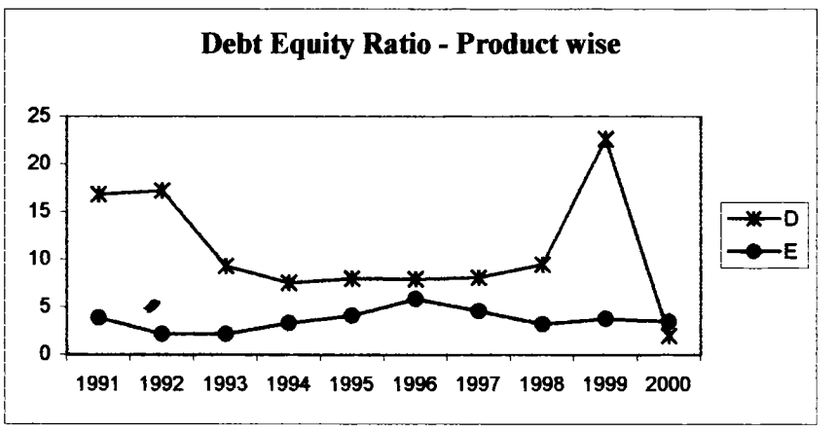


Table IV.3

Comparison of Debt Equity Ratio-Group Wise(1991-2000)

Year	General			Product wise		Activity cum network							
						Garments with network				Garments without network			
	A	B	C	D	E	F	G	H	I	J	K	L	M
1991	9.43	3.53	13.91	16.77	3.81	2.92	1.03	5.80	1.30	2.90	0.84	5.00	7.20
1992	3.36	3.35	3.38	17.18	2.15	1.60	1.03	1.90	1.35	1.80	0.42	5.00	0.97
1993	3.16	2.88	3.68	9.27	2.16	2.29	3.15	1.20	1.06	1.90	1.20	4.90	0.99
1994	4.55	4.60	4.51	7.49	3.30	3.00	4.83	1.50	1.99	2.30	2.50	5.40	1.34
1995	6.86	5.80	7.07	7.95	4.05	4.00	4.65	1.70	1.65	3.40	2.30	18.50	2.40
1996	8.42	8.44	8.21	7.87	5.80	2.07	2.20	1.80	2.18	4.50	6.80	17.60	3.30
1997	6.48	5.50	7.51	8.02	4.56	3.01	1.70	1.80	4.26	4.40	5.90	4.40	3.20
1998	8.51	3.57	11.75	9.42	3.19	1.50	1.20	1.80	1.13	4.60	8.30	4.70	3.30
1999	7.11	4.49	11.99	22.59	3.72	1.80	1.40	2.20	1.47	4.50	8.00	4.30	3.40
2000	5.13	2.84	12.33	1.96	3.43	1.20	1.60	2.40	1.20	4.70	10.90	4.10	3.50
Average	6.30	4.50	8.43	10.85	3.62	2.34	2.28	2.21	1.76	3.50	4.72	7.39	2.96

Source: Same as Table – IV.1

A = Women cooperatives general B= Women cooperatives with network C= Women cooperatives without network

D= Printing cooperatives E= Garment cooperatives F= Garments with network

G= Garments with network – contract work H= Garments with network – contract and manufacturing work

I= Garments with network – manufacturing work J= Garments without network K= Garments without network – contract work

L= Garments without network – contract and manufacturing work M= Garments without network – manufacturing work

Chart – IV.11

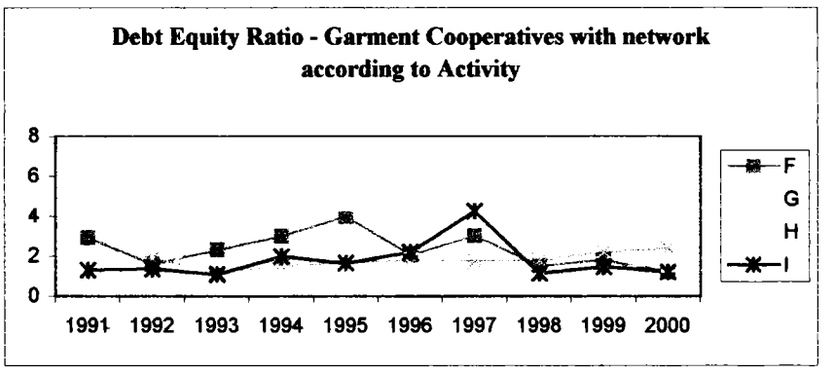
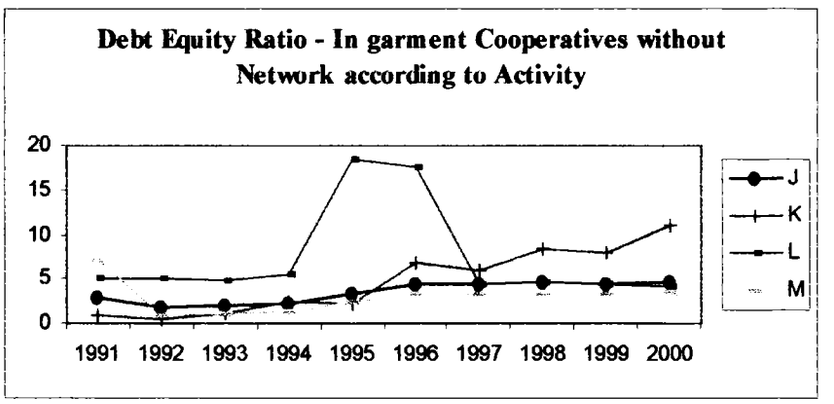


Chart –IV.12



Generally it is seen that the financial position is satisfactory although difference exists in some of the groups. The data indicate (Table IV.3) that in the cooperatives with network, the debt equity ratio is lower than that of without network. This is not on account of poor net worth but due to its huge long-term loans. Hence this cannot be treated as an indicator of financial credibility of the units without network without considering its status of net worth. A comparison of working capital, share capital, reserves, net profit and long term loans would enable us to understand the difference in the financial base of cooperatives with network and without network. (Table – IV.4 and Table – IV.5)

Table –IV.4
Comparison of Variables- Group Wise

Year	Working Capital		Share Capital		Long Term Loan	
	A	B	A	B	A	B
1991	11964.78	339.56	101327.50	52614.67	33611.64	7998.25
1992	8113.83	1370.51	109431.88	69563.00	36080.69	37812.92
1993	7878.82	5183.07	98345.00	62641.50	47127.28	31719.64
1994	5997.98	2663.80	133583.89	78501.82	38222.22	27664.59
1995	8384.51	2918.77	154100.56	96951.44	31116.22	18658.00
1996	7562.09	3836.71	139481.43	112784.40	22320.38	17470.00
1997	7507.03	3216.66	162755.91	115280.28	43164.23	18553.84
1998	6393.93	3020.81	169183.18	199076.40	41044.09	19507.80
1999	6011.84	2709.26	197919.55	196819.46	58172.95	19280.81
2000	5357.23	2323.49	207746.82	196514.85	81544.77	19037.35

Source: Audit Reports of Women Cooperatives
A = Cooperatives with net work B = Cooperatives without net work

Table – IV.5
Percentage Share of the Components of Net worth – Group wise

Year	Share Capital			Reserves			Net Profit		
	A	B	C	A	B	C	A	B	C
1991	70.43	85.39	47.31	65.11	42.73	69.19	6.53	12.59	8.74
1992	76.67	90.59	54.46	62.87	43.79	63.73	5.84	10.13	8.68
1993	67.49	72.38	53.67	53.94	40.48	62.84	11.77	19.04	8.82
1994	71.02	75.90	62.95	49.60	37.38	50.89	4.68	7.28	7.43
1995	80.64	85.20	73.54	43.42	36.60	38.69	5.08	10.19	5.08
1996	75.56	74.08	78.67	40.26	33.75	37.24	11.04	18.93	3.35
1997	74.90	68.53	82.77	37.77	31.03	36.11	14.28	22.50	6.54
1998	101.12	115.39	86.85	40.33	54.02	23.44	8.23	26.69	2.79
1999	84.23	75.83	85.14	38.32	48.96	24.13	8.17	21.38	4.58
2000	89.55	89.64	83.72	31.83	36.01	24.86	9.07	24.56	4.11

Source: Audit Reports of Women Cooperatives
A = Cooperatives with net work B = Cooperatives without net work

The data given in the table above clearly show the differences in the three variables between the two groups. The loans availed by the cooperatives without network has been comparatively smaller than that of the other group. Usually, the loans are used to invest in fixed assets particularly in machines and other equipments. Through linkage with politicians and other influential people in the society, the cooperatives with network have been able to obtain bank finance comparatively much

easier. More over, the management of the former is seen to be relatively more active in taking decisions regarding resource mobilization as well as its utilization. This can be attributed to the presence of homogeneity and cohesiveness among the workers, members and management, their mutual trust and social embedded ness (social capital) in those units, which have network. The share of net profit, reserves and share capital of net worth are seem to be greater in the cooperative with network than that of without network. This phenomenon further highlights the relevance of network in the business of women cooperatives in Kannur.

The product wise analysis of debt equity ratio indicates that printing cooperatives are far behind the garments as it reduced to a ratio of 1.96 in 2000 from 16.77 in 1991.The data (Table – IV.3) also indicate the coverage with net worth on borrowings declined over the period. This is due to the more proportionate borrowings over net worth in both types of cooperatives. Here also the share capital constitutes the major component in the net worth of the cooperatives, but it varies in its respective shares. (Garment cooperatives have 85.9 percent in 2000 and the printing units 25.4 percent). On the contrary, the reserves kept in the garments are less than that in printing. Similarly, the long-term loans in printing cooperatives constitute more than 50 percent of its net worth, while in garments; it is only 29.1 percent. This also has influenced the debt-equity ratio of printing and garment cooperatives.

The main reason for this difference was on account of the modernization of printing cooperatives by the installation of the off set printers in order to compete with the private printing presses in terms of speed or quantity of work as well as the quality of service. They have modernized the plant with the help of bank finance, but no such attempt has been made in the garment cooperatives. The details of net worth of cooperatives (product wise) are given in Table –IV.6. Based on activity cum network the garment cooperatives with network falls behind those with out network in all three type of activities. Within the group (garments with net work), the units that do contract and manufacturing work is seen to have a higher ratio than that of other activities.

Table –IV.6
Components of Net Worth- Product Wise (percentage share)

Year	Share Capital			Reserves			Net Profit			Borrowings		
	A	B	C	A	B	C	A	B	C	A	B	C
1991	0.00	8.58	74.79	0.00	116.74	52.95	0.00	8.58	13.93	0.00	5.96	26.28
1992	100.00	6.96	80.08	0.00	129.99	55.36	0.00	6.96	13.68	0.00	5.82	46.47
1993	97.76	6.79	65.54	4.90	129.83	48.80	0.00	6.79	21.48	0.00	10.78	46.29
1994	95.98	8.00	70.95	6.82	139.42	41.68	0.00	8.00	9.61	0.00	13.35	30.28
1995	93.91	16.08	77.72	8.71	138.08	42.84	0.00	16.08	10.48	0.00	12.58	24.66
1996	92.60	10.06	72.71	9.92	176.24	36.32	0.00	10.06	16.76	0.00	12.71	17.23
1997	83.97	33.47	69.47	12.05	140.77	34.05	7.31	33.47	19.85	0.00	12.47	21.95
1998	83.82	20.16	105.59	12.20	148.61	51.29	6.40	20.16	21.22	0.00	10.62	31.36
1999	77.96	32.38	76.55	13.62	87.77	50.63	8.42	32.38	17.60	0.00	4.43	26.86
2000	69.36	25.39	88.98	13.01	96.51	38.19	17.63	25.39	20.78	0.00	50.96	29.13

Source: Worked out from Audit Reports
A= Food Cooperatives B= Printing Cooperatives C= Garment Cooperative

On the other hand, in units without linkage an increasing trend in all the sub groups is seen compared to those with network. This is particularly due to the influence of long-term loans in the units with linkage in order to expand their production capacity through modernizing their equipments. As a result, the proportion of debt to net worth or equity declined over the period. But the units without linkage have not availed much loan particularly bank loan because of their poor repayment capacity, which is evident from their profit-loss account. However, looking at the data, it could be observed that the units that are doing manufacturing only, in the group of cooperatives with linkage appear to be very poor when compared to other sub groups within the group (with linkage) as well as between groups.

The financial features discussed above bring out the group difference with respect to three ratios viz., current ratio, quick ratio and debt equity ratio. Though women cooperatives in Kannur are seen to be financially safe generally, difference is observed both in short term and long-term liquidity based on network. Though net worth has increased over the period, loans obtained by garments and printing cooperatives with network are also seen to be high. Further it is seen that share capital constitutes the major share of net worth in most of the groups. However majority of the women cooperatives are lacking adequate working capital, as it is visible in their

low quick ratio. Based on the analysis of three ratios, a summary is done by taking the mean value and from the mean value, the level of financial structure is made. (Table IV.7 & 8)

Based on the level of financial structure, the scores are calculated as 'Good', 'Average' and 'Poor' (Table IV.9)

Table IV.9
Scores of Financial Performance Level –Group Wise

Group	Good	Average	Poor
Units with net work	9(60)	3(42.9)	3(37.5)
Units without net work	6(40)	4(57.1)	5(62.5)
Total	15(100)	7(100)	8(100)

Source: Worked out from Table IV-8

From the above table it is seen that out of 15 points scored as 'good', 60 percent account to those units with network. Under 'poor', 62.5 percent is seen in those units with out network. Generally the financial features of women cooperatives with net work in Kannur is more favored than that of with out network.

Employment Generation in Women Industrial Cooperatives

As job creation is a major function of a cooperative, we propose to address below how far the women industrial cooperative societies in Kannur have been able to perform this function and at what level of efficiency.

In an industrial producer cooperative the provision of capital entitles one to membership and to participate democratically in the running of the enterprise. But entitlement to membership and its associated rights and obligation are not tied to the provision of capital, but with the requirement that the member finds work with in the cooperative (Abell and Mahoney, 1988). As such the motivation of the cooperatives is job security and income distribution favorable to them (Bonin and Louis Putter man, 1987).

Table IV.7

Financial Features According to Group (Mean)

Sl. No	Variable	Women Cooperatives			Product wise					Activity wise cum net work					
		General	With net	Without net	Food	Printing	Garments			Garments with network			Garments without network		
						Printing	Garments general	With network	Without network	C	C&M	M	C	C&M	M
1	Current Ratio	2.92	3.34	1.6	9	1.91	3.07	3.07	3.03	12.54	2.98	2.3	0.59	2.73	5.28
2	Quick Ratio	1.19	1.33	0.6	6.8	0.7	1.09	1.13	1.01	3.6	0.84	1.2	0.45	0.9	1.5
3	Debt-Equity Ratio	6.31	4.5	8.4	NA	10.85	3.62	2.1	4.2	2.3	2.2	1.76	4.73	7.4	3.2

Source: Worked out from Tables -IV.1, 2 and 3

Table – IV.8

Performance Level of Financial Features – Group Wise Comparison

Variable	General			With network			Without network			Garment with network									Garments without network									Printing						Garments					
										C			C&M			M			C			C&M			M			Printing			Food			With net			Without net		
	G	A	P	G	A	P	G	A	P	G	A	P	G	A	P	G	A	P	G	A	P	G	A	P	G	A	P	G	A	P	G	A	P	G	A	P	G	A	P
CR		X		X					X	X				X				X			X		X		X					X	X			X			X		
QR		X		X					X	X					X		X				X		X		X					X	X			X				X	
DER		X				X	X			X			X				X			X		X					X								X	X			

CR = Current Ratio QR = Quick Ratio DER – Debt Equity Ratio

In the women industrial cooperatives in Knauur, at present about 700 women are employed. Over the years the employment has declined. But a change is not uniformed in different groups. The workers belong to the poorest of the poor class. Only 12 percent of the workers have above S.S.L.C education. Only 10 percent of the worker's household members are reported to be employed either in public or private companies with regular income. The rest of the worker's family depends solely on cooperative society. Moreover there exist inter group and intra group differences in the employment status as well as income earned by workers.

During the period 1991 – 2000, the number of workers per unit changed from 9 to 10. However the women cooperatives when categorized into units with network and without network, it appears that employment has increased in the former compared to the latter. The average employment group wise, product wise and activity cum network wise is given in Table -IV.10.

I. Status of Employment - Group wise, Product wise and Activity cum Network basis

The role of women cooperatives in creating employment has not been very satisfactory. The data (Table – IV.10) show that the average number of workers per unit in 1991 was 13 in the cooperatives with network, by 2000 it increased to 16. On the contrary in the cooperatives without network, the number of employment declined steeply from 11 to just 7 during 1991-2000.

Employment in the printing cooperatives showed signs of stagnation though it slightly increased during 1991 – 2000. In the food and garment cooperatives, the situation has been very poor. In the food cooperatives, employment per unit declined from 19 in 1993 to 9 in 2000 (food cooperatives started operation only in 1993) and in the garment cooperatives, it rose from 15 in 1991 to 18 in 2000. Thus in the women cooperatives irrespective of the type of product, the employment status shows a dismal picture.

It is observed that among the three types of work done by garment cooperatives with network, employment increased substantially (from 15 to 99) in

those doing only contract work. In the units engaged only in manufacturing, employment remains constant. In those units doing both types of work, employment increased from 10 in 1991 to 17 in 2000. Thus in the garment cooperatives with network, employment increased in those engaged in contract work only and units that do both contract and manufacturing work; but stagnated in those units engaged in manufacturing work only. On the other hand, in the garment cooperatives without network the employment status irrespective of the type of work, was quite disappointing, as employment declined from 16 to 4 in contract units, from 14 to 5 in contract and manufacturing units and from 10 to 7 in the manufacturing only units during 1991 – 2000. Thus the garment cooperatives with network, maintained employment steadily during the period 1991 – 2000. On the other hand in the garment cooperatives without network, employment stagnated during the period under study (Table IV.10). However in those printing cooperatives without networking, the change in the number of workers is seem to be from 7 to 8 only.

Thus in the women cooperatives, generally the units with networking, employment increased though marginally. Among the product based cooperatives, those with network and doing contract work only made impressive growth in employment. However the printing cooperatives with network registered only a small positive change during the period 1991–2000. The rest of the groups have not provided any additional employment. In short, the data reveal that most of the women cooperatives in Kannur have not been able to generate any additional employment, which is contrary to the prime objective of the cooperative sector. This phenomenon of either stagnation or deceleration appears specifically after the 1990's. Quite obviously only the women cooperatives with network is able to with stand the pressures which are related to finance and marketing. This has directly and indirectly influenced the employment status through the impact of the network. This further indicates the strength of networks and its impact on the working of women cooperatives in its structure, performance and growth.

However the employment generation in any industrial unit depends on the investment or capital employed. Though the financial features of women cooperatives

in Kannur are more or less satisfactory in terms of liquidity and solvency, the availability of capital employed per worker is lower in the cooperatives without network than with network (Table – IV.11). However despite increases in capital per worker even in the units with network, no significant change in the size of employment was occurred. The pattern of wages and income earned by the workers in each group is analyzed in the next section to understand inter group and the intra group differences based on network.

