

A Comparative Study on the Performance of Chenkumar
Weavers' Co-operative Society and Chemimalai Industrial
Weavers' Co-operative Society in Chemimalai
Panchayat-Periyar District (1979-80 to 1988-89)

BY

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Introduction

INTRODUCTION

Co-operation, from the meaning of its component words opus to work co-together stands for "Working together". Largely speaking, co-operation means a method of business organisation. The co-operative principles as an instrument of economic and social reform was propounded over a century ago. It is a voluntary movement.

Seligman observes, "Co-operation in its technical sense means the abandonment of competition in distribution and production and elimination of the middlemen of all kinds".

G.R.Fay, "Co-operative society is an organisation for the purpose of joint trading originating among the weak and conducted always in an unselfish spirit on such terms that all those who are prepared to assume the duties of membership may share its in proportion to the degree in which they make use of association".

To Sir, M.L. Dailing, "Co-operation is more than a system. It is a spirit which appeals to heart and the mind. It is a religion applied to business. It is gospel of self-efficiency and services".

In this context, it is important to see the growth of co-operative movements in various countries in the world.

Co-operation in Foreign Countries:

Co-operative movement has found sufficient roots in several Western Countries. In fact, co-operative credit movement found its origin in Germany. Popular rural banks became famous in Italy and served the needs of the people who needed money badly and were otherwise depending on private sources and money lenders.

Both in Denmark and Sweeden co-operative had to grow under certain difficulties. The people were poor. People were organised themselves to get rid of many of their economic problems which badly faced them. Co-operative was found the only way to remove the problems. Co-operative movement both in England and Ireland made very good progress.

In Canada, co-operative started as early as in 1870. In U.S.S.R., the co-operative movement made good progress before the October Revolution of 1917.

Co-operative movement in China has made a good progress like many other countries of the World. In 1938, Sino-Japanese war gave a new push to the co-operative movement.

Development of Co-operative Movement in India:

In India co-operative received some set back after the decline and fall of Hindu Rule.

In India, co-operative movement was introduced in 1904 by special enactment as a measure to alleviate to some extent the enormous hardship caused by the agricultural indebtedness which had then reached alarmingly high proportion. Therefore, it is interesting to mention the structure, progress and types of the co-operative society in India.

Progress of the Co-operative Movement Since 19th Century:

The movement started in 1904 and 1912, it had gained some ground. In 1906 - 1907 there were 843 co-operative societies and its members rose from 1957 in 1908 - '09 to 5321 in 1910 - '11. The number of such societies in 1911 - '12 was 8177. In 1907 - '08, the number of members was 90844 which rose to 403318 in 1911 - '12. Working capital position in

1906 - '07 was Rs.22,71,683 and it rose to Rs.3.35 crores in 1911 - '12.

In India, the period between 1919 - '20 has been characterised as that of unplanned expansion of co-operatives whereas, the period between 1939 - '46 was considered as co-operative recovery in India. The following Table 1.1 shows the growth of co-operative societies in India from 1940 - '41 to 1980 - '81.

TABLE - 1.1

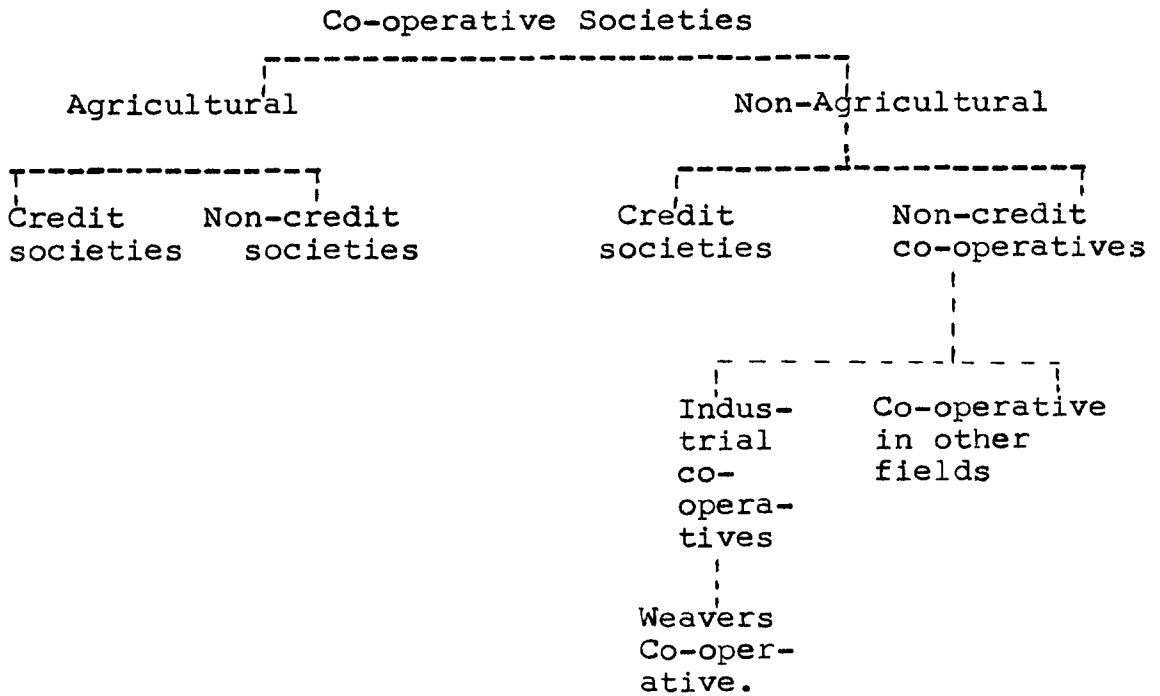
THE GROWTH OF CO-OPERATIVE SOCIETIES IN INDIA (1940 - '41 to 1980 - '81)