Wages Earned by Workers – Group Wise, Product Wise and Network Cum Activity Basis

Comparing the cooperatives between with and without network, significant difference is observed in the income earned by the workers. In the former group there has been a deceleration in wages per worker from Rs.833 to Rs.725 where as in the latter group, it has gone up from Rs.360 to Rs.380 during the period 1991 – 2000. On product wise, by the year 2000, except garment cooperatives, in the food and printing cooperatives, the wages per worker increased over the period. While considering the printing cooperatives with network it is seen that wages are much greater than that in those without network.

Finally in the garment cooperatives, the units with network and engaged in contract work, earned comfortable income per worker than those in other kinds of work. Contrary to our claim on the superiority of network, in the garment cooperatives without network and doing manufacturing only, wages are higher than those that with network. In other words among garment cooperatives without network, wages in the manufacturing only units has increased during the period 1991-2000. The performance of rest of the sub groups of garments without network has been very poor. In the garment cooperatives with network the income per worker increased in all the sub groups doing different activities.

Table – IV.10

Employment Status – Group Wise, Product Wise and Activity cum network basis

	General			Printing			Food	Garments	Garments with network				Garment without network			
Year	General	With net work	Without net work	General	With net work	Without net work	1993-2000	General	C	C and M	M	Total	C	C and M	M	Total
1991	9	13	11	7	7	7	-	15	15	10	10	12	16	14	10	13
1992	11	13	10	7	7	7	-	14	40	13	10	12	18	14	9	14
1993	10	13	10	9	10	8	19	14	49	13	10	11	18	12	9	13
1994	10	13	11	12	10	14	19	14	49	16	9	8	18	9	6	12
1995	10	13	9	9	10	9	10	13	53	11	7	9	13	8	9	12
1996	10	16	9	9	10	9	10	17	66	13	6	9	10	6	9	11
1997	11	16	8	9	10	9	14	17	71	17	12	8	8	6	9	13
1998	11	16	8	10	10	9	9	17	82	17	10	8	7	5	9	13
1999	10	16	8	9	10	8	9	17	88	16	10	7	4	5	8	13
2000	10	16	7	9	10	8	9	18	99	17	10	6	4	5	7	13
Average	10	15	9	9	9	9	12	16	61	14	9	9	12	8	9	13

Source: Worked out from Audit Reports

C= Contract, C & M = Contract and manufacturing, M = Manufacturing

Details of Capital per Labour according to Group, Product and Network basis (1981-2000)

Year	General cooperatives		Product wise			Net work basis								
						Printing		Garments Activity wise						
								With network			Without network		
	With net	Without net	Food (1993-2000)	Printing	Garments	With net	Without net	C (1991-2000)	C and M	M	C	C and M	M
1991	3629	3645		6266	2988	4541	7992	4031	3437	3350	2380	1181	6760
1992	3660	2751		7428	2215	7340	6233	1256	2126	2294	2612	880	8477
1993	5480	5334	894	8304	4496	4978	6131	11688	1920	4244	2629	850	7513
1994	4934	4327	629	6155	4038	5142	6637	9948	2036	4495	2330	898	6615
1995	5658	4917	1079	7556	4463	4978	8197	10455	2915	5759	2566	873	6253
1996	6103	4934	567	7728	4825	5142	7489	9406	2456	8577	3005	679	8711
1997	7997	5428	4135	7126	7034	5921	7345	10859	2263	15145	3725	902	8918
1998	14492	5628	4129	9525	8609	50360	6689	15887	3217	14721	4945	7018	13986
1999	14564	4980	3700	5701	7756	4993	6152	11582	3553	14740	4070	1717	13481
2000	11031	4784	3068	4903	10149	3950	5281	18342	5809	13983	4279	1618	14679
Average	7755	4673	2275	7069	5657	9735	6815	10345	2973	8731	3254	1662	9539

Source: Worked out from Audit Notes

C = Contract Work C& M = Contract and Manufacturing M = Manufacturing only

Thus, irrespective of the product, wages in the women industrial cooperative societies increased during the period 1991 –2000; on the contrary, employment either stagnated or declined except some groups with network. The wage details are given in table – IV.12.

Another indicator of the worker is the share of wages in value added. For the period 1991 – 2000, the average labour share is clearly higher in cooperatives with network (49.82%) than in those without network (27.78%)(Table – IV.13). No clear perceptible difference is found in this rate among the food, printing and garment cooperatives. Similarly, with respect to printing and garment cooperatives, network does not make any significant difference in labour share in value added. Whether the cooperatives are engaged in contract work or contract and manufacturing together or manufacturing only and whether operating with network or without network, the share of labour in value added does not show any visible pattern.

Though the share of wages in value added is a measure of labour welfare, it is determined largely by the preference of the units to keep reserves. The reserves are kept for the future development of the cooperatives. Other than the mandatory reserves such as depreciation, the share of proceeds to be set apart for future activities are decided by the Director Board of each cooperative. The decisions approved by the board are based on democratic principles, and such decisions directly or indirectly affect the volume of wages. This follows that in those cooperatives, where the volume of reserves is kept high, the wages are supposed to be low. The volume of reserves group wise, product wise and network wise shown in Table – IV.14 supports this argument.

The average wages in the cooperatives with network is higher than that in those without network. As a corollary to this one can find the average reserves to be more in the units with network than those without network. A similar trend could be observed in other groups of cooperatives classified on the basis of product, and activity cum network also (Table –IV.14.)

Table – IV.12

Wages per Worker according to Group, Product and Activity cum Network

Year	General cooperatives		Product wise			Net work basis									
						Printing		Garment net work cum work wise							
	With net	Without net	Food (1993-2000)	Printing	Garments	With net	Without net	With net				Without net			
								G	C	C and M	M	G	C	C and M	M
1991	833	364		787	696	684	647	899	689	617	823	373	238	203	720
1992	709	398		904	625	660	557	918	607	726	801	446	214	226	782
1993	688	347		542	621	930	675	768	612	720	818	397	170	256	799
1994	714	389	671	749	662	956	615	796	757	625	953	421	160	224	826
1995	729	351	831	541	633	1043	728	768	905	613	969	594	153	166	600
1996	541	364	876	514	567	909	768	728	639	605	782	404	193	191	559
1997	587	509	589	560	691	950	889	766	1397	559	458	603	281	186	776
1998	666	497	1437	586	787	1167	720	887	1422	619	895	753	342	143	785
1999	774	597	1550	594	967	1023	770	1025	2035	498	876	831	578	243	900
2000	725	380	2062	790	640	1148	736	987	1322	715	878	778	550	368	910
Average	696.60	419.60	1145.14	656.70	688.90	947.00	710.50	854.20	1038.50	629.70	825.30	560.00	287.90	220.60	765.70

Source: Worked out from Audit Notes

C = Contract Work C& M = Contract and Manufacturing M = Manufacturing only G= General

Table – IV.13.

Percentage Share of Wages in Value Addition according to Group, Product and Activity cum Network basis.

Year	General cooperatives		Product wise			Product cum Net work				Activity cum network basis					
						Printing		Garment		Garments with net			Garment without net		
	With net	Without net	Food (1993-2000)	Printing	Garments	With net	Without net	With net	Without net	C	C and M	M	C	C and M	M
1991	51	28		59	50	62	57	54.6	59.5	25.9	49	60	64	29.4	70
1992	55.7	25.6		58.6	56	65	55	49	49	19.7	48.8	47	63	19.1	60
1993	50.6	25.6	75	52.5	49	61	47	47.3	48	15.3	45	50	66	18.2	60
1994	49	20.6	65	69.1	47.6	65	60.7	48.7	47	38.7	45	53.5	74	16.9	54.4
1995	50.5	28.8	36	58.6	48.3	60	58	47	59	33.3	42	57	63	32	61.7
1996	49	31	44.6	61.8	50	60	62.7	45	58	32	47	46	48.4	58	56.7
1997	46.5	29	44.6	60.3	48.5	56	62.2	48	50	63	43	59	55.2	17.3	50.7
1998	54	31	59	55	53.6	56	55	54	52	54	43	55.3	51.4	8.7	54.4
1999	51	28.3	66	52	51	50	53.7	51	49	73	32	55	42.3	28.2	50.4
2000	40.9	29.9	53	55	42	57	54.5	40	52	52	24.2	54	37.6	29.7	54.8
Average	49.82	27.78	55.40	58.19	49.60	59.20	56.58	48.46	52.35	40.69	41.90	53.68	56.49	25.75	57.31

Source: Worked out from Audit Notes

C = Contract Work C& M = Contract and Manufacturing M = Manufacturing only

Table – IV.14.

Details of Reserves kept by the Cooperatives according to Group, Product and Activity cum Network basis.(1981-2000)

Year	General cooperatives		Product wise			Product cum Net work				Activity cum network basis					
						Printing		Garment		Garments with net			Garment without net		
	With net	Without net	Food	Printing	Garments	With net	Without net	With net	Without net	C	C and M	M	C	C and M	M
1991	50710	76955		68527	60288	36718	100336	56307	7830	7167	45962	53151	11333	12524	6222
1992	52896	81402		78548	59738	54045	103051	52513	12910	16498	42268	50295	15170	13174	10230
1993	55001	73347	12932	71710	59081	66810	74977	51627	17100	23138	47514	57758	18590	13438	14068
1994	65791	63463	18318	77008	59720	73421	79400	63611	14800	36663	52270	62120	21376	13963	17205
1995	66198	51000	23923	57991	57058	71142	52731	64785	22110	29182	38879	65940	23142	10593	18310
1996	63545	53386	27618	64084	55372	79040	58102	59899	24328	28237	43143	68290	27218	10206	12110
1997	73685	50291	24062	56752	63146	68045	44235	70494	25618	41207	57703	70840	33045	11109	13126
1998	79200	53729	18692	65603	65672	103599	50405	73779	31316	46807	56102	72325	34772	11652	14160
1999	127785	55780	22441	66626	72310	106853	51997	132437	22290	39476	60120	78610	30582	12090	8126
2000	83451	58349	24100	76311	66920	131072	56398	142869	29345	42340	65363	82933	32647	11427	7230
Average	67826.20	61770.20	21510.75	68316.00	61930.50	79074.50	67163.20	76832.10	20764.70	31071.50	50932.40	66226.20	24787.50	12017.60	12078.70

Source: Worked out from Audit notes

C = Contract Work C& M = Contract and Manufacturing M = Manufacturing only

Thus wages and reserves are inversely related. The relative status of some of the variables also reveals (Table – IV.15) that the existence of network influenced the variables favourably in some of the groups. Based on the status of selected variables, the performance levels of the different groups are shown in Table – IV.16.

Table - IV.15
Relative status of selected variables (average) according to Group, Product and Activity cum Network (1991 – 2000)

Sl.No	Type of cooperative	Variables					
		Employment per unit	Wages per worker (Rs)	Value added per worker (Rs)	Capital per worker (Rs)	Reserves per worker (Rs)	Share of wages in value added (%)
1	Women cooperatives with net	15	696	1488	5712	3483	49.82
2	Women cooperatives without net	9	419	1208	3412	4914	27.78
3	Product wise						
	a. Food cooperatives	12	1145	2228	2275	1793	55
	b. Printing cooperatives	9	656	1036	5897	4851	58
	c. Garment cooperatives	16	688	1453	4048	4202	49
4	Net work basis						
	a. Printing with net	9	947	1258	7751	5789	59
	b. Printing without	9	718	969	5777	5620	56.8
	c. Garment with net	16	854	1606	7008	3350	48.6
	d. Garment without net	13	560	1066	3210	1936	52.3
5	Net work cum work wise						
	A. Garment with net						
	a. Contract only	61	1038	2150	10346	31072	40.7
	b. Contract and manufacturing	14	629	1279	4890	2285	41.9
	c. Manufacturing only	9	825	1562	5787	4388	53.68
	B. Garment without net						
	a. Contract only	12	287	575	2703	1292	63.49
	b. Contract and manufacturing	8	220	825	958	802	25.75
	c. Manufacturing only	9	765	1365	5969	796	57.31

Source: Worked out from Audit Notes
C = Contract Work C& M = Contract and Manufacturing M = Manufacturing only

The level of performance calculated shows that generally women cooperatives with network scored 60 percent as good and 20 percent each under average and poor. But it was just the opposite in the case of cooperatives without network. The most significant difference in the level of performance is observed within the group in the garments cooperatives with network.

In the contract units and units doing both manufacturing and contract work, all the variables are seen to be 'good'. On the contrary in manufacturing only units, the three variables are marked below 'good'. In the garment cooperatives without network out of the five variables, three recorded as 'poor' and one each below 'average' and 'good' by the cooperatives doing manufacturing only. To those doing contract only as well as doing both, the performance of cooperatives without network was very poor. However, the scores of the five variables (Table – IV.17) clearly highlight the predominance of cooperatives with network over those without network. In all the groups examined, the units with network recorded 'good' performance level, where as in the group without network the scores are 'poor'. The percentage level of performance between groups is shown in Table – IV.18.

So far, this chapter discussed the performance and growth of women cooperatives with respect to financial features, employment and income and their variation between and within the groups on the basis of the nature of the linkage, product and activity.

Thus we see that the cooperatives with network are distinct from those having no network. In the network structure, the nature of relationship is a major determinant to attain their control (Knoke, 1990). Network is of different type such as political, social, business and economic. However, these networks have significant relation with personal contacts. The personal contacts are sources of information and influence that people can mobilize either directly or indirectly for advancement and further growth of an enterprise. The network anlysis can contribute valuable insights into how structures of informal communication are essential for career development particularly to women and minorities (Knoke, 1990).

Table – IV.16

Levels of performance according to Group, Product and Activity cum Network basis

Type of cooperative	Employment per unit			Wages per worker			Value added per worker			Capital per worker			Reserves per worker			Total score			Total
	G	A	P	G	A	P	G	A	P	G	A	P	G	A	P	G	A	P	
Women cooperatives with net		X		x			x			x					x	3 (60)	1 (20)	1 (20)	5
Women cooperatives without net		X				x			x			x	x			1 (20)	1 (20)	3 (60)	5
Product wise																			
a. Food cooperatives		X		x			x					x			x	2 (40)	1 (20)	2 (40)	5
b. Printing cooperatives			x			x			x	x			x			2 (40)	-	3 (60)	5
c. Garment cooperatives	x					x			x		X		x			2 (40)	1 (20)	2 (40)	5
Net work basis																			
a. Printing with net			x	x			x			x			x			4 (80)	-	1 (20)	5
b. Printing without	X					x			x			x			x	1 (20)	-	4 (80)	5
c. Garment with net	X			x			x			x			x			5 (100)	-	-	5
a. Contract only	X			x			x			x			x			5 (100)	-	-	5
b. Contract and manufacturing			x			x			x			x			x	-	-	5 (100)	5
c. Manufacturing only			x			x			x			x			x	-	-	5 (100)	5
B. Garment without net			x			x			x			x			x	-	-	5 (100)	5
a. Contract only		X				x			x			x	x			1 (20)	1 (20)	3 (60)	5
b. Contract and manufacturing		X				x			x			x			x	-	1 (20)	4 (80)	5
c. Manufacturing only		X		x			x			x					x	3 (60)	1 (20)	1 (20)	5
Total	4	6	5	6	0	9	6	0	9	6	1	8	7	0	8	29	7	39	75

Source : Worked out from Table – IV.15

Chart – IV.13

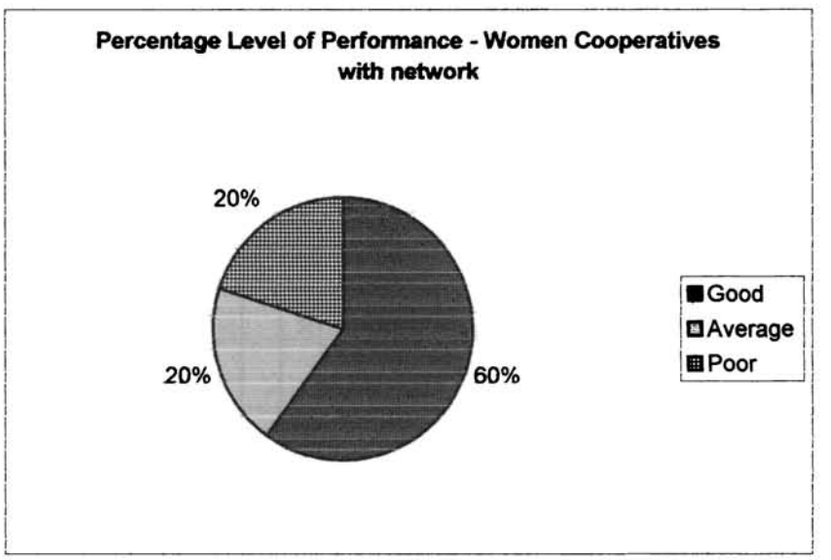


Chart – IV.14

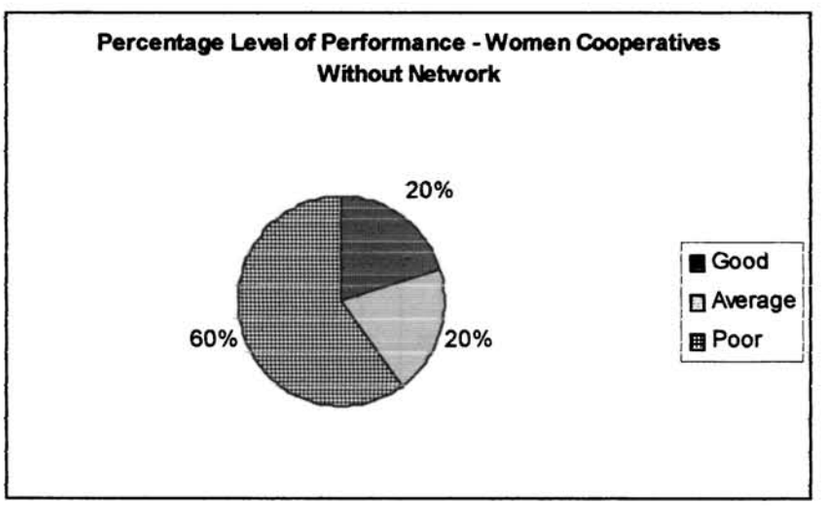


Table – IV.17

Scores obtained according to levels of Performance between Groups

Type of cooperative	Employment			Wages			Value added			Capital			Reserves			Total scores		
	G	A	P	G	A	P	G	A	P	G	A	P	G	A	P	G	A	P
Women cooperatives with net		X		x			x			X					x	3	1	1
Women cooperatives without net		X				X			x			x	x			1	1	3
Product wise																		
a. Food cooperatives		X		x			x					x			x	2	1	2
b. Printing cooperatives			x			X			x	X			x			2	0	3
c. Garment cooperatives	X					X			x		x		x			2	1	2
Net work basis																		
a. Printing with net			x	x			x			X			x			4	0	1
b. Printing without	X					X			x			x			x	1	0	4
c. Garment with net	X			x			x			X			x			5	0	0
d. Garment without net			x			X			x			x			x	0	0	5
e. Contract only with net	X			x			x			X			x			5	0	0
f. Contract only without net		X				X			x			x			x	0	1	4
g. Contract and manufacturing with net	X			x			x			X			x			5	0	0
h. Contract and manufacturing without net			x			X			x			x			x	0	0	5
i. Manufacturing only with net		X		x				X		X			x			3	2	0
j. Manufacturing only without net		X				X	x					x			x	1	1	3
Total	5	6	4	7	0	8	7	1	7	7	1	7	8	0	7	34	8	33

Source: Worked out from Table – IV.16.

G=Good A=Average P=Poor

Table – IV.18
Percentage Level of Performance between Groups

Type of cooperative	Scores		
	G	A	P
1. Women cooperatives with net	75	50	25
2. Women cooperatives without net	25	50	75
3.Total	100	100	100
1. Food cooperatives	33.3	50	28.6
2. Printing cooperatives	33.3	0	42.8
3. Garment cooperatives	33.3	50	28.6
4. Total	99.9	100	100
1. Printing with net	80	0	20
2. Printing without	20	0	80
3. Total	100	0	100
1. Garment with net	100	0	0
2. Garment without net	0	0	100
3. Total	100	0	100
1. Contract only with network	100	0	0
2. Contract only without network	0	100	100
3. Total	100	100	100
1. Contract and manufacturing with network	100	0	0
2. Contract and manufacturing without network	0	0	100
3. Total	100	0	100
1. Manufacturing only with network	75	66.7	0
2. Manufacturing only without network	25	33.3	100
3. Total	100	100	100

Source: Worked out from Table – IV.17

The political patronages involve personal network. Leaders provide followers with valued services and in return they gain votes and personal gain. Political or social, the network activities are encouraged by leaders who are active in social and political spheres. We have already noted that the women cooperatives have network connection in Kannur district. Therefore the nature of political and social network and the inter related impact on the growth of women cooperatives in Kannur is examined in the next chapter.

Chapter – V

Socio Political Network Of Women Industrial Cooperatives In Kannur District

In the previous two chapters we have shown that the women industrial cooperative societies in Kannur with socio-political network have been able to do better in value added activities. The nature and dynamics of networks are the major concern of this chapter. In network analysis the objects of explanation are neither peoples organization nor states, rather, it consist of a set of relations, which have both form and content. Relational form refers to properties of connections among groups or actors, (Ronald, 1982)

The two basic forms are:

1) Intensity, strength or frequency of interaction and
2) The degree of joint involvement in activities such as reciprocal flow of information, (Ronald, 1982). The relational contents are very complex and diverse.

The most important steps in any network analysis are to delineate a concrete population of social objects and one or more types of relationships connecting them (Thomas and John Skvoretz, 1986). It is common knowledge that a measure of interpersonal relation (communication between members and leaders) produces substantial increases in member involvement in any social or political movement (Knoke, 1990). People are motivated to involve in social movement through their interest in a diversity of public as well as private incentives. The interpersonal network may be helpful in understanding how movement participants develop common interest and belief that facilitates collective action. Members of a cohesive group are linked directly to one another by many intense mutual ties. They are structurally oriented towards their internal reference groups to appropriate thoughts and deeds. In this context of women industrial cooperative societies under consideration two major questions arise;

1) How do networks function among women cooperatives? ; and
2) Why are they effective at inter and intra organizational levels?

In this chapter an analysis of political and social networks in cooperatives, based on the linkage as well as differences in the performance are carried out. Let us consider social network first.

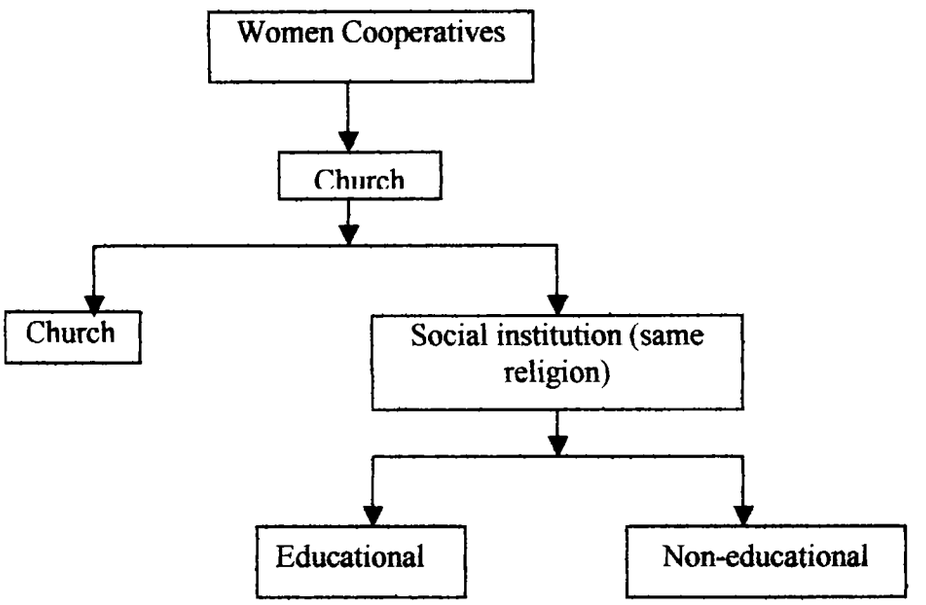
1. Nature of Social Network

In this study social network refers to the linkage of women cooperatives with church and its chief executive, the priest. It is the priest who acts as a mediator to communicate information to women cooperatives regarding the job work they have to undertake. The churches as a social institution have several contacts with other institutions sponsored by or promoted by church or members of the church. In Kannur there are five such institutions in the cooperative sector; three in garments and two in printing. The church related linkage or network helps the cooperatives to organize their activities mare efficiently. The church's mediation role is mainly through passing information about the availability of job works else where to the cooperative societies, providing the necessary contacts and recommending their cases wherever necessary. As mentioned earlier , the church has under its sphere of influence a number of social institutions such as schools, orphanages etc and also few a manufacturing units furniture making etc. Besides, the church also has organized or supervises a number of self help groups which are engaged in value added activities. The schools under the church need uniform for their children. The making of uniforms is given to the garment cooperatives connected with the church. Similarly when schools and church related institutions need notices or posters to be printed, such jobs are given to the printing cooperatives. But a major problem with such jobs is that they are seasonal. Since religion is the binding factor, the bondage works only in respect of the specific religious sector.

A significant observation that arises from this context is the presence of social capital. The network connections have strong relation with the concept of social capital, because where the social capital is strong, the network connection is also strong.

Chart – V.1

Social Network of Women Cooperatives in Kannur.



2. Political Network

Political network[1] refers to connection of cooperatives with political parties of local, state or national level. Behind the formation of any cooperative, there is generally found a political initiative. Since the cooperatives are the organization of the weaker, marginalized and suppressed groups, assistance rendered to them to start a cooperative society pays back ample rewards to the political parties. When the workers feel that their interests are protected by the political parties in the cooperatives, they gradually tend to become their party members. Therefore political parties generally use cooperatives as an effective support base. In addition to this method of using cooperatives as a vehicle for political mobilization, political parties also directly intervene in the functions of cooperatives.

The politicians act as promoters of cooperatives with their own party workers as members cum workers of cooperatives so as to maintain a strong political grip over them and through them in the locality. The more the number of cooperatives, they promote the more supporters and party workers they mobilize in that area. It is

observed that there are 25 units with political network in Kannur area dealing in garments (21), printing (3) and leather works (1).

The channels through which the political linkages of cooperatives work are the following.

1) The political parties extend support to mobilize finance from government of Kerala, Cash-credit scheme of NABARD, finance from National Integrated Cooperative Development Assistance Scheme and also bank loan. The party workers take keen interest through their contacts with other people both in power and otherwise so as to provide financial assistance at concession rate.
2) The political parties help the cooperatives in marketing their products through a network of establishments and trade centers in cities and towns including the departmental stores through their contacts and political clout.
3) Political parties assist to grab job works or employment from other cooperative institutions, banks, hospitals and private exporters in the organized and unorganized sectors.
4) The party helps to procure raw materials for instance, textile fabrics for the garment cooperatives which helps to reduce production cost, through their connection in other states at cheaper rate.

Networking whether political or social have significant bearing on what is described in the new institutional economics as social capital.

Through the linkage, such as personal, political, officials etc, the connection in the society is widened and stronger the linkage, greater the scope to develop a high level of social capital which is considered as the essential requirement for the development of cooperative organizations. Moreover homogenous association does better by way of social capital (Putnam et.al, 1993). The four central aspects of social capital that are relevant to our analysis are:

1. The promoter of a cooperative, whether workers or any members have any affiliation with any political party, whether workers be the relatives of any political party worker, whether the decision of new entry or any decisions regarding wage, finance, marketing or job work have any connection with the party - if anyone or all the features exist - is referred to as political network.

1. Relation of trust.
2. Reciprocity and exchanges.
3. Common rules, norms, and sanction and
4. Network, connection and groups.

A wide range of network characteristics influence the nature and extent of social capital within a given network such as -

1) Type of network.
2) Size of network.
3) Proximity of network.
4) Density of network; and
5) Homogeneity of network.

The membership of groups, the quality of connection through norms of trust and reciprocity has been used as a key measure in social capital (Putnam, 1993, 1995). Studies indicate (Stone and Jody Hughes, 2001) that network size differ significantly by level of education. The density of network interaction broadens the participant sense of self developing of 'I' into 'we' or enhancing the taste for collective benefits.

Since cooperatives have been one of the social movements for integrating the weaker and the marginalized group into the main stream, an attempt is made to examine the nature and the extent of social capital which forms the chief basis of networking among the workers. For this purpose a conceptual framework has been developed on the basis of certain attributes.

They are:–

1. Homogeneous/heterogeneous group in terms of member/workers of an enterprise having the same ideology or not. In the homogeneous group, social capital appears to be more than in heterogeneous group (Putnam, 1995)
2. Level of education of members/workers is another attribute that is related with social capital. Among members of low level of education social capital has been higher than those having high level of education (Stone and Hughes,

2001). Low level of education in this study is taken as education of workers having S.S.L.C or below.

3. Units with network and more contacts have a high level of social capital (Putnam, 1993, 1995).
4. Solidarity is yet another attribute that can contribute much to develop social capital among members, through factors like friendship, kinship, joint organizational membership. (Fireman and gamson, 1979)
5. Commitment is treated as another attribute of social capital. When members have the financial stake in their units they become more committed. The number of Board meetings held in the units per year also account for commitment. The more the number of Board meetings, the more commitment and hence social capital they have.
6. Distribution of power whether equal or unequal, which depends on, the voting rights of each member can also influence the volume of social capital. The more equal the distribution; the better is the social capital.
7. Sharing of benefit whether equal or not is another feature of the existence of social capital. Equal sharing of benefits goes hand in hand with social capital.
8. Equality of income i.e. distribution of wages and return to capital whether equal or not also influences the social capital.
9. Equality in ownership which means whether the cooperatives are working on democratic principles or not.
10. Job rotation and multi skill is considered as another feature of social capital.
11. Participation of labor force in decision-making process enables to develop high level of social capital.
12. The quality of the service rendered by the management such as regular staff, permanent secretary and Board members and stable management can contribute much to develop a high level of social capital.

The distribution of the women cooperatives in Kannur according to linkage and products is shown in table – V.1.

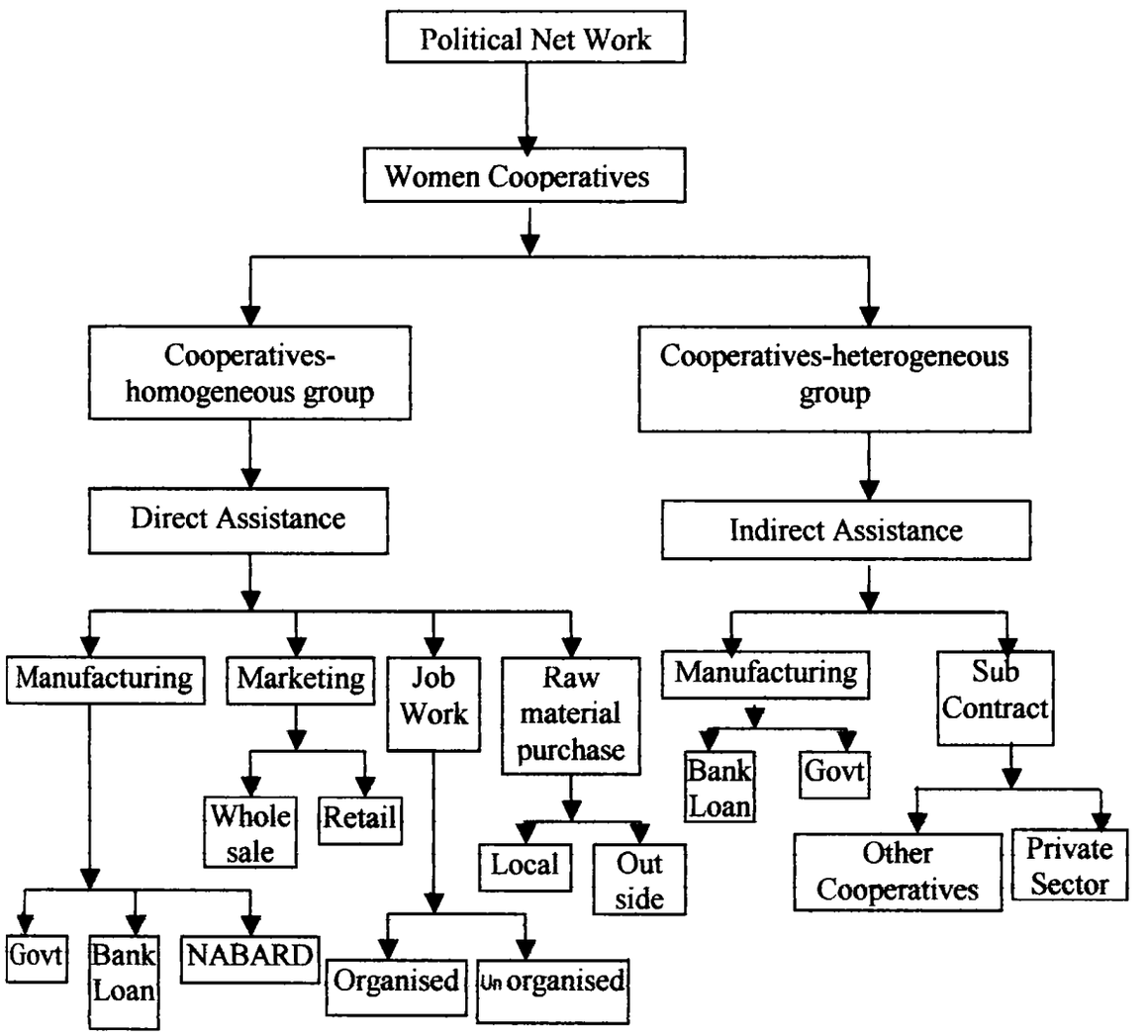
Table –V.1
Distribution of Units According to Linkage and Products

Product	Type of linkage							
	Political		Social		No linkage		Total	
	No	Percentage	No	Percentage	No	Percentage	No	Percentage
Garments	21	63.6	3	9.1	9	27.3	33	100
Printing	3	20	2	13.3	10	66.7	15	100
Food					3	100	3	100
Leather	1	33.3			2	66.7	3	100
Total	25	46.3	5	9.3	24	44.4	54	100

Source: Survey Data.

The structure of political network is shown in the chart -V.2 below.

Chart – V.2
Political Network of Women Cooperatives.



The chart given above shows the channels through which the assistance flowed to women cooperatives. To the cooperatives of homogeneous group, the assistance flow more out of political patronage than to the cooperatives of heterogeneous group. Homogenous and heterogeneous groups are classified on the basis of ideology of the workers in the cooperatives. If all the workers are of the same ideology, it can be called a homogeneous group, other wise heterogeneous. The main reason behind this has been the existence of a high level of social capital among the workers of the cooperative.

Based on the twelve attributes discussed earlier, it is possible to examine the extent of social capital by grouping the cooperatives into with political network, with social network and without any network. These attributes were measured with the help of binary analysis (assigning value either zero or one for the absence or presence of each attribute among the cooperatives). The group that accounts for the maximum scores has the highest level of social capital. From the table – V.2, it could be observed that the cooperatives with political network have the highest level of social capital scoring 48 percent of the total scores, where as the cooperatives with social network scored only 28 percent and the remaining 24 percent by the cooperatives without any network. Some of the attributes were common to all the three groups such as level of education, financial stake distribution of power, sharing of income and benefits etc. Almost all the workers have below S.S.L.C education and have financial stake in the cooperatives. The principle of sharing of income, benefits and distribution of power indicates the existence of democratic principle in the units. It is seen that only units with political network have a stable management and a permanent secretary to monitor and account the daily business of the cooperative. From the scores obtained, it is clear that the social capital and the linkages are closely related (given in Table – V.2). Against this background, the analysis is carried out to understand the impact of political and social network on the growth and performance of women cooperatives in Kannur.

Differentiating Political and Social Network

In the previous chapter, the performance variability between units with and without network was examined and found that it was superior in the former compared to the latter. In this chapter the variability in performance between units with political networks and social networks is examined. The same variables, as used in the previous chapter are used in this chapter also. It was observed that most of the cooperatives with social network have not availed any long-term loans, on the contrary they have been working with own funds (Share capital plus govt. financial stake). Hence the liabilities of these cooperatives have been very negligible and hence no comparison on debt equity ratio was made.

The comparison between social and political networking is carried out for the period 1994-2000, because the cooperatives with social networking started operation only in 1994. Our discussion starts with the financial features of the two groups.

1) Financial Features

The short - term financial structure (current ratio) indicates that, current assets were over and above current liabilities in both the groups (units with social and with political network). But comparing cooperatives of social with that of political network, it is seen that the ratios for the former have been higher than that for the latter during the entire period. The quick ratio also shows a similar tendency. Except for the year 2000, both current and quick ratios have crossed the rule of thumb. All in all the short-term financial structure is safe in both groups and they have adequate liquidity to meet any short-term liabilities. On an average the current ratios for the period 1994-2000 are 10.6 and 5.4 and the quick ratios are 5.3 and 1.5 for the units with social and with political network respectively. The data are given in Table –V.3.

Though the debt equity ratio was not calculated for comparative purpose, it is not difficult to see that the equity or the net worth is satisfactory in both groups; the major component in the net worth is share capital in those with political network and it is more than that in those with social network. It ranges between 67 to 90 percent of the net worth in the former and between 22 and 45 percent in the latter.