S.No.	1940-'41	1950-'51	1960-'61	1970-'71	1980-'81
1. Number of societies (lakhs)	1.3	1.8	3.2	3.3	3.4
2. Membership of primary societies (lakhs)	60	137	342	359	370
3. Working capital (Rs. crores)	107	276	1,312	6,810	8,670

(Source: India Year Book 1981, Co-operation in India and Abroad - Mukhi and Co-operative Department Report).

CHART - 1

STRUCTURE OF THE CO-OPERATIVE SOCIETY



In the structure of the co-operative societies, the industrial co-operative society is important, because industrial co-operative may be defined as a co-operative unit which is formed by artisans, industrial labourers and small industrialists for the purpose of pooling their resources with the object of increasing their production and marketing their produce. The members join hands as a body and avoid middle men services both in production and distribution.

Under the industrial co-operative, one of the most important society is Handloom Weavers' co-operative society. The handloom industry provides employment to about 2 million persons and about 35 per cent of the total cloth produced in the country is produced by the Handloom Weavers' co-operative society. With the help of export of handloom fabrics, India earns about a minimum Rs.200 crores every year. According to the All India Federation of Co-operative Spinning Mills, Bombay (1981), there were 12,005 handloom weavers' co-operative societies in India.

The two types of handloom weavers' co-operative societies are given below:

- a. Where members are helped to carry out the work individually and,
- b. Where members produce goods collectively.

Handloom Weavers' Co-operatives in Tamil Nadu:

The Handloom Industry is one of the most important of the traditional small industries in Tamil Nadu and has around a reputation for its products both in India and Abroad. The Handloom Industry is the belt running from Coimbatore, in the West to Salem, in the East through Periyor District. Coimbatore has got the

second rank in Tamil Nadu. The Coimbatore and Periyor District has produced nearly 16.79 per cent of the total looms.

The first co-operatives of Weavers came up in the region in the 1930s. But their expansion and spread did not occur until after independence. The most rapid growth taking place in the years 1976 - 1983. Now 1,668 Handloom Weavers' co-operative societies in Tamil Nadu.

In Periyar District, now there are 195 Handloom Weavers' Society which came under the co-operative fold. Among the 195 Handloom Weavers' Co-operative societies, 15 societies are under the control of Chennimalai Panchayat. Out of this 25 societies, the investigator has taken Chenkumar Weavers' Co-operative Society and Chennimalai Industrial Weavers' Co-operative Society for the study covering the period of ten years (1979 - '80 to 1988 - '90).

In the Chenkumar Weavers' Co-operative Society the members are helped to carry on the work individually. The society purchases the yarn in bulk at cheaper rates and supplies that to the members at reasonable rate.

Progress of the Chenkumar Weavers' Co-operative Society:

The society was registered on 22.04.'71 and it started its business on 01.05.1971.

The following table 1.2 shows the progress of the Chenkumar Weavers' Co-operative Society from 1979 - ' to 1988 - '89.