Table –V.2
Assessment of Social Capital among Socio-Political Network

Sl.No	Attributes	Scores Assigned	Scores Obtained			Total
			A	B	C	
1	Nature of group					
	Homogenous	1	1	0	0	1
	Heterogeneous	0				
2	Education					
	Below SSLC	1	1	1	1	3
	Above SSLC	0				
3	Commitment					
	Financial stake - Yes	1	1	1	1	3
	- No	0				
	No. Of Board meeting					
	Equal to 12	1	1	0	0	1
	Less than 12	0				
4	Contacts					
	Yes	1	1	1	0	2
	No	0				
5	Distribution of power					
	Equal	1	1	1	1	3
	Unequal	0				
6	Sharing of Benefit					
	Equal	1	1	1	1	3
	Unequal	0				
7	Sharing of income					
	Equal	1	1	1	1	3
	Unequal	0				
8	No. of shares with number					
	Equal number	1	0	0	0	0
	Unequal number	0				
9	Job rotation and multi skill					
	Yes	1	1	0	1	2
	No	0				
10	Labor force participation					
	Yes	1	1	0	0	1
	No	0				
11	Solidarity					
	Yes	1	1	1	0	2
	No	0				
12	Stable management					
	Yes	1	1	0	0	1
	No	0				
	Total		12 (48%)	7 (28%)	6 (24%)	25 (100%)

Source: Survey Details

A= Units with political network B = Units with social network C = Units with no network

Table –V.3

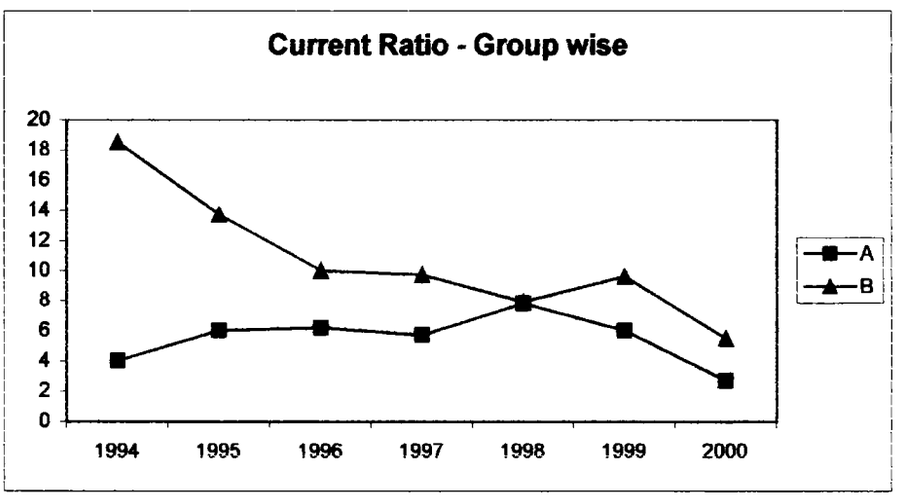
Short term Financial Structure of Socio-Political Network (1994-2000)

Year	Current Ratio		Quick Ratio	
	A	B	A	B
1994	4	18.5	0.6	9.2
1995	6	13.7	1.6	6.8
1996	6.2	10	1.7	5
1997	5.7	9.7	1.8	4.9
1998	7.8	7.9	3.1	4
1999	6	9.6	1.1	4.5
2000	2.7	5.5	0.7	2.7
Average	5.4	10.6	1.5	5.3

Source: Survey Data

A = Cooperatives with political network. B = Cooperatives with social network.

Chart – V.3



This shows how significant is political network in mobilizing share capital (both individual and government participation) compared to social network. More over the total net worth in the units with political network far exceeds that in those with social network; to be precise by more than three times by the year 2000 (Table – V.4)

Chart – V.4

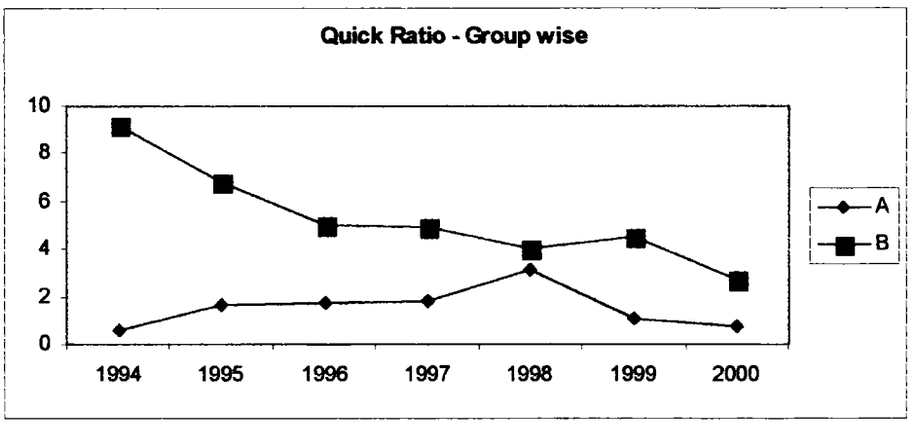


Table –V.4
Total Equity and Percentage of Share Capital in Equity - Group wise (1994 – 2000)

Year	Total Equity (Rs)		Percentage of share capital in equity	
	A	B	A	B
1994	243746	4470	86	22.4
1995	252639	58089	90	45.9
1996	342023	132894	74	43.6
1997	383765	139761	67.4	44.2
1998	283723	138125	92.5	41.9
1999	450450	145600	81.8	44.3
2000	454080	137564	89.1	45.2
Average	344347	108068	83	41.1

Source: Worked out from Audit Report
A: Cooperatives with Political network B: Cooperatives with Social network

This has a direct bearing on the total capital employed by the two groups. From Table –V.5, w see that the total capital employed by cooperatives has been twenty one times more in units with political network than in those with social network by the year 2000. When the average for the whole period is considered, it is nearly ten times more in group A than in group B. This may be partly attributed to the increase in share capital and partly to the mobilization of finance including bank finance by political networking. Hence it may be safely inferred that the units with political network have a strong capital base compared to the other group. In the total capital employed the share of working capital has been small in both the groups, but it is significantly higher in group-B than in A. Though the share is small and declined

om 5.5 to 1.1 during the period in those with political network (Table – V.6), in solute terms the volume of working capital is seen to be greater than that in those th social network.

Table – V.5
Capital Employed -Group wise (1994-2000)

Year	Total Capital	
	A	B
1994	12238	10295
1995	141779	16342
1996	164109	25718
1997	198168	35614
1998	337082	28682
1999	283297	23495
2000	506492	23259
Average	224752	23344

Source: Worked out from Audit Notes
A = Political network. B = Social network.

Chart – *V.5*

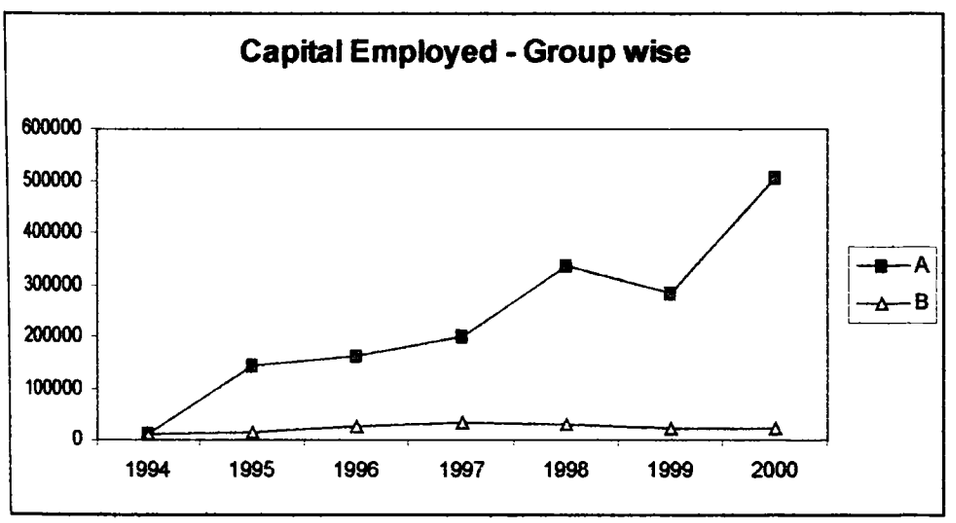


Table – V.6

Percentage Share of Working Capital to Total Capital Employed - Group wise (1994-2000).

Year	A	B
1994	5.5	20.3
1995	8.2	24.4
1996	5.5	29.3
1997	4.2	17.1
1998	2.2	14
1999	2.5	15.6
2000	1.1	12.4

Source: Worked out from Audit Report.
A = Political network. B = Social network.

These characteristics of the working capital (difference between current asset and current liabilities) in the two groups too support the status of the short-term financial structure analyzed early in this chapter. Hence it is interesting to see how do the units function with a very small share of working capital and what is the effect of such a small percentage of working capital on the performance of the units?

We have pointed out earlier that the cooperatives were able to function with such level of capital because, some of the units work on contract basis and some others on contract and manufacturing. In such cases, since the contractors supply the raw materials, the cooperatives require only small amounts of finance as working capital. Although the volume of working capital is small, units with political networks are found to be working relatively satisfactorily.

One of the relevant criteria of performance has been the extent of value addition per unit and per labor and the extent of capital used to generate each unit of value addition.

5.3 Value Addition – Group Wise

Value addition in a firm may be considered as the over all measure of economic success (Chiplin and Coyne 1980). The data on value addition show that (Table-V.7) for the period 1994-2000 the units with political network have an edge

those with social network. The difference between the two groups is very large some times even as much as ten times.

More over the value addition per unit increased by more than 5 times for the od 1994 - 2000 in units with political network. More or less the same is the case respect to the value addition per worker. On an average, value addition per ter with political network was Rs.2070/- but it was only Rs.1171/- in the units social network. The proportion of capital in value addition (Table-V.8) has been nificantly higher in units with political network than in those with social network ugh out the period. Table-V.9 shows the different components of value added in the groups. Wages constitutes substantially higher proportion in the case of operatives with social network. Similarly the interest component is nil.

Table – V.7
Value Addition – Group wise (1994-2000)

Year	Value addition per unit (Rs.)			Value addition per worker (Rs.)		
	A	B	Changes of A over B	A	B	Changes of A over B
1994	24758	12103	2.1	1719	1513	1.1
1995	28440	6920	4.1	1922	477	4
1996	30054	3853	7.8	1565	385	4.1
1997	52038	4935	10.5	1956	673	2.9
1998	50430	7796	6.5	1763	1063	1.7
1999	74039	12464	5.9	2501	1968	1.3
2000	98091	13438	7.3	3065	2121	1.4
Average	51121	8787	5.8	2070	1171	1.8

Source: Worked out from Audit Notes
A = Political network. B = Social network.

Chart – V.6

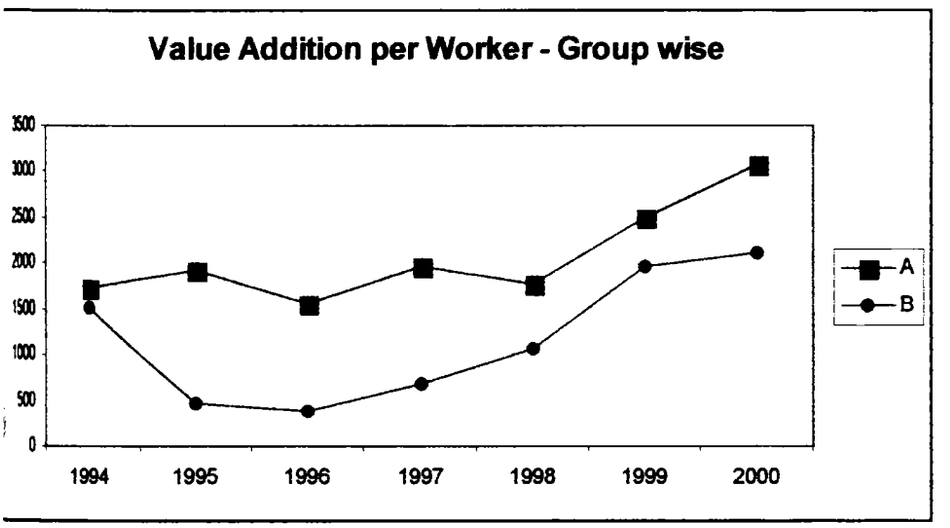


Table -V.8
Capital per Unit of Value Addition –Group wise

Year	Capital Employed (Rs)		Value Addition (Rs)		Capital per unit of value addition	
	A	B	A	B	A	B
1994	122338	10295	24758	12103	4.9	0.9
1995	141779	16342	28440	6920	5	2.4
1996	164109	25718	30054	3853	5.5	6.7
1997	198168	35614	52038	4935	3.8	7.2
1998	337082	28682	50430	7796	6.7	3.7
1999	283297	23495	74039	12464	3.8	1.9
2000	506492	23259	98091	13438	5.2	1.7
Average	207609	23344	51121	8787	4.1	2.7

Source: Worked out from Audit Notes.
A = Political network. *B = Social network.*

This indicates that cooperatives with political network concentrate mainly on eration of profits; for this purpose they even resort to borrowing capital incurring igations for interest payment. As the focus of other group of cooperatives is more employment or wages, they refrain from borrowing. Another implication of the ding is that the higher profits share coupled with political networking makes them

more credit worthy and hence they have better access to the credit market than the group with social network.

Table – V.9
Percentage to Total Value Addition (Components of Value Addition) - Group wise during 1994-2000

Year	Gross Profit		Wages		Interest	
	A	B	A	B	A	B
1994	54.2	12.2	45.1	87.8	0.7	0
1995	53.9	8.4	45.2	91.6	0.9	0
1996	58.7	-1.4	40.7	101.4	0.6	0
1997	48.3	17.1	51	82.9	0.7	0
1998	42.8	39.1	56.4	60.9	0.8	0
1999	46.5	37.5	52.3	62.5	1.2	0
2000	65	42.7	33.9	57.3	1.1	0
Average	52.8	20.5	46.4	77.8	0.8	0

Source: Worked out from Audit Notes
A = Political network. *B = Social network.*

It is evident from the above analysis that the performance of the units with political network has been more creditable than those with social network. For a more meaningful analysis of this profitability it is useful to have a look at the structure of cost of production in the two groups.

Table – V.10
Extent of Coverage of Total Revenue over Total Cost – group wise (1994-2000)

Year	Social net work			Political net work		
	T.C (Rs)	T.R (Rs)	Coverage (T.R/T.C)	T.C (Rs)	T.R (Rs)	Coverage (T.R/T.C)
1994	15846	17328	1.09	46799	60215	1.3
1995	12918	13502	1.04	53394	68712	1.3
1996	36058	36006	0.99	70957	88607	1.2
1997	33924	34769	1.02	86181	111334	1.3
1998	41902	44950	1.07	99759	121367	1.2
1999	43172	47842	1.1	136210	170611	1.3
2000	38190	43930	1.2	106665	170457	1.6
Average	31715.7	34046.7	1.07	85709.3	113043.3	1.3

Source: Worked out from Audit Notes.
T.C – Total Cost T.R = Total Revenue

3) Cost of Production – Group Wise

The surplus generated by a firm depends on the financial management particularly cost management, which controls the production cost and maximizes the difference between cost and revenue. The ratio of TC and TR is higher in the cooperatives with political network than with that of social network. The coverage indicates a more efficient performance of the former. (Table –V.10)

As Table-V.11 shows that the cost of raw materials constitutes the main item in the total cost of production. Except in the case of the proportion of the cost on establishment and contingencies, there is no clearly visible difference between the two groups. Most often the units with social network bought the materials from the local market at a high rate. On the other hand because of the wider network connection within and outside the state, the units with political network obtain the materials from neighboring states at cheap rate both on credit and cash basis. As a result, the gap between the cost incurred and the revenue received makes a lot of difference in the total profit earned by the units with political and social network. In this respect the politically connected cooperatives are at an advantageous position because the local committee monitors expenditure in the form of establishment and contingencies regularly in the units.

Table –V.11
Components of Cost of Production – Group wise (Percentage)

	Wages		Purchase		Depreciation		Establishment and contingencies		Total	
Ycar	A	B	A	B	A	B	A	B	A	B
1994	23.80	67.00	50.50	12.20	13.10	5.20	12.60	15.60	100	100
1995	24.10	49.00	54.40	27.70	12.30	8.90	9.20	14.30	100	100
1996	17.20	10.80	67.00	73.70	10.10	9.60	5.70	5.90	100	100
1997	30.70	12.10	53.30	66.40	9.60	14.30	6.40	7.30	100	100
1998	28.50	11.30	59.30	68.00	6.40	11.60	6.00	9.00	100	100
1999	28.40	18.00	56.50	60.10	10.70	11.20	4.40	10.60	100	100
2000	31.10	20.10	50.80	54.80	12.30	12.70	5.80	12.40	100	100
Average	26.30	26.90	48.80	51.80	10.60	10.50	7.20	10.70	100	100

Source: Worked out from Audit Notes
A = Political network. *B = Social network.*

To obtain a better picture of the efficiency of the firm the surplus earned, after meeting the cost of production is calculated as percentage of gross profit to cost of production.

4) Percentage of Gross Profit to Cost of Production- Group Wise

On an average the ratio of gross profit to cost of production has been significantly higher in the units with political network than in those with social network (Table – V.12).

But the ratio of gross profit to capital employed (productive capital) is more or less the same for the two groups (Table – V.13). In this case of return on investment the groups differ much (Table –V.14).

Table - V.12
Percentage of Gross Profit to Cost of Production - Group wise (1994-2000)

	Total Cost (Rs)		Gross Profit (Rs)		Percentage of Gross profit to cost	
Year	A	B	A	B	A	B
1994	46799	15846	13146	1482	28.70	9.40
1995	53394	12918	15318	583	28.70	4.50
1996	70957	36058	17650	-52	24.90	-0.10
1997	86181	33924	25153	844	29.20	2.50
1998	99759	41902	21608	3048	21.70	7.30
1999	136210	43172	34401	4070	25.30	10.80
2000	106665	38190	63792	5740	59.80	15.00
Average	85709.29	31715.71	27295.43	2245.00	31.19	7.06

Source: Worked out from Audit Notes
A = Political network. *B = Social network.*

When the social network group works under loss, the cooperatives with political network have clear gain over cost. With respect to other indicators such as number of workers per unit, value added per worker and wages per worker also, the units with political network have been doing much better than those with social network (Table – V.15).

Table –V.13

Percentage of Gross Profit to Capital Employed- Group wise (1994-2000)

Year	Gross Profit to Capital Employed	
	A	B
1994	11.00	14.40
1995	10.80	3.60
1996	10.80	-0.20
1997	12.70	2.40
1998	6.40	10.60
1999	12.10	19.90
2000	12.60	24.70
Average	10.91	10.77

Source: Worked out from audit notes

A = Political network. *B = Social network.*

Table –V.14

Return On Investment (ROI)– Group wise (percent)

	Return on Investment	
Year	A	B
1994	5.80	6.40
1995	6.00	-3.50
1996	6.30	-13.60
1997	8.30	-11.20
1998	4.40	-6.30
1999	6.70	-0.70
2000	10.00	3.90
Average	6.79	-3.57

Source: Survey Data

A= Political network *B= Social network*

Most of the performance indicators of group A exceeds that of group b probably due to the careful finance management of the former engendered by strict monitoring and supervision of the political parties associated with them. The substantially higher ratio of reserves to value addition in group A than in Group B

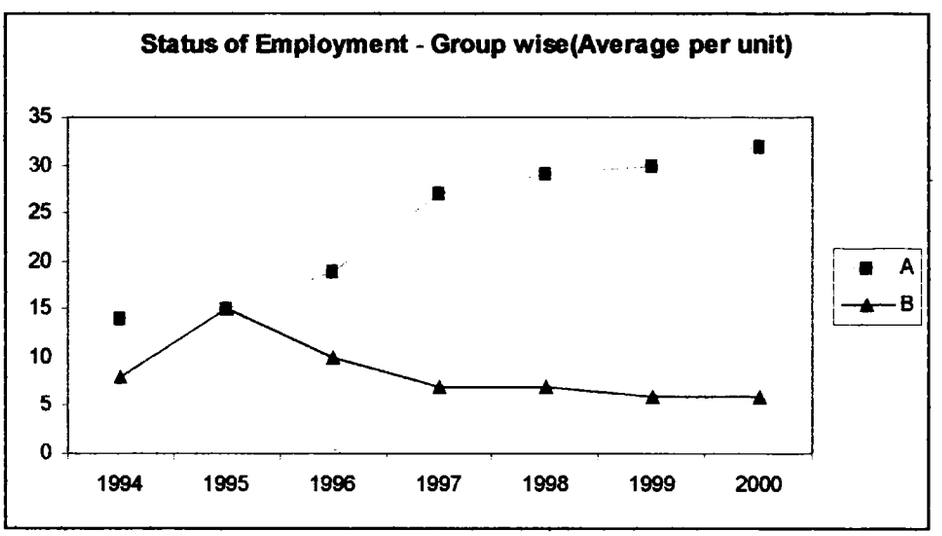
(Table – V.16) clearly points to this. After all, keeping a higher reserve takes care of the sustainability of the units, which in turn ensures better growth performance.

Table – V.15
Employment and Wages – Group wise (1994 – 2000)

	Employment(No.of Workers)		Value addition per worker (Rs)		Wages per worker (Rs)	
Year	A	B	A	B	A	B
1994	14	8	1719	1513	774	1327
1995	15	15	1922	477	868	406
1996	19	10	1565	385	636	360
1997	27	7	1956	673	997	450
1998	29	7	1763	1063	994	647
1999	30	6	2501	1968	1309	1230
2000	32	6	3065	2122	1038	1215
Average	24	8	2070	1172	945	805

Source: Worked out from Audit Notes
A = Units with political network B= Units with social network

Chart – V.7



All the variables used for comparing the relative performance of units with political and social networks are presented in a summary form in Table – V.17. Further the units are classified into 'Good', 'Average' and 'Poor' indicating different levels of

performance. It is found that 45 percent of the women industrial cooperative societies in Kannur fall into the 'Good' category, about 15 percent in the 'Average' category and the remaining 40 percent in the 'Poor' category.

Table –V.16
Share of Reserves in Value Addition –Group wise (1994-2000)

	Value Addition (Rs)		Reserves (Rs)		Percentage of reserves in value addition	
Year	A	B	A	B	A	B
1994	24758.00	12103.00	10694.00	1483.00	43.00	12.00
1995	28440.00	6919.00	13682.00	584.00	48.00	8.40
1996	30054.00	3853.00	15126.00	-52.00	50.00	-0.01
1997	52038.00	4935.00	18683.00	844.00	35.00	17.00
1998	50430.00	7796.00	17550.00	1508.00	35.00	19.00
1999	74039.00	12461.00	27877.00	1900.00	38.00	15.00
2000	98091.00	13438.00	36824.00	1460.00	38.00	10.80
Average	51121.43	8786.43	20062.29	1103.86	41.00	11.74

Source : Survey Data
A = Political network B= Social network

Of these units in the 'Good' category, 75 percent belong to group A and in the other two categories the dominant position is occupied by group B. Further more in the 'Poor' category, 73 percent of the units belong to group B. Thus units with political network are far ahead of those with social network in terms of 18 performance indicators given in Table – V.17.

In order to obtain a more precise picture of inter group and intra group differences based on a set of performance variables, we have carried out multiple as well as simple discriminant analyses.

Usually the discriminant analysis technique is used to classify individual units in to one or two or more alternative groups on the basis of a set of measurements. It involves deriving the linear combination of the two or more independent variables that will discriminate between the *a priori* defined groups. This is achieved by the

statistical criteria of maximising the between group variance relative to the within group variance.

Table –V.17
Comparison of Political and Social Network with the major indicators of Performance (1994 – 2000)

Sl.No	Variable	Political Network	Social Network	Performance level					
				Good		Average		Poor	
				A	B	A	B	A	B
1	Current Ratio	5.4	10.6		X			X	
2	Quick Ratio	1.5	5.3		X			X	
3	Net worth (Lakh)	3.4	1.1	X					X
4	Capital employed (Lakh)	0.2	0.2			X	X		
5	Working Capital to Total Capital (%)	4.2	15.2		X			X	
6	Value Addition per unit (Rs)	51121	8787	X					X
7	Value Addition per worker (Rs)	2070	1171	X					X
8	Gross profit (Rs)	63792	5740	X					X
9	Gross profit to cost of production (%)	31.2	7.1	X					X
10	Capital Available per unit of value addition	4.1	2.7	X					X
11	Coverage of TR over TC	1.3	1.1	X			X		
12	Gross profit to capital employed (%)	10.9	10.8	X		X	X		
13	Return on Investment	6.8	-3.7						X
14	Profit per sales (%)	17.4	-18	X					X
15	Employment	19	8	X					X
16	Wages per worker (Rs)	945	805	X					X
17	Share of wages in value addition (%)	46	74		X			X	
18	Share of reserves in value addition (%)	41	11.7	X					X
	Total			12	4	2	3	4	11

Source : Worked out from Survey Data
A= Units with political network B= Units with social network

The discriminant analysis model used in our study is based on six independent variables such as sales, profit (gross), productive capital, capacity utilization, borrowings and employment. The model is specified below.

$D = b_o + b_1 X_1 + b_2 X_2 + b_3 X_3 + b_4 X_4 + b_5 X_5 + b_6 X_6$

D = Discriminant score

b_0 = intercept

b_1, b_2, b_3, b_4, b_5 and b_6 = coefficients

X_1 = Sales

X_2 = Profit (Gross)

X_3 = Productive Capital

X_4 = Capacity Utilisation

X_5 = Borrowings

X6 = Employment

Statistics Associated with Discriminant Analysis

The important statistics associated with discriminant analysis include the following.

1. Canonical correlation: The canonical correlation measures the extent of association between the discriminant scores and the groups.
2. The centroid: The centroid is the main values for the discriminant scores for a particular group. There are as many centroid as there are groups.
3. Classification matrix: Also called prediction matrix, the classification matrix contains the number of correctly classified and misclassified cases. The correctly classified cases appear on the diagonal because the predicted and actual groups are the same for such cases. The off-diagonal elements represent the misclassified cases. The sum of the diagonal elements divided by the total number of cases represents the hit ratio.
4. Discriminant function coefficient: The discriminant function coefficients (unstandardized) are the multiplier of variables, when the variables are in the original units of measurement (for hold out sample).

5. Discriminant score: To obtain the discriminant scores the unstandardized coefficients are multiplied by the values of the variables and their products are summed and added to the constant term (for hold out sample) and standardized coefficients are multiplied by the values for the sample analysis.
6. Eigen value: For each discriminant function the Eigen value is the ratio of between group to within group sums of squares. Large Eigen value implies superior function.
7. 'F' values and their significance: These are calculated from a one-way ANOVA, with the grouping variable serving as the categorical independent variable. Each predictor serves as the metric dependent variable in the ANOVA.
8. Group means and group standard deviation: These are computed for each predictor in each group.
9. Pooled within group correlation matrix: This is computed by averaging the separate covariance matrices for all the groups.
10. Standardized discriminant function coefficient: The discriminant function coefficient is the multiplier when the variables are standardized with mean as zero and variance as one.
11. Structure correlation: Also referred to as discriminant loadings, the structure correlation represents the simple correlation between the predictor and the discriminant function.
12. Wilks's λ: Some times called 'u' statistic, Wilks's λ for each predictor is the ratio of the within group sum of squares to the total sum of squares. Its value varies between 0 and 1. Large values of λ (close to 1 indicate that group means are not different and small values of λ (close to 0) indicate that the group means are different.

The above mentioned statistics are used to find linear combination of the independent variables that maximizes the discrimination between two groups and minimizes the probability of misclassifying individuals or objects into their respective groups.

Hypothesis

a. Null Hypothesis: No significant difference exists between groups in terms of predictor variables. i.e.:

$H_0 = G_1 = G_2$.

b. Alternative Hypothesis: Significant difference exists between groups in relation to predictors, i.e;

$H_a = G_1 \neq G_2$.

The discriminant analysis seeks to explain the following:

1. Between groups variation in relation to within group variation based on Eigen value.
2. Whether significant difference exists between groups based on group centroids.
3. Which variables count most in explaining the inter group differences.
4. The relative importance of predictor with structure correlation called canonical loadings, i.e; simple correlation between predictors and discriminant function.
5. The significance of discriminant function based on Wilk's Lambda.

The discriminant analysis is done in four categories of women cooperatives;

1. Women cooperatives – general divide into units without network as Group-1 and units with network Group-2.
2. Socio –Political network: Units with social network as Group-1, Units with political network Group – 2
3. Garment cooperatives with network according to activity: Contract only units- Group – 1,Contract and manufacturing: Group –2, Manufacturing only- Group –3; and
4. Garment cooperatives without network according to activity: Contract only units- Group- 1, Contract and manufacturing – Group- 2, Manufacturing only- Group- 3.

We shall use simple discriminant analysis to analyse the first two groups and the last two categories are analysed with multiple discriminant analysis to identify the discriminant between the subgroups within each group.

We shall first discuss the simple discriminant analysis (Table- V.18).

Between women cooperatives with and without network there exists significant difference. The group centroid is negative in Group- 1(cooperatives without network) and positive in Group- 2(cooperatives with network). High Eigen value (2.66) indicates the superiority of the function. The Wilk's lambda is close to zero (0.27), which means that the two groups are significantly differentiated. The most important discriminatory variables between the two groups are capacity utilization, product capital, borrowings and gross profit which are more likely to favour units with network because of positive group centroid in Group- 2 as well as the nature of structure correlation matrix attached to these variables. Based on the Wilk's lambda, the significance level is estimated on a chi-square transformation of 58.4 with 6 df which is significant beyond 0.05 level. This means that the women cooperatives with network are significantly discriminated from that of without network.

In the analysis on socio political network also, high Eigen value indicates superiority of the function. The variables in the structure correlation are positive which means that all the predictor variables used in this analysis are more likely to be with political network than that of in social network because the group centroid is positive in Group- 2 (2.07) but in social network the group centroid is an equal negative value (-2.07). More over the value of Wilk's lambda (0.167) is close to zero, which indicates that the two groups are significantly differentiated and favour the units with political network.

Now we shall discuss the multiple discriminant analysis (Table- V.19).

First we shall look into the results of garment cooperatives with network according to activity. Since there are three groups, there are two functions. The first function discriminates between Groups –1 and 2 and the second function differentiate between Groups –2 and 3. The highest Eigen value (6.765) is attached with Function - 1 and hence Group -1 separates from Group-2 and Group –3. The Group centroid is

positive in Group –1 and the signs of all variables in the structure correlation are also positive. This can be further clarified from the value of canonical correlation (0.933 in Function-1) and Wilk's lambda (0.095), which transform the chi-square of 57.677 with 12 df. This is statistically significant at 0.05 levels. Thus it is clear that garment cooperatives with network doing the contract work have better chance of growth and performance in terms of employment, profit, productive capital, sales and borrowings.

A similar analysis is done in the garment cooperatives without network according to activity. The results show that the predictor variables are more likely to be with Group-2 (contract and manufacturing work). This is because the group centroid is positive in Group-2 and the highest Eigen value is seen in Function-1. However the most important predictor variable is gross profit, which discriminate Group –2 from Group-1 and Group-3. The structure correlation and Wilk's lambda (0.122 in Function-1 and 0.618 in Function-2) shows the statistical significance at 0.05 levels of both groups. Group-3 is discriminated from Group-1 and Group-2 with respect to capacity utilization.

Thus we find that cooperatives with network are superior than those without network. Between social and political network, the cooperatives with political network performs better than that of with social network. In the garment cooperatives on activity bases, the units that do contract work (with network) have better chances of success than that of other activities. But in the garments without network the analysis shows that manufacturing units do better than other activities like contract work.

Thus it is proved that the inter unit difference in performance is due to the existence of linkages.

Operational features of Network in the Women Industrial Cooperative Societies in Kannur

A business unit is no longer a single firm, but a configuration of alliances. Network differs from systems. Firms enter into cooperative arrangements with other firms in order to simply gain market share in a quick and almost automatic way.

Changes in the inter firm system of production yield positive and negative consequences for the quantity and quality of labor. Whether they are primarily 'vertical' or 'horizontal' relationship, successful inter firm partnership can have a range of employment consequences. The employment out come may be different depending upon whether inter firm production patterns are occurring in an external or internal way. The network connections operate in different ways in Kannur district.

Mobilization of Job Work and Contract Work

The job work and contract works to women cooperatives are mobilized through both horizontal and vertical net works. There are instances of both vertical and horizontal network, functioning simultaneously between groups. These network that function through contract and sub contract works are based on trust and solidarity.

Marketing Channel (Forward Linkage)

In the growth of any business, marketing is a key determinant. In Kannur the women cooperatives overcome the marketing problem through networking. First let us consider how political network operates. The women cooperatives are introduced to large business firms and trade centers by the administrative heads of local bodies who are active members of political parties. Once they are introduced, the connectivity is established either directly or indirectly with the established traders. They purchase the products manufactured by women cooperatives either in bulk or in part depending on the strength of the connectivity. The subcontracting relationship is one important vehicle to promote small enterprises particularly in employment generation. As already seen the system of contract work has highly influenced not only employment generation but also the overall performance of the women industrial cooperative societies in Kannur.

TableV.18

Simple Discriminant Analysis

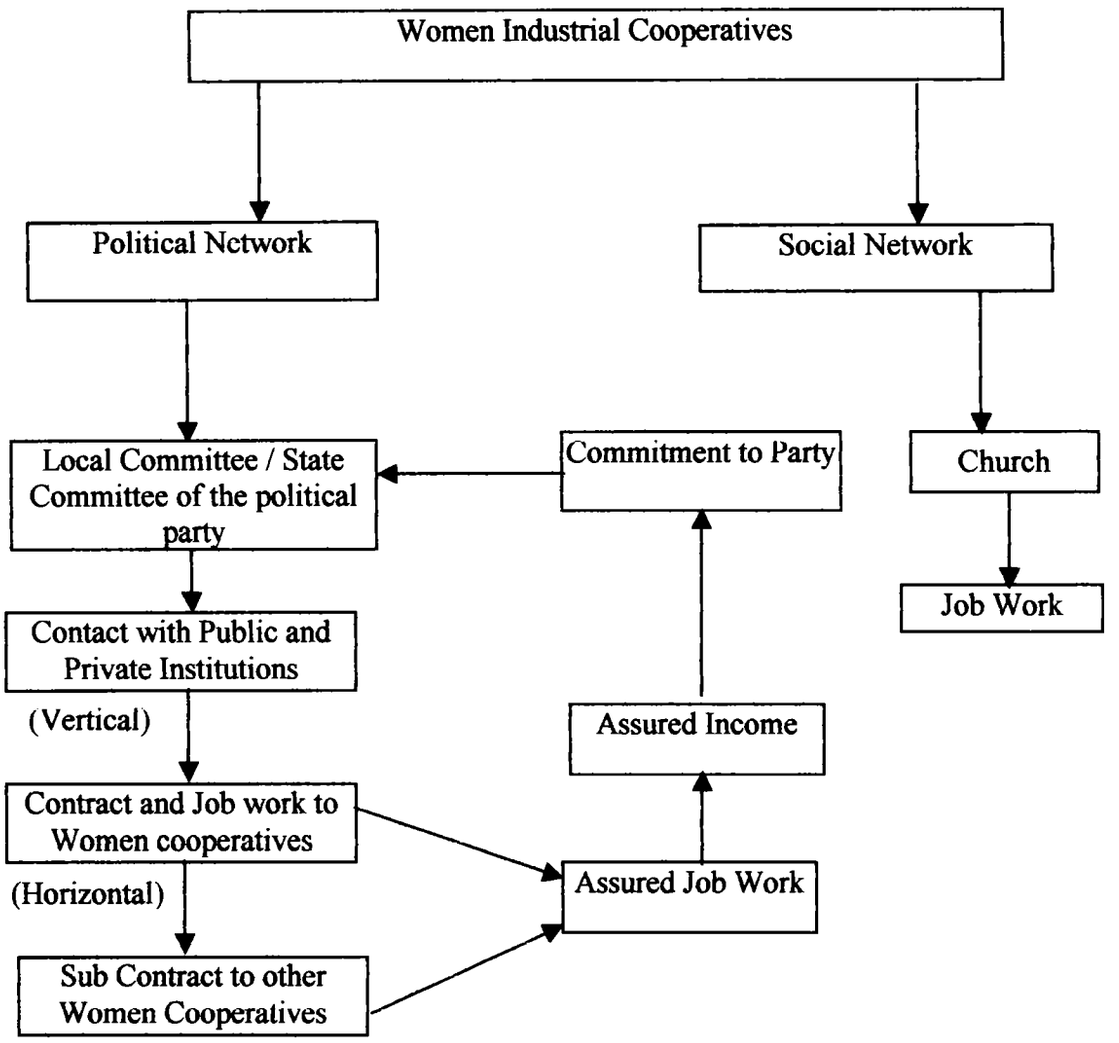
Category	No. of groups	No of Function	Eigen value	Group centroid	Discriminating variables	Univariate F-ratio	Canonical correlation	Wilk's Lambda	df	Structure correlation	χ^2
1.General				F-1	Capacity utilisation	25.09				0.443	
Women cooperatives without network	G-1			(-) 1.599	Productive Capital	10.98				0.293	
					Borrowings	4.19	0.85	0.273	6	0.181	58.4
		1	2.66		Profit	3.74				0.171	
Women cooperatives with network	G-2			1.599	Sales	0.082				-0.025	
					Employment	0.035				0.016	
2.Socio-Political											
					Employment	25.54				0.652	
Social network	G-1			(-)2.071	Productive Capital	19.18				0.565	
		1	5.002		Profit	13.98	0.913	0.167	6	0.483	16.129
					Borrowings	11.56				0.439	
Political network	G-2			2.071	Capital Utilization	5.89				0.314	
					Sales	5.92				0.339	