TABLE - 1.2

PROGRESS OF THE CHENKUMAR WEAVERS' CO-OPERATIVE SOCIETY

Year	Membership	Shares
1970 - '71	351	17,550
1980 -- '81	507	3,82,420
1988 - '89	874	19,39,540

(Source: Annual Reports)

From the above table 1.2 the number of membership has increased nearly three and a half times in 1988 - '89 compared to 1970 - '71. The amount of shares has also increased Rs.17,550 in 1970 - '71 to Rs.19,39,540 in 1988 - '89.

The society apart from providing raw materials at cheaper rate to their members it helps to the members by providing not only marketing facilities for the finished products such as bet sheets, towels, pillow covers, table clothes, polyester shirtings, suitings, but also gives dyeing and housing facilities to their members.

In Chennimalai Industrial Weavers' Co-operative Society the members produce goods collectively. The society purchases raw materials. It runs a production centre and members are required to come and work there. The society also arranges for the sale of goods produced and the profit if any, is divided among the members.

Progress of Chennimalai Industrial Weavers' Co-operative Society:

The society was registered on 29.09.1962 and it started its business on 02.04.1962.

The following table - 1.3 shows the progress of the Chennimalai Industrial Weavers' Co-operative Society from 1962 to 1988 - '89.

TABLE - 1.3

PROGRESS OF THE CHENNIMALAI INDUSTRIAL WEAVERS' CO-
OPERATIVE SOCIETY

Year	Membership	Shares
1962 - '63	64	4,753
1972 - '73	447	69,703
1982 - '83	434	1,77,175
1988 - '89	649	2,79,969

(Source: Annual Reports)

From the above table 1.3, the number of membership has increased more than ten times in 1988 - '89 compared to in the year 1962 - '63.

Apart from the other services, the Chennimalai Industrial Weavers' Co-operative Society provide dyeing facilities to their members.

Theoritically there is close relationship between the total level of production and sales. The amount of production directly influenced by the number of members, net profit (Total profit - implicit costs) and shares of the members. In this context,

the investigator was interested in finding out the relationship between the year and membership, shares, production, sales, total profit and net profit.

It is accepted that the growth rates are in a way a summary statement of the way in which the variables such as membership, shares, production, sales, total profit and net profit were behaved over a period of time (1979 - '80 to 1988 - '89). Hence, this study too had attempted to find out the growth rate of membership, shares production, sales, total profit and net profit.

Considering the importance of Handloom Weavers' Co-operative Society particularly in the village, the investigator has undertaken this study with the following major objectives.

1. To study and compare the performance of the two societies namely Chenkumar Weavers' Co-operative Society and Chennimalai Industrial Weavers' Co-operative Society by taking into consideration the following aspects.
 - a. Membership
 - b. Shares
 - c. Production

- d. Sales
- e. Total Profit
- f. Net Profit

"A comparative study on the performance of Chennimalai Industrial Weavers' Co-operative Society and Chenkumar Weavers' Co-operative study in Chennimalai Panchayat - Periyar District" was taken by the investigator. This Panchayat (Chennimalai) is one of the important handloom weaving centres in the State (Tamil Nadu), producing handloom products such as bedsheets, towels, pillow covers, polyester shirtings, polyester suitings and table clothes.

For the purpose of the study the investigator draw on the statistics of the Annual Reports as maintained and published by the Chenkumar Weavers' Co-operative Society and Chennimalai Industrial Weavers' Co-operative Society. It is expected that this attempt will help to know the actual amount of influence of different factors over the period time. This attempt will also help the other co-operative societies in the state as on incentive to increase their membership, shares, production, sales, total profit, net profit in the same line as the two above mentioned societies have grown over the time period.

Review of Literature

II REVIEW OF LITERATURE

The relevant literature on the "Performance of the Chenkumar Weavers' Co-operative Society and Chennimalai Industrial Weavers' Co-operative Society during 1979 - '80 to 1988 - '89" will be discussed under studies and reports done earlier (year - wise). Mahapatro (1916 - '17) has studied "Economics of cotton handloom industry in India" which has analysed the Weaver's Co-operative society in Berhampur in Orissa. Conclusion of this study explains the Berhampur Society may be considered as a model of Weaver's Co-operative Society in Orissa. If other Weaver's Co-operative Societies are developed on the same lines, there is no reason to believe that the co-operatives cannot succeed in the case of the Handloom Industry in Orissa.

Colombain (1950) in his study, Co-operative organisation for thrift observed that the co-operative movement frees its members not only from users and profiteurs, but also from themselves and their habits. It teaches them virtues which are not always natural to them, such as overlines, foresight, punctuality and strict respect for engagements.