Table-V. 19

Multiple Discriminant Analysis

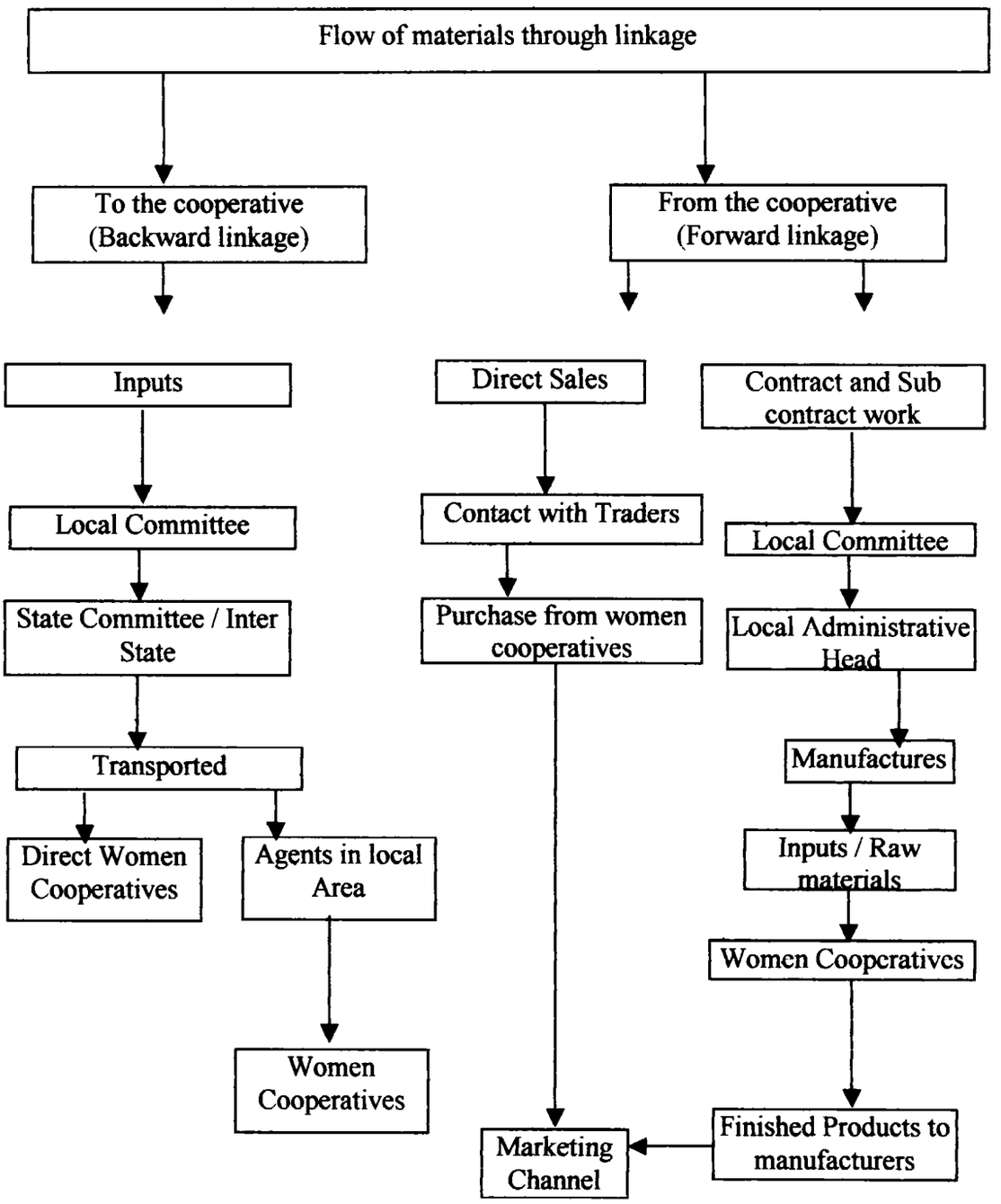
Category	Group No	No of Function	Eigen value Function 1	Eigen value Function 2	Group centroid Function 1	Group centroid Function 2	Discriminating variables	Univariate F-ratio Function	Canonical Correlation Function 1	Canonical Correlation Function 2	Wilk's Lambda Function 1	Wilk's Lambda Function 2	Structure correlation Function 1	Structure correlation Function 2	χ^2 Function 1	χ^2 Function 2	df
1.garment cooperatives with network according to activity							Employment	38.55					0.642	0.437			
							Profit	22.29					0.489	0.292			
Contract only	G-1				3.387	0.193	Productive capital	14.83	0.933	0.512	0.095	0.737	0.385	0.513	57.677	7.46	1
Contract and manufacturing	G-2	2	6.75	0.356	-0.966	-0.769	Capacity utilisation	10.88					0.34	0.245			
Manufacturing only	G-3				-2.421	0.576	Sales	10.44					0.335	0.207			
							Borrowings	7.79					0.259	0.513			
2.Garment cooperatives without network																	
Contract only	G-1				-0.785	-1.055	Profits	98.25					0.619	0.373			
							Capacity utilisation	28.9					-0.175	0.76	246.743	56.634	1
Contract and Manufacture	G-2	2	4.043	0.619	2.728	0.262	Borrowings	18.55	0.895	0.618	0.122	0.618	0.272	0.129			
							Productive capital	21.39					-0.246	0.423			
Manufacturing	G-3				-1.943	0.794	Sales	12.09					0.209	0.202			
							Employment	2.24					-0.023	0.239			

Chart – V.8



In procuring the inputs required such as machines and materials also, the role of linkages is significant. Workers pass information about the availability and prices of the inputs to whom in turn promote them with the necessary contacts. These backward linkages are really a help to women managed enterprises as social inhibition and low mobility of women could be over come by this. The marketing network of women industrial cooperatives in Kannur is depicted in Chart-V.9.

Chart – V.9
Marketing Channel



The foregoing analysis brings to focus the different types of network which women industrial cooperatives in Kannur are involved and the ways in which; they operate. The multiple discriminant analysis has provided us with a framework to understand the interaction between different performance indicators and the impact of networking on each one of them. This analysis and the analysis in the preceding chapters established the fact that political networking has not only been, not a disadvantage to the functioning of the cooperatives, but it positively promotes the business interest and other general welfare of the workers. The next chapter gives summary and conclusion.

Chapter -VI

Summary and Conclusion

The cooperative movement plays a vital role in all walks of life in Kerala for poor women for their integration with the main stream of the society as a suitable institution. (Ramanujam, 1995) The objective of cooperatives, as that of democratically managed firms is the maximization of some combination of income per member and employment stability. In addition, their existence also reflects larger concerns such as commitment to democratic practices, general equality and solidarity that set them away from capitalist firms (Gunn, 2000).

In the present study we have made an attempt to analyse the structure, performance and growth of women industrial cooperatives in Kannur district, Kerala. A key element that promotes growth in cooperatives has been found as social and political networking and more particularly the latter. The study thus seeks to discuss the dynamics of political as well as social networking so as to identify its pressures and possibilities in the structure and performance of women cooperatives in Kannur. The study encompasses all women industrial cooperatives registered at the district industries center, Kannur and that currently exist.

For analytical purpose the women industrial cooperatives are classified broadly into two groups i.e. a group with network and another group without network. To examine the intra group and inter group differences in performance, the cooperatives are further classified on the basis of product as well as the type of activity they undertake. On the basis of product wise classification two product specific cooperatives have been identified, viz., printing and garments. The garment cooperatives are discussed separately in order to study the impact of networks on contract units, manufacturing units and contract cum manufacturing units. The women cooperatives with networking have been further classified into those with political network and social network. The analysis of the structure and performance of women industrial cooperative societies has been carried out with respect to all the groups mentioned above. The variables used are mainly derivate rather than direct. A good deal of the data for the study is taken from audit notes and reports of the

cooperatives for the period 1981 – 2000. The analysis for different groups have been done for different periods, viz., garments for the period 1991 – 2000, product wise analysis for 1993 – 2000 and socio – political networking for the period 1994 – 2000.This study also address inter and intra unit differences in the structure, performance and growth of women industrial cooperatives in Kannur.

In Kannur there are 54 units working as women industrial cooperatives. The age wise distribution of cooperatives in the district shows that 18.5 percent of them have more than 20 years of age and 53.7 percent are old by 10 years or less. Of the total women cooperatives, about 7 percent were formed during the 60s, which are mainly engaged in garment related works. About 46 percent of women cooperatives have political linkage, 16.6 percent social network and the rest have no linkage at all. Further about 51.7 percent of the units, with the political assistance, were formed during 1991-2000.

Generally the cooperatives, which were formed before 80s, have more members, but the share value is small. But the number of members is small and share value high in those cooperatives, which were formed after 1980's. After 1980's, the amount of share capital increased through the women industries programme where government participates as stake holder in the cooperative sector granting six and half times of paid up capital to each unit subject to a maximum of rupees 3.5 lakh which ever is less. In Kannur majority of the women cooperatives are operating on small scale, employing less than 10 workers. Such units constitute 63 percent of the total. The garment cooperatives are engaged in different kinds of activities such as contract work, manufacturing work or both work simultaneously. Most of the contract works are obtained from local private traders, as well as from other cooperatives. Most of them depend on local traders for raw materials. As women run the units, they face both social and economic inhibition to travel to distant places to purchase the required raw materials at cheap rate. The educational status of the workers is poor, as 93 percent of them are educated either below or up to S.S.L.C. Generally job rotation and multi skilling are followed in most of the cooperatives. One of the major

problems the women cooperatives face is the lack of working capital followed by marketing problem.

The competition between cooperatives as well as private traders is very high. Hence the price factor plays an important role. Consequently the inter unit cooperation is very fragile. The women industrial cooperatives in Kannur are engaged in mainly four products viz. garments (61.6 percent), printing (29.2 percent), food products (9.1 percent) and leather goods (0.1 percent). The garment cooperatives follow three types of work such as contract work or manufacturing work or contract and manufacturing work simultaneously. The network actively functions with garments and printing cooperatives. Of the 33 units in garments, about 54.5 percent work with network. However out of the 15 units in printing work, only 26.7 percent operate with network. Again out of 54.5 percent garment cooperatives with network, 6 percent are engaged in contract work, 50 percent in manufacture and the remaining 44 percent do both contract work and manufacture. The contract work is mobilized from private traders, both local and exporters and from other cooperatives, with whom they have the linkage. Similarly, of the 45.5 percent of the units without network, 13.3 percent functions as contract work units, 66.7 percent work as manufacturing and the remaining 20 percent work as both contract and manufacturing. Generally more than 50 percent of the garment units operate as manufactures. About 57 percent of the cooperatives reported finance as the major problem particularly shortage of working capital, and it is found that due to the shortage of working capital coupled with easing of the problem of marketing, around 42 percent of the total garment cooperatives prefer either contract work only or doing it along with the non-contract work.

Locationally the units are more or less spatially distributed in the three taluks of Kannur district viz., Kannur, Thalassery and Taliparamba. Of the total 54 units in the district, 25 units are working with political network. Out of this 60 percent were formed during 1991-2000. Thus the spread of women cooperatives and their political net working activated more during the decade (1991 – 2000). The government of Kerala grants several concessions and incentives to the cooperatives viz., managerial

grant, machinery grant, rent subsidy, subsidy on land and building, furniture grant etc. 85 percent of the women industrial cooperatives in Kannur availed managerial grant, which accounts for 50.8 percent of the total incentives allotted by government, 63 percent obtained machinery grant and rent subsidy was availed by 44 percent.

The cooperatives have the provision of equity participation by government, which depends on the paid up capital of each cooperative. About 53.7 percent of the units obtained less than one lakh rupees as government participation and those obtained more than three lakh rupees accounts for 5.6 percent of the units. As such the capital structure of the very young units (units formed during 1991 – 2000) is much stronger than those, which were formed before 1991.

The garment cooperatives prefer to do contract work either partly or fully, as it involves only a small amount of working capital. 81 percent of wage payment is based on piece rate system. The wages that constitute an important part of the cost structure differs between groups of societies with respect to net working. The wage component of cost varies between 25 and 47 percent on various products depending on network. The difference in material (fabric) price has also been between 20 and 40 percent on various types of fabrics. As the social inhibition to travel restricts the mobility of women to the neighbouring places where the materials are cheap, they are forced to depend on local market. Similarly about 50 percent of the products are marketed directly to consumers in the local area.

The structure and performance of women cooperatives societies have been analysed, grouping the women units into with network and without network. This is followed by product wise analysis and then activity cum network basis. Besides the works are further divided into social network and political network. The inter and intra group variations of these groups are discussed to identify the impact of network on the structure, performance and growth of women cooperatives.

The productivity of cooperatives is measured with the help of value addition per worker. There was significant difference in the volume of value addition per worker between the groups during 1981 – 2000. The women cooperatives with network are seen to be much above those without network in value addition per

worker. The value addition during the post 1991 period is greater than that of the pre 1991 period. This is true with respect to both cooperatives with network and without network. But the value addition per worker in the cooperatives with network recorded an annul average growth of 232 percent which is higher than that of those without net work (129.1 percent) during the 90s. Similarly value addition in the food cooperatives is greater than that in printing or garments. Garment cooperatives that work as contract units have low value addition compared to those doing other types of work. But within the group, cooperatives that do manufacturing work only account for a higher value addition than other subgroups. However the average labour productivity of garment cooperatives based on activities was higher during the post 1990 period. While comparing the units on the basis of activity it is seen that those doing both contract and manufacturing with network do much better in value addition than those doing only manufacturing work. In those cooperatives, which have no network, value addition is smaller.

Not only value added per labor but also, the share of capital (productive capital) in value addition has also been analysed in the different categories of women cooperatives in Kannur. This analysis gives insights into regarding the capital availability of each group, on the one hand and the efficiency of capital to generate value addition in the various groups of cooperatives on the other hand. The broad classification of women cooperatives into those with network and without network reveals that, the share of capital per unit of value addition is more in the former group than in the latter. The share of capital in value addition is greater in printing cooperatives than in garments or food cooperatives. However, compared to those units with network, the garment cooperatives of different activity having no network have very low capital with them. The major reasons for the share of capital per unit of value addition in the units with network to be high is the proportion of total capital employed in the fixed assets either for modernization of existing plant or formation of additional plant. Through linkages the units with network mobilizes additional finance to invest in modernizing the plant. Hence the unit cost of value addition has

gone up. However the level of performance in terms of value addition between the groups is higher in those with network than in those without network.

The structure of cost production is analysed in different groups by decomposing the different components of cost of production. Out of the total cost, the major component is the material cost. In the cooperatives with network, the percent share of material cost is greater than in those without network. The labor cost share declined in both groups, but at different rates. It declined marginally in the cooperatives with network and steeply in those without network; more specially after 1990. The percent share of administration cost is found to be higher in the latter than in the former. It shows the administrative inefficiency in controlling the expenditure on the establishment and contingencies. This is because the cooperatives with network are able to minimise the transaction cost involved in the purchase of raw materials.

The major component in the total cost of production in garment cooperatives irrespective of network is the material cost and the wage component comes only second, but its share in the cooperatives with network is found to be more than in those that without network. In those cooperatives doing manufacturing work only both contract and manufacturing work, the wage component is higher in the group with network than in those without network. At the same time not much difference is found with regards to the material cost between them. In short, the wage component in all the three activities is high in the garment cooperatives with network, whereas the material cost is found to be the major element in the group without network. The inter group difference in cost structure is directly related to the profitability of the units.

The profitability of women cooperatives is examined in terms of gross profit to capital employed, gross profit to cost of production as well as operating profits to sales. In addition the return on investment and capacity utilisation is also examined in all the groups in order to discuss the inter and intra-group differences in these variables. The gross profit to cost of production in the women cooperatives generally

increased over time from 10.9 percent to 25.3 percent, but network connection makes difference. In the cooperatives with network it increased from 8.2 percent to 33.4 percent and declined from 14.6 percent to 12 percent in cooperatives without network during 1981-2000. The profit to cost of production significantly increased in food cooperatives followed by garments. At the same time, it declined in printing cooperatives. Garment cooperatives with network recorded a higher ratio than those with out network. The percent of gross profit to cost of production increased significantly in the former, while in the latter only marginal change occurred. In the garment cooperatives, on the contrary, gross profit as percentage of capital invested is found to be more in the units without network than with network. Similarly, the garment cooperatives doing both manufacturing and contract work show relatively better performance than those doing either contract or manufacturing work alone. In the case of printing cooperatives, units with network as done better.

At the same time, operating profit per unit of sales shows a positive trend in the cooperatives with network. The cooperatives without network have not obtained any operating profit at all during the period under study. The operating loss mounted from (–)3 percent to(-) 41.8 percent. But in the cooperatives with network, operating profit per unit of sales increased from 4.5 percent in 1991to 27.6 percent in 2000. The return on investment is found to be positive in the cooperatives with network where as the cooperatives without network has incurred loss during the entire period. The analysis of return on investment shows the level of efficiency of each group to control and restrict the management cost. Though gross profit is found to be positive in the units without network, net profit is negative. The analysis of capacity utilization shows that none of the product has been able to utilize more than 50 percent of their installed capacity. This is on account of restricted output followed by women cooperatives in order to reduce the stock and inventories. In the network structure personal contacts have direct and indirect influence on the mobilization of finance and consequently on employment and income earned by workers.

The financial features of women industrial cooperative societies are discussed with the help of three ratios viz., current ratio, quick ratio and debt-equity ratio to

understand the short term and long-term financial liquidity. In the women cooperatives in Kannur, the current ratio is safe. The cooperatives with network, is safer than the ones without network. Among the products, the current ratio of food and garment cooperatives has increased marginally though a declining trend is found in all the three products. In the garments, this ratio is found to be safe in those units doing contract work only as well as those doing both contract and manufacturing work. Wirth regard to quick ratio, irrespective of network, product or activity, the quick assets are found to be inadequate to meet the current liabilities. This mismatch is seen to be higher particularly in those cooperatives without network. However in food cooperatives the quick ratio is found to be safer than in others. The debt-equity ratio of cooperatives with network is reported to be less than that of without network. Although the volume of net worth over the years has not declined, yet due to huge borrowings this ratio is low in all the groups with network, except in the contract work units in the garment sector with network, during the period 1991-2000. The cooperatives without network have very low borrowings; even then their net worth is rather small. This is evident from the profit-loss account and balance sheet. Share capital, net profit and reserves constitute the major segments of net worth .The capital base structure shows that the size of share capital in cooperatives with out network has been smaller than that in those with network. Although the financial features are seen to be more or less safe, wide differences exist between groups. One of the general features of women cooperatives in Kannur is the poor working capital, which is evident from the quick ratio. The performance level based on financial features (quick ratio, current ratio and debt-equity ratio) shows 60 percent below 'Good' level in the units with network, where as in the below 'Poor' category, 62.5 percent are those units without network.

The employment scenario in the women industrial cooperatives in Kannur is not very encouraging. It is found that in the cooperatives with network, employment increased only marginally where as in the other group with no network, it declined by more than 50 percent over the period. It is only in the garment cooperatives with network, that the size of employment recorded significant growth from 15 to 99. On

the other hand in the garment cooperatives without network employment in cooperatives of all the three types of activities declined drastically. In contract work units, employment declined by 70 percent. In the cooperatives doing contract and manufacturing work simultaneously, the same dropped by 73.7 percent and in the manufacturing units it decline by about 63 percent. In the printing cooperatives with network employment showed a marginal improvement over the period. It increased by 42.8 percent in those having network, where as in the printing without network, the employment declined by 20 percent. Even though capital per worker has been more in the cooperatives with network, no significant change in the size of employment has occurred although capital availability is a determinant factor in employment generation.

With regards to wages rates it is found that except group of women cooperatives without network, it increased in all other groups by the year 2000 compared to 1981 though differences exist between them. The wages declined around 13 percent by 2000 compared to the wages in 1981 in the cooperatives without network. The wage rate is seen to be more in food cooperatives than in garments or printing. It is found to be the lowest in printing cooperatives. However the wage rates increased in all the three products over the period. The garment cooperatives with network doing the contract work pay more wages to their workers. The percentage share of wages in value added declined in cooperatives with network but in the cooperatives without network it increased marginally. On the contrary, with regards to the size of reserves with the cooperatives, it is found that its volume increased in all the groups over the period. But between cooperatives with and without network, the reserves are higher in the former group than the latter. In the manufacturing units with network reserves are seen to be very high. Among those garments without network that do manufacturing, the reserves are found to be relatively small.

This analysis shows that reserves and wages have a strong inverse relationship. Hence cooperatives that keep more reserves have more net worth in the long period. Thus the welfare of the collectives are taken care of and not the welfare of the members. The volume of reserves and wage payment depend on the decision of

the Director Board of Cooperatives. This has direct bearing on the status of women cooperatives with respect to their level of assets over liabilities both in the short period as well as in the long period.

The socio - political networking is further analysed using the concept of social capital. Twelve attributes of social capital have been identified and a composite index is worked out in this context. As shown earlier, the cooperatives have been classified into three groups viz. cooperatives with political network, cooperatives with social network and cooperatives with no network. The group that obtains the highest score is assumed to be having the highest level of social capital. The cooperatives with political network obtained 48 percent of total scores where as 28 percent of the scores accrued to those with social network and 24 percent to the ones without network. Some of the attributes are found to be common to all groups, such as, level of education, sharing of benefit and income, financial stake and distribution of power. The attributes related to administration and management is found to be unique with political network group.

Once we found that networks have helped societies to function well, we have proceeded to a comparison of social and political network in women cooperatives in Kannur. The short-term financial structure reveals that both groups have been above the satisfactory level and between two groups, social network is found to be having an edge over political network. The net worth shows that the group with political network has been far ahead of the other groups. More over the major component of net worth is found to be share capital, which is much higher in political network units than in social network. The total capital employed by each group reveals their capital base, which is closely related to the volume of share capital. Comparing the two groups in terms of capital base, the political network group has 21.8 times capital of the social network group. However the percent share of working capital in the total capital employed is found to be comparatively low in the political network group.

Capital per unit of value added shows a higher ratio for the group with political network. While decomposing value addition, it is found that the percent of profit accrued to political network group has been greater than that of the other group.

At the same time the wage component is found to be just the opposite i.e. less in political network than those in social network.

An analysis of the structure of cost of production shows that the major item in the total cost has been the purchase cost. It is higher in social network than in political network, and it accounts for more than 50 percent of total cost. The cost of management is also found to be greater in social network (10.7 percent average) than in political network (7.2 percent). The wider political network connection of cooperatives enables them to obtain materials from neighbouring states at relatively cheap rate either through agents or through personal contacts which reduces the transaction cost considerably. The ratio of profit to cost of production is higher in units with political network than in units with social network.

The efficiency of the cooperatives with political and social network is discussed by analyzing the gross profit and net profit earned by these two groups using the ratio of gross profit to capital employed and return on investment. The percent of gross profit to capital employed increased in both groups, but it is found to be comparatively better in social network than political network. However the return on investment (average) in the political network group is positive, where as it is negative in the social network group except the year 2000. This is because of the comparatively high administrative cost incurred by the cooperatives with social network. The percent of net profit per sales also reveals a similar result in both the groups i.e. positive through out the period of analysis in the political network, but negative except the year 2000 in social network. A comparison of wages earned and the size of employment between the two groups also show clear difference between them. The size of employment is more in the political network group but in the social network group, it is small and declining. But in the social network groups, the reduction in the size of employment accompanies a hike in wages. This shows a particular tendency of the restriction of the size of employment in order to maximize the income per worker. But in the political network group, both employment and wages increased though marginally during the period 1994 – 2000. However comparing the income earned (average) in both groups, it is found that a worker in a

political network group obtains more income than one in a social network unit. Contrary to the experience of social network, the size of employment in political network groups is not restricted so as to maximize income per worker. On the other hand the workers accept a wage cut in order to increase the size of employment.

Moreover though the value addition per worker has been greater in the political network than social network, the percent share of wages in value addition is seen to be lower in the former than those in the latter. The major component of the value addition constitutes profit, of which a major portion is kept as reserves. It further highlighted the tendency of the cooperatives to increase the welfare of the collectives rather than the individual economic interest. The reserves of the cooperatives with political network have been between 30 and 50 percent of value addition where as in social network, it is found to be between –0.01 and 1.9 percent. This shows comparatively high potentiality of cooperatives with political network over social network with respect to long – term sustainability.

The variables examined to analyse the performance of women industrial cooperatives in Kannur showed that there exists inter unit difference in almost all the variables. The efficiency parameters (value addition and profit) used in the study to examine the performance between groups show that there exists significant differences between cooperatives with network and without network. The financial structure shows that the short term liquidity of women cooperatives in Kannur favour more the units which have political network; but the long term financial coverage is seen to be highly geared in this group, not because of a decline is net worth but due to highly proportionate increase in financial liabilities in the form of borrowings. The comparison of performance between political and social network shows that political network is more growth promoting than social network in almost all the variables analysed.

A simple discriminant analysis is carried out to gauge the differences between groups has come out in favour of cooperatives with network. The most discriminator is profit, which favours cooperatives with network, similarly between the social and political networking the difference is significant in favour of political network. In this

analysis employment is the most discriminator between groups. Thus our analysis has clearly shown that networks have been a growth-promoting factor with respect to women cooperatives in Kannur. It all depends on the type of network and their attitude towards the women managed enterprises. The existence of networking in general and political net working in particular has stimulated the growth and performance of the women cooperatives in Kannur.

The encouragement given by the government through financial stake and other incentives has been the major factor in the formation and growth of women cooperatives.. The networking in general and political network in particular promotes the mobilization of institutional finance for women cooperatives. Besides networking reduce their marketing problem through mobilization of contract work. More over the local committee party workers are more vigilant in the daily business of women cooperatives. The regular monitoring of cost of administration enables them to control it, which is a major factor in the cost components. As a result both productivity and efficiency improves in the cooperatives. To those who have no networking they face variety of problems related with productivity. Though networking is seem to be a positive factor in the functioning of women industrial cooperatives in Kannur, we were not able to examine all the dynamics of networking in the present study. An important area that requires detailed investigation is the impact of the growth of women cooperatives on the development of politics in Kannur. Similarly issue related with employment status requires further research; though employment generation has been considered as a primary objective of a cooperative, the general scenario is not been in tune with they capital invested in the women cooperatives. Hence, this issue seeks further research to understand the relation between employment and capital in a cooperative society. In short the present study helped to capture the impact, role and dynamics of networking in general and socio political network in particular in relation to intra and inter unit differences on the structure, growth and performance of women industrial cooperative societies in Kannur district.

Bibliography

1. Abell Peter and Nicholas Mahoney (1988), **Small Scale Industrial Cooperatives in Developing Countries,** Oxford University Press.
2. Ammirato, Piero (1996), **The Making of a Successful Cooperative Network**, Aldershot, Ashgate Publishers, U.K.
3. Anasuma B and T.Kikutani (1992), *Risk Absorption in Japanese Sub Contracting: A Micro Economic Study of Automobile Industry*, **Journal of Japanese Industrial Econmics** Vol.6 No.1: 1 – 29.
4. Attwood D.W and B.S. Baviskar (1987), *Why do Some Cooperatives Work but not Others ? – A Comparative Analysis of Sugar Cooperatives in India*, **Economic and Political weekly**, Vol.22. No.26.
5. Attwood D.W and D.S. Bhaviskar (1995, **Finding the Middle Path – The Political Economy of Cooperatives in Rural India**, West View Press, U.S.A.
6. Atwood DH and B S Baviskar (1988) (ed), **Who Shares? Cooperatives and Rural Development** , Oxford University Press.
7. Axellson B and G Easton (1982) (eds), **Industrial Network: A New View of Reality**, London, Routledge.
8. Axelrod R (1984), **The Evolution of Cooperation**, Basic Books, New York.
9. Bailey Jack (1960), **The Bristish Cooperative Movement**, Hutchinson University Library, London.
10. Banaerjee, Mukul (1965), *Role of Women's Organization in the Promotion of Cooperatives*, **Indian Cooperative Review**, Vol.2 , No.3: 417.
11. Baviskar B S (1980), **The Politics of Development: Sugar Cooperatives in Rural Maharashtra**, Oxford University Press.
12. Berger, L Peter (1998) (ed) **The Limits of Social Cohesion: Conflict and Mediation in Pluralistic Societies**, Boulder, Colo: West view Press.
13. Bhaviskar B.S and Atwood (1991), *Fertile Grounds : Why do Cooperatives Flourish in Western India*, **IASSI Quarterly**, Vol.9, No.4.
14. Bhownuk, Sharit (1983), *Producer Cooperative in Tea Industry in India*, In Records, Alan and Philip . L. Martin (ed) **The Social Impact of Mechanization and Agricultural Labor Market in Egypt**, Boulder, West view
15. Biswas, Pradeep, Kumar (1998), *Technological Change and Form of Production Organization- A Case Study on Handloom Cooperatives and Conch Shell Products in West Bengal*, **Margin**, Vol. 30, No.2.
16. Bonin P John and Louis Putterman (1993), *Theoretical and Empirical Studies of Producer Cooperatives: Will Ever the Twain Meet?* **Journal of Economic Literature,** Vol.XXXI, September.
17. Bourdieu P (1993), **Sociology in Question**, Sage Publications. London.
18. Buchanan James B and Gordan Tullock (1965), **The Theory of Cooperative Choice**, University of Michigan Press.
19. Campbell, Duncan (2000), *Is the Single Firm Vanishing?* **Inter Enterprise Net Works,** Labor and Labor Institutions, International Institute for Labour studies
20. Casson M C (1995), **Entrepreneurship and Business Culture**, Aldershot, U.K and Bookfield, U.S: Edward Elgar.

21. Census of India (2001), *Series 33*, **Kerala Provisional Population Totals,** Paper 1of2001.
22. **Centre for Monitoring Indian Economy** (2000), *District People – Kannur*, Mumbai, October.
23. **Centre for Monitoring Indian Economy** (CMIE), June –2001, Bombay.
24. Chikwendu, Eudora (1995), *Women Cooperatives and Economic Recovery in Nigeria*, Vol.III, Issue-1.
25. Chiplin B and J. Coyne (1988), *Some Economic Issues of a Worker's Cooperative Economy*, In A.C.Layre (ed) **The Political Economy of Cooperation and Participation: A Third Sector**, Oxford University Press.
26. Choubey R B (1978), *Problems and Prospects of Weavers Cooperatives*, **Indian Cooperative Review,** Vol. XV. No.3
27. Coase R. H (1937), **The Nature of the Firm**, Economica, No.4.
28. Coleman J (1988), *Social Capital in the Creation of Human Capital*, **American Journal of Sociology** 94: 95-120
29. Coleman, James S (1990), **Foundation of Social Theory**, Cambridge, Mass: Harvard University Press.
30. Conforth, Chris (1995), *Pattern of Cooperative Management Beyond the Degeneration Thesis*, **Economic and Industrial Democracy,** Vol.16, No.4: 487 – 523.
31. *Cooperatives in Malaysia*, **Regional Seminar**, New Delhi.
32. Cornforth, Chris; Allan Thomas; Jenny Lewy and Roger Spear (1988), **Developing Successful Worker Cooperatives,** Sage Publications, New Delhi.
33. D'Cruz M (1981), *The Role of Women in the Japanese Agricultural Cooperative Movement*, **International Cooperative Alliance**, New Delhi.
34. D'Cruz M (1985), *Women Industrial Cooperative Societies in Bangalore – A Case Study*, **International Cooperative Alliance**, New Delhi.
35. Das, Mohan M (1982), ***Women Cooperative Development in India***, **Tamil Nadu Journal of Cooperation** Vol.79. No.2
36. Dawar, K R (1990), *Returns to Scale and Factor Productivity in Cooperative Sugar Factory in Punjab and Haryana*, **Indian Journal of Industrial Relations** Vol. 26, No 2: 166-171.
37. Ealayath K.M.N (1984), *Cooperative Democracy and State Control*, **Cooperator**, Vol.XXI. No.1.
38. Economic Review, State Planning Board, **Issues of 1985-2000**, Government of Kerala, 1Trivandrum.
39. Ellerman D.P (1984), *Workers Cooperative- The Question of Legal Structure*, In Jackall Robert and H Levin (1988)(ed), **Workers Cooperatives in America**, Berkely, University of California Press.
40. Fireman, Bruce and Willliam A Gamson (1979), *Utilitarian Logic in the Resource Mobilisation Perspeective*, In Mayor N Zold and John D. Mc Carthy (eds), **The Dynamics of Social Movements: Resource Mobilisation , Social Control and Tactics**, Cambridge, Mass: Winthrop, pp: 8-44
41. Frnake, W Richard; Thomas, Isac and Pyarelal, Ragavan. (1998) **Democracy at Work in an Industrial Cooperative- Story of Kerala Dinesh Beedi**, Oxford University Press.

42. Fukuyama F (1995), **Trust: The Social Virtues and the Creation of Prosperity**, The Free Press Paper backs, New York.
43. Gandhar V and Reddy, Raji K (1982), *Working of Warangal Carpet Industrial Cooperative Society*, **Indian Cooperative Review**, Vol.XX. No.1
44. Gawi, Gawen ﷺ (1998), *Job Creation by Cooperatives in Selected Asian Countries: Philippines*, **ILO Un published Document. Geneva.**
45. Ghuman B S and Anil, Monga (1987), *Performance of Cooperative Sugar Mills in Punjab*, **Indian Cooperative Review**, Vol.XXV. No.1
46. Goldar BN. (1956), **Productivity Growth in Indian Industry Studies in Economic Development and Planning**, Allied Publishers, New Delhi .
47. Govindappa G.T (1996), *Primary Women Handloom Cooperatives in Karnatak: A Case Study*, In R.Rajgopalan(ed) **Rediscovering Cooperation**, IRMA, Anand, Gujarath.
48. Grootaert, Christian and Deepa, Narayan (2001), *Local Institutions, Poverty and House Hold Welfare, In Bohivia*, **The World Development Social Development Family, Environmentally and Socially Sustainable Development**, New York..
49. Grootert, Christian (1998), **Social Capital, House Hold Welfare and Poverty in Indonesia**, World Bank.
50. Grrootaert Christian (1998), *Social Capital: The Missing Link*? **Social Capital Initiative Working Paper**, No. 3, The world Bank, Washington DC.
51. Gunn, Christopher (2000), *Markets against Economic Democracy*, **Review of Radical Political Economics,** Vol. 32, 3: 448-460.
52. Henk, Thomas and Chris, Logan (1982), **Mondragon -An Economic Analysis**, George Allen and Union, UK.
53. Henry M Levin and Robert Jackall (1984) (eds), **Workers Cooperative in America**, Berkley, University of California Press.
54. Hopkins S Nicholas (1976), *Cooperatives and Non-cooperative Sector in Tunisia and Egypt*, In Nash J Dandler and N.S Hopkins (ed) **Participatory Decision Making and Modern Cooperatives in Mali. Notes Towards Prospective Anthropology**, Popular Participation in Social Change. The Hague, Mouton .
[illegible], New Delhi.
55. International Labour Organization (1999), *Role of ILO in Technical Cooperation*: **Report VI to the 87th Session of the International Labour Conference**.
56. Ireland J Norman and Peter Law J (1982), **The Economics of Labour Managed Enterprises**. Croom Helm Ltd. London.
57. Jackall Robert and Joyce Crain (1984), *Contemporary Small Cooperative Movement – The shape of Cooperative Movement* in Jackall Robert (ed) Workers **Cooperatives in America**, University of California Press.
58. Jain Devaki ; Nalini Sinh and Nalini Chand (1976), *Milk Made of Kheda Districts*, **Indian Council of Scientific Research Project,** Vikas.
59. Jarillo J C (1988), *On Strategic Networks*, **Strategic Management Journal**, Vol.9 No.1.

60. Jones C Derek (1984), *American Producer Cooperatives and Employee Owned Firms – A Historical Perspective*, In Henry M Levin and Robert Jackall (ed)(1984) **Worker Cooperatives in America**, University of California Press.
61. Joseph, Toney (1988), Comparative Analysis of Cottage and Factory Sub Sector of Cooperative Sector in the Handloom Industry in Kerala – M.Sc Thesis, College of Cooperation and Banking, Kerala Agricultural University, Mannoothy. Trichur
62. Kajipet, Om Prakash and Narayan, Reddy, Rapole (1989), *Industrial Cooperatives – A Better Solution for Rural Unemployment*, **Kurukshethra** Vol.37, No.7.
63. Kawasaki S and J McMillan (1987), *The Design of Contracts: Evidence from Japanese Sub Contracting*, **Journal of Japanese and International Economics**, Vol. No.3 : 327 – 349.
64. Knoke, David (1990), **Political Net Work: The Structural Perspective**, Cambridge University Press.
65. [illegible] and Sara Ahmad (1995), *Status of Women Cooperatives in Gujarath*, **Mimeogarph**, Canadian Council for International Cooperation.
66. Krusch, P A (1996), *A Study of Cooperatives and Inter firm Cooperation in Kannur District –Kerala*, In Raja Gopalan R (ed), **Rediscovering Cooperation- Vol. III**, IRMA, Anand, Gujarath.
67. Kulandai Swamy and John Winfred (1987), **History of Economic Thought**, Rainbow Publication, Coimbatore.
68. Kulandai Swamy V (1996), *Emerging Agri Business Complexes – A Study of Two Cooperatives*, In Rajagopalan R (ed) **Rediscovering Cooperation**, Vol. II, IRMA, Anand, Gujarat.
69. Kulandaiswami V (1994), *Future of Cooperatives*, In Bhatia B S ; H L Sharma and Mahesh C Garg (eds) **Encycl paedia of Cooperative Management in Meta Physics of Cooperative Movement, Vol. 1**, Deep and Deep Publication, N. Delhi
70. Kumar Ambili V (1999), *Productivity: A challenge Before the Coir Cooperatives*, **Cooperative Prospective**, October – December.
71. Kumar, Shiva S (1998), *The Cooperative Movement in India – Restructuring of Cooperative Support Services in Asia and Pacific*, **Proceedings of a Regional Workshop**, (April 19 – 23), National Cooperative Union of India, New Delhi.
72. Kuttikrishan A.C (1985), *The Handloom Industry in Kannur*, **Ph.D Thesis**, University of Calicut, Kerala.
73. Lall S (1980), *Vertical Inter firm Linkages in Less Developed Countries – An Empirical Study*, **Oxford Bulletin of Economics and Statistics**, Vol.42, No.3: 203 August.
74. Langan Chenn (1999), *Expanding Women Cooperatives in China through Institutional Linkage*, **Development and Change**, Vol.30. No.4. Blackwell Publishers, Institute of Social Science, The Hague.
75. Langdon I.A (1996), *Contemporary Capital Flexibility Within a Cooperative Structure*, **The World Cooperative Enterprise**, Plunkett Foundation.