The report of the village and small industries second five year plan committee published in October, 1955 made certain recommendations. The committee examined whether the whole of the increased demand during the second plan period can be met by the expansion handloom production, especially because such expansion would have the result of reducing under employment in an important sector of the economy and also refinancing the decentralised pattern of production it aimed.

NEARER (1959) studied Handloom Industry in Karnataka and Sholapur which stated that a large percentage of workers worked for the master weavers and also depended on them for finance and were thus exploited latter. Further the study expressed the fact that weaver's suffered from a large number of problems such as lack of funds, inefficient method of production and inadequate marketing facilities etc. In Karnataka and Sholapur District, the co-operative movement had shown greater success in rural than in urban areas.

South India Textile Research Association Marketing Research Division (1963) had conducted a number of studies on handloom industry. Some of the studies as follows:

- a. A market survey of Handloom Products in Coimbatore (1963)
- b. Consumption Pattern of Handloom Fabrics with particular reference to Coimbatore (1963).
- c. Sales and Demand for Non-Weaving Apparels (1963).
- d. Market Survey of Handloom Products (1963).

The above studies revealed that a high preference for handlooms was noticed with regard to sarees, bed sheets, towels and dhothies. On the other hand, for shirtings, trousers, suits and cholis, the preference was for mill-made cloth, the studies also mentioned that advertisement and propaganda to be done for handlooms. The sale proceeds as bedsheet constituted 48.4 per cent of total sales in Non-Weaving apparel. All the shops in Coimbatore sold handloom varieties but only about 46 per cent of the shops sold mill made varieties and the cloth was the only fibre mentioned. The rebate on handloom cloth given in co-operative sector was criticised, because it affected the private shops. It was felt that if rebate was given it should be made available to all both private and co-operative shops.

Kakhade (1964) studied the socio-economic survey of weaving communities Padmosalis in Sholapur. The findings of the study are the weaver's population was labouring under the disabilities of ignorance and illiteracy, poverty, malnutrition, indebtedness, insanitary housing, unclean habits etc. The root cause of all the social evils were their poverty which resulted production and marketing problems.

Prof. Gadgil (1965) in his National Co-operative study forum in Delhi observed that the Indian economic system is more riddled with inequality privileges and monopolistic entrenched positions, than any other. The Indian political and economic situation requires today, a categorical rejection of competitive, philosophy psychology and the assertion of a belief in co-operation. He traced the progress of co-operative movement since 1957, of the credit availability in the rural areas.

Planning Commission (1967) of Government of India reported that the membership of co-operative societies from the weavers' households had increased nearly one and a half times over the period 1956 - '57 to 1962 - '63 in the sample areas. As between the rural and urban areas growth rate was much higher in the rural than the urban areas. About 2/5th of rural weavers' and less than

1/5th of urban weavers' are working in the co-operative. The net income per co-operative member household increased by 58 per cent as against 25 per cent.

Rami Reddy (1971) have studied the Economic theory of co-operatives. The objective of the co-operatives are to maximise returns to members as sellers of farm produce or to minimise their cost in purchase and supplies. The co-operate firm tries to maximise profits on an independent firm. Because if it tries to maximise the profit of each member then, "the sum of the profits of members as a whole will be lower". The paper spells out the profit maximization condition in a co-operative under perfect competition in the short run and in the long run. The profit are calculated in the following manner.

$$P_y Y - \sum_{i=1}^n P_i X_i - P_m M - F$$

where $\sum_{i=1}^n P_i X_i$ = profit; y = finished product ; the productive services; M = the raw material in finished product; P_y and p_m = prices of each respectively and F = operative expenses of the co-operative. In this formulation $P_m M$ is the payment made to the members.

To calculate the supply, following formula is used.

$$S = P_m M; \text{ If } = 0; \text{ then } S = P_Y^Y \sum_{i=1}^n p_i X_i - F.$$

$i = 1$

Now maximization of S demands minimization of cost. The author spells out the cost minimization condition in terms M.P. facing the co-operative firm and its M.C; where cost is made a function of level of Y handled. In the long run the co-operative firm does not face the constraint of a fixed plant. However, its long-run net revenue curve has an inverted U shapes.

Garg (1972) in his article "Handloom Industry. A case study for co-operativization" had elucidated the role of co-operatives in improving the consumption of Handloom Industry on two grounds. They are increasing the employment potential and improving traditional nature of the industry and the reducing economic backwardness of the Handloom Weavers.