76 Lars Kivst and Claes, Suvensson (1981), *Worker Owned Companies in Swedan*, **Paper Presented at the International Conference on Producer's Cooperatives**, Copenhagen, Denmark.
77 Lokanathan.P and Paul A Salavaraj (1997), *Democratic Management and Efficiency in Industrial Cooperatives*, **Indian Cooperative Review**. Vol.35. No.2.
78 Lynons, B R and S. Baily (1993) *Small Sub Cotractors in U.K Engineering - Competitiveness, Dependence and Problems*, **Small Business Economics**, No.5: 101 – 109.
79 Machika, YaJima and Nobuhiko, Orito (1990), *Women and Cooperative Community – Producer's Cooperative in Japan*, **The other Economic Summit**, Houstan.
80 **Madras Cooperative Mannual, Vol. 1 &II**
81. [illegible]
82. Marshal G.P and B.J Me Cormek (1986), **Economics of Managerial Decision Making**, Basil Blackwell Ltd, Oxford, U.K.
83. Mathew George (1987), **Handloom Industry in Kerala – A Historical Analysis, Unpublished Ph.D Thesis**, Department of Applied Economics, Cochin University.
84 Mauel P.M (1987), *Capacity Utilization in the Handloom Industry in Kerala with respect to Weaver's Industrial Cooperatives*, **M.Phil Thesis,** Department of Applied Economics, Cochin University.
85 Mayoux, Linda (1995), *Alternative Vision of Utopian Fantacy – Cooperatives, Empowerment and Women Cooperative Development in India.* **Journal of International Development**,Vol.7, No.2: 211 – 228.
86 Mehta S.C (1975), **Industrial Cooperatives in India**, Atma Ram and Sons, New Delhi.
87 Menon, Sreedharan A (1972), **History of Kannur**, Kannur Gazetteer, Kerala, Trivandrum.
88. [illegible], **World Development Report**, Vol.29, No.2: 239.
89. Mohanan H (1998), *Employment Creation Through Cooperatives in India*, **International Labour Organisation Un Published Document,** National Institute of Rural Development (Hyderabad)
90 Molly, Joseph and Saradha R.N (1988), *The Level of Women Participation in Cooperatives*, **Tamil nadu Journal of Cooperation,** Vol. 79. No.7.
91 Nadiri, Ishaq M (1970), *some Approach to the Theory and Measurement of Total Factor Productivity: A Survey,* **Journal of Economic literature**, Vol.2.
92. Nambiar K Krishnan (1972), *Progress of the Cooperative Movement in Kerala*, **Kerala State Cooperative Bank Ltd**.
93 Narayana, Deepa (1999), *Bonds and Bridges: Social Capital and Poverty*, **Policy Research Working Paper-2167**, Poverty Division, Poverty Reduction and Economic Management Net Work, World Bank, Washington D.C.
94. Natarajan , Hema (1989), *Women Cooperatives in Kerala*, **Kerala calling**, Vol .9, No.7.

94. Nicholas, Hopkins S (1976), *Cooperatives and Non-Cooperatives in Tunisia and Egypt,* In Nash. J; J. Dandler and N.S. Hopkins (ed) **Participatory Decision Making and Modern Cooperatives in Mali: Notes Towards a Prospective Anthropology,** Popular Participation in Social Change, The Hague.Mouton.
95. Nikham G.A (1986), *Financial Strength of Sugar Cooperatives – A Ratio Analysis Approach*, **Indian Cooperative Review**, Vol.XXIII. No.3
96. Nilsson, Jerker (1996), *The Nature of Cooperative Values and Principles: Transaction Cost and Theoretical Explanations*, **Annual of Public Cooperative Economics**, Vol. 67, No.4: 633-653.
97. Ostrom E (1995), *Incentive Rules of the Game and Development*, In M. Bruno and B. Pleskovic (eds), **Annual Bank Confereence on Development Economics**, Washington DC, World Bank.
98. Padmini C (1998), **Status Paper on Industrial Cooperatives- Issues for Further Research,** Project Report submitted to Kerala Research Programme in local level Development, Center for Development Studies, Trivandrum.
99. Panicia, Ivana (2002), **Industrial Districts- Evolution and Competitiveness in Italian Firms**, Edward Elgar Publishing Ltd, U.K
100 Pathima P and Rosnah, Siti, Ahmad, Haji (1981), *General Situation of Women*
101. Patro, N Nicholai (2001) *Creating Social Capital in Russia: The Novgorod*
102. Pillai, Vijaya, Chandran B(1997), *Production and Marketing Problems of Cooperatives in Kerala,* **Sahakarna Veedhi** , Vol.20, Issue, No.2 April.
103 Pillia, Vijaya, Chandran and Pavithran, K, B (1997), *Production Problems of Coir Cooperatives in Kerala – A Cooperative Study in the Private Sector*, **Indian Cooperative Review**, Vol. XXX IV, No.3: 213-18.
104 Powell W W (1990), *Neither Forms of Organization* in Thompson G; J Francis; R Levacic and J Mitchell (1991), **Markets, Hierarchies and Networks**, Sage Publications, London.
105. Prakasas P. Siva (1996), *Inter and Intra Relationship in Cooperative Marketing Structure –An Empirical Study*, In Rajagopalan R (ed) **Rediscovering Cooperation**, Vol. II, IRMA, Anand, Gujarat.
106. Prakash, Om (1987), **Ratio Analysis for Management in New Perspective Management Ratio**, Himalaya publishing, Bombay.
107. Programme Evaluation Organization, Planning Commission, Government of India. 1967. pp: 59-64.
108. Putnam D Robert (1993), *The Prosperous Community: Social Capital and Public Life*, **American Prospect** 13: 35-42.
109. Putnam D Robert (1995), *Bowling Alone: America's Declining Social Capital,* **Journal of Democracy,** 6 (1).
110. Raghavan, Pyarelal (1995), *Dynamics of Industrial Cooperatives in Kerala* – **Ph.D Thesis**, Jawaharlal Nehru University, New Delhi.
111. Raghavan,Pyarilal (1986), *Organisation of Production in Beedi Industry.* **M.Phil Thesis** , Jawaharlal Nehru Univerasity, New Delhi.
112. Rajagopaln R (1996) (ed), **Rediscovering Cooperation**, Vol. III, Institute of Rural Management Anand, Anand, Gujarat.

116. Rajagopaln V (1986), *The Handloom Industry in North and South Kerala – A Study of Production and Marketing Structure* – **M.Phil Thesis**, Department of Applied Economics, Cochin University of Science and Technology, Cochin.
117. Rajagopaln V (1988), *Economics of Cooperative Rice Mill – A Case Study*, **Indian Cooperative Review**. Vol.26. No.1
118. Ramanujan, K N (1995), *Women Cooperatives and Economic Development* **Kurukshetra** , November.
119. Rami Reddy S (1997), *The Economic Theory of Cooperatives*, **Southern Economic Review**, Vol.4.
120. Rana J.M (1965), *Cooperation and Small Industries in South East Asia*, **Cooperative Series**, International Cooperative Alliance, New Delhi.
121. Rao V.M (1996), *Warana Milk Cooperatives and Women Producers*, In Rajagopaln V (ed), **Rediscovering Cooperation**, Vol.1, IRMA, Anand.
122. Rao V.M (1996), *Warana Milk Cooperatives and Women Producers*, In Rajagopaln V (ed) (1996), **Rediscovering Cooperation**, Vol.1, IRMA, Anand, Gujarat.
123. Rao, Sudhakara and Sambasiva, Rao (1979). **New Industrial Possibilities in Kannur District**, Small Industrial Extension Training Center, Hyderabad.
124. Ray, Sanjay (1997), *Weavers Cooperative Societies in Tripura,* **Cooperative Prospective**,Oct – Dec, 1997. Vol.32, No.3, PP: 38 – 46
125. Ray, Sanjay (1997), *Women Cooperative Societies in Tripura*, **Cooperative Prospective**. Vol.32 . No.8
126. Rayudu C.S (1987), *Financial Management in Industrial Cooperative in India – A Case Study of Spinning Industry*, **Indian Cooperative Review**, Vol. XXIV No.3.
127. Reddy S Rami (1977), *The Economic Theory of Cooperatives*, **Southern Economist**. Vol.4.
128. *Report* (1958), **First Working Group on Industrial Cooperatives**, Ministry of Industries and Commerce, Government of India.
129. *Report* (1980), **Evaluation of Women Industries Programme in Kerala** , Department of Economic and Statistics, Government of Kerala , Trivandrum.
130. *Report* (1998), **Committee for Evaluation of Women Industries Programme in Kerala**, State Planning Board, Government of Kerala, Trivandrum
131. Report Committee for Evaluation of Women Industries Programme (1998), State Planning Board, Government of Kerala, Trivandrum.
132. *Report*, **Cochin Banking Enquiry Committee** (1920).
133. **Report**, Ministry of Commerce and Industry, Government of India, 1959 .pp: 18-19.
134. *Review of Cooperative Movement in India (1952 - 54)*, **Reserve Bank of India**, Bombay.
135. Riba R (1981), *Enhancing Women's Participation in Cooperative Activities in North Eastern India*, **Regional Seminar**, New Delhi.
136. Robert Jackall and Joyce Crain (1984), *Contemporary Small Cooperative Movement - The Shape of Movement*, In Henry M Levin and Robert Jackall (ed)(1984) **Worker Cooperatives in America**, University of California Press.

137. Ronald S Burt (1982), Towards a Structural Theory in Action, New York Academic Press

132 Ronald S Burt (1982), **Towards a Structural Theory of Action**, New York Academic Press, New York.

139. Roony Patrick Michael (1988) Worker's Participation in Employee owned firm,

138. Roony, Patrick, Michael (1988), *Worker Participation in Employee Owned Firm.* **Journal of Economic Issues**, Vol.22, No 2 : 451-456.

134 Rosario, Lazaro and Santos G Rosalina (1981), *Women Participation in Cooperatives in the Philippines*, **Regional Seminar**, New Delhi.

135 Sampson, Robert J; S W Raudenbush and F. Earls (1997), *Neighbourhoods and Violent Crime: A Multi Level Study of Collective Efficiency*, **Science**, 277: 918-924, August 15.

136 Sen, Ratna (1995), *Worker's Industrial Cooperatives and Worker's Management*, **Indian Journal of Industrial Relation**, Vol.30. No.3.

137 Sen, Ratna (1995), *Worker's Industrial Cooperatives and Worker's Management*, **Indian Journal of Industrial Relation,** Vol.30, No3.

138 Sharma S Prem. (1998) *Need for Women at the Forefront of Cooperative Movement*, **Cooperator**, Vol. XXXVI, No.11. May.

139 Sharma, Ravinder; Moorthy and Chauhan (1980), *Cost – Benefit Analysis of Tea Cooperative*, **Indian Cooperative Review**. Vol.26. No.3

140 *Shramskathi*, **Report (1998), National Commission of Self Employed Women and Women in Informal Sector**, Ministry of Human Resource Development, Government of India.

141. Shreegouri V Savadi (2001), *Women Enterprises in India: Scope and Opportunities*, **Southern Economist**, Vol.40, No.8, August 15.

142 Singh Somorendro (1999), *Women in Cooperatives – A Case Study of Thang jam Leikai Weavers Cooperative Society*, **Maharashtra Cooperative Quarterly.** Vol XXXIII No.1

143. Singh, Rai (1987) Potential areas of women participation in Cooperative movement, cooperator, Vol.XXIV, No.21:654 – 655.

144 Singh,Trivedi and Rajendra Singh (1982), *Bunker Sahakari Samithi Ltd – Gorakhpur, Utter Predesh*, **Indian Economic Renew**; Vol. X X , No. 2: 139.

145 Sinha J N and Sawhney P K (1970), **Wages and Productivity in Selected Indian Industries**, Vikas Publishing House, New Delhi.

146. Sisodia S S (1998), *Economic Empowerment Alone Give Meaning and Substance to Social Emancipation of Women*, **Cooperator**, Vol. XXXVI, No.5. November.

147. *Small Industries Entrepreneurship Training Institute- Hyderabad, Case Studies on Industrial Cooperatives(1988)*, **National Cooperative Union of India**, New Delhi.

148 Smith C Stephen (1994), *Innovation and Market Strategy in Italian Industrial Cooperatives – Econometric Evidences on Organizational Comparative Advantage*, **Journal of Economic Behaviour and Organization**, Vol.23, No.3.: 303 – 320.

149 Smith Stephan C (1994) *Innovation and Market Strategy in Italian Industrial Cooperatives- Econometric Evidence on Organisational Comparative Advantage*, **Journal of Economic Behaviour and Organisation**, Vol.13, No.3.

150 Soejetno A (1981), *Seta Budi Vanitha Multi Effort Women's Cooperative Society – East Java, Indonesia* – **Seminar Paper,** Regional Seminar on Enhancing Women Participation in Cooperative Activities, New Delhi.

151. Soundra, Rajan; Amritha Growri and Renuka (1999), *The Manappad Women Workers Palm Leaf limited Cooperative Society – Review of Performance*, **Indian Cooperative Review**, Vol.XXXVII.No.2

152. *Statistics and Information on European Cooperatives* (1998), **International Cooperative Alliance**, Geneva.

153 *Statistics Relating to Cooperative Movement in India, Non-Credit Cooperative Societies in India*, **National Bank for Agriculture and Rural Development**, Bombay, Various Issues.

154 Stefanson Harris A B and Fulton M (1996), *New Generation Cooperatives and Cooperative Theory*, Unpublished Paper quoted by Tewari D D (1996), Economics of a Cooperative Firm, In **Rediscovering Cooperation** (ed) Rajagopalan R, IRMA, Gujarat.

155. Stephan Frank H (1986), **The Economic Analysis of Producer Cooperatives**, MacMillan Press, London.

[illegible]

156 Stephen H Frank (1984), **The Economic Analysis Producer's Cooperatives**, Macmillan Press, London.

157 Stone Wendey and Jody Hughes (2001), *Nature and Distribution of Social Capital, Initial Findings*, **Australian Institute of Family Studies,** Paper to Comparative Vision's National Social Policy Conference, Sydney, July 4-6th.

158 Sudan K Falendra and Gupta S K (1997), *Home Based Female Worker in Self Employed and Informal Sector*, In Datt, Raddar (ed), *Organizing the Unorganized* **Indian Society of Labor Economics,** Vikas Publishing House, New Delhi.

159 Swamy Narayana and Roy A.K (2000), *Women Improvement Through Cooperatives – A Case Study of Mahila Vikasa in Andhra Pradesh*, **Cooperative Prospective**, Vol.34. No.4

160 Swamy, Muthu (1981), *Cooperatives in 2000 A.D*, **The Tamil Nadu Journal of Cooperation**, Vol.73. No.1.

161 Swamy, Narayana N and Ramachandran (1988), *Factors Affecting the Growth and Development of Cooperative Sugar Factory - A Case Study*, **Indian Cooperative Review**, Vol.25, No.3

162 Tadeusz, Kowalak (1981), *Worker's Cooperative in Poland*, **Paper Presented at the First International Conference on Producer Cooperatives**, Denmark.

163 Tahnulingam N and Guru, Moorthy (1987), *Financial Performance of Handloom Cooperative Society - A Case Study* – **Indian Cooperative Review**. Vol.XXV. No.2

164 Teller G (1991), *From Hidden Nationalization to Convert Privatization: Lessons from the Past and Present in the Industrial Cooperatives*, **Acta Oeconomica** Vol.43, No.1 and 2 : 19 – 35.

165. Tewari DD (1996), *Economics of a Cooperative Firm* in Rajagopalan R(ed), **Rediscovering Cooperation : Bases of Cooperation**, Institute of Rural Management, Anand, Gujarat.

166. Thomas Henk and Chris, Logan (1982), **Mondragon – An Economic Analysis**,George Allen and Unwin, U.K.

167. Thomas, Fararo and John Skvoretz (1986), *E-State Structuralism: A Traditional Method*, **American Sociological Review**, 51: 591-602.

168 Thomas, Feraro and John Skvoretz (1986). *E –State Structuralism: A Traditional Method*, **American Sociological Review**, No.51: 591 – 602.

169 Thorelli H.B (1986), *Networks Between Markets and Hierarchies*, **Strategic Management Journal**, Vol.7 No.1: 37 – 51.

170. Thornley J (1981), **Workers Cooperatives – Jobs and Dreams**, Heinemann, London.

171. Thusing, Rolf (1973), **Productivity under Codetermination in Industrial Democracy- Some Issues and Experiences**, Sree Ram Center for Industrial Relation and Human Resources, N. Delhi. 1973.

172 U N Research Institute for Social Development, **Cooperatives and Development in Asia** (1972), Vol. VII, A Study of Cooperatives in 14 Rural Communities in Iran, Pakistan and Ceylon

173 UNICEF(1980), *Income Generating Activity for Women*, **Indian cooperative Union**, New Delhi.

174 Uphoff, Norman (2000), *Understanding Social Capital: Learning from the Analysis and Experience of Participation*, In Das Guptha, Partha and Ismail Sera geldin (ed), **Social Capital: A Multi faceted Perspective**, Sociological Perspectives on Developmental Series, Washington D C, World Bank.

175 Vanek Jarslov (1970), **General Theory of Labour Managed Market Economy**, Cornell University Press, New York.

176 Vanek Jursolav (1977), **Labour Managed Firm**, Ithaca, Cornell University Press, New York.

177 Vanek, Jan (1972), **A Yougaslavia Case Study**, George Allen and Unwin ltd, London

178 Vanek, Jarslov (1970), **The General Theory of Labor Managed Market Economies,** Ithaca Cornell University Press.

179 Varkey V.O (1981) *Development and Working of Coir Cooperatives in Kerala*, **Unpublished Ph.D Thesis**, University of Pune Pune.

180 Vekatappa K N (1977) *Progress and Problems of Weaver's Cooperatives in Karnataka*, **Indian Cooperative Review,** Vol.14, No.2

181 Vincent Joan (1968), *The Local Cooperatives and Parochial Politics in Uganda,* **The Journal of Common Wealth Political Studies**. Vol. 8.

182 Vincent, Joan (1968), *The Local Cooperatives and Parochial Polities in Uganda*, **The Journal of Common Wealth Political Studies**, Vol. 9

183 Waris M.L and Choudhary J.N (1997), *Economic Efficiency of Milk Producer Cooperative Union in North.Bihar'*, **Indian Cooperative Review**, Vol. XXXIV. No.3

184 Warris, M L and J N Choudhary (1997), *Economic Efficiency of Milk Producer's Cooperative Union in North Bihar*, **Indian Cooperative Review**, Vol. XXXIV No.3: 228-34.

185 Williamson O E (1991), *Comparative Economic Organization : The Analysis of Discrete Structural Alternatives*, **Administrative Science Quarterly**, No.36: 3 – 37.

186 Williamson Oliver E (1985), **The Economic Institution of Capitalism**, Free Press, New York.

187 Williamson, Oliver E. (1986), **The Economic Institution of Capitalism**, Free Press, New York.

188 *Women in Kerala* (1994), **Department of Economics and Statistics,** Government of Kerala, Trivandrum,