Kanungo Committee (1974) of Government of India found that marketing was the fundamental problem of the Handloom Industry. The committee pointed out obsolete equipment and the existence of middlemen in the Handloom Industry created major problem which ultimately affected the Handloom Weavers considerably.

Karam Singh (1974) while studying Monopoly element in the Co-operative loan system, examined the extent of co-operative loan system advanced to different categories of farmers in relation to their total working expenses and the monopoly element in crop loans advanced by co-operative agricultural credit societies in Jandiala Block, Amritsar District (Punjab) during the period 1969 - '72. The analysis revealed that the crop loan requirements of small medium and large farmers were being met by co-operative agricultural societies. His study revealed the fact that the per acre working expenditure was higher in the case of small farmers. But, the per acre crop loan advanced was higher in the case of larger farmers. He has concluded his study by suggesting the co-operative societies to restrict their loans only to small farmers, so as to minimise the monopoly element.

Mishra (1974) has studied the co-operative marketing of jute in Bihar in which he has argued for organising just Growers co-operative society and state Jute Corporation. According to him, the marketing and credit facilities should be linked together to benefit the jute growers. If conceived efforts are made, the

co-operatives can hope to build up a commanding position. To him the success of co-operatives depend on the degree of co-operation from the Jute Corporation of India in the coming years.

Ramamurthy (1974) Committee of Orissa Government recommended that apex society should be made responsible to supply the entire requirements of inputs to the primary society. It should establish three dye houses to meet the requirement of dyed yan of the weavers'.

Reddy committee (1974) of Andhra Pradesh Government reported the activities of handloom co-operative organisations and recommended that from measures should be taken for the strict implementation of minimum wages. The Apex Society must allow margin of profits to primaries at par with Andhra region societies. For healthy development and rapid growth of handloom, co-operative societies in the state must take immediate steps to cover more member of weavers under the co-operative fold so as to attain the per cent coverage in the next three years.

Sivaprakasam (1974) in his article co-operative and small farmers in India has analysed different aspects of benefits to small farmers, farm co-operatives. He has pointed out that the role of co-operatives in SFDA and MFAL had not been satisfactory. According to him, the major abstacles for small farmers in getting loans were:

- i. Land Ownership was used as almost the sale criterion for extending credit.
- ii. Leadership and Management were in the Hands of Bigger Farmers.
- iii. Technical Expertise had been Lacking.
- iv. Co-ordination in leading policies of the credit institutions was inadequate.

Sivaraman (1974) committee of Government of India recommended that the coverage of the Weavers in co-operative societies should be targeted at 60 per cent of the total by the end of fifth plan period. The apex societies must make the responsibility not only for the supply of yarn for a reasonable percentage of the percentage of the weavers' requirements, but also for the marketing of atleast 50 per cent of the production of the weavers' societies through a central organisation.

Thomas committee (1974) of Government of India, reported that the margin of middleman's profit was considerably high taking upto 47 per cent. Difficulties were also experienced on account of transport and want of standardisation of handloom goods.

Thakur (1974) while studying the impact of Dairy Development through milk co-operatives in Gujarat examined the progress of the selected milk societies and analysed the impact of milk co-operatives on the economic conditions of the farmers in general and the sections in particular. He has concluded that the development of organised diarying is most important from the point of view of weaker sections.

Tidke Committee (1974) of Maharashtra Government suggested that the Apex co-operative marketing Federation should bring all handlooms in the co-operative fold and the Directorate of Handlooms and co-operative Textiles of Handloom corporation should bring all handlooms in the private sector and both should supply raw materials and arrange for marketing of the finished goods.

Desay and Narayanan (1976) Rao have studied the continuous increase in overdues to primary agricultural societies and development Banks between 1966 - '67 and

1974-'75. They have pointed out that the short comings in the formulation and implementation of credit scheme are:

- i. Absense of functional linkages of activity financed from credit with other activities,
- ii. Inadequate, involvement of the field staff and other agencies,
- iii. Highly questionable assumptions made to judge the economic vitability and repayment capacity of any borrower financed under the schemes.

therefore, to solve the problem of overdues of credit they have suggested:

- a. Integration of consumption and production credit,
- b. Making saving mobilization as an integral part of the loan programmes,
- c. Integrating both saving and working capital loan programmes with the terms of loan,
- d. Achieving functional linkages of activities by way of promoting multipurpose co-operative societies,

- e. Taking up financing of agricultural infrastructure.

A study conducted by the Institute of Co-operative Management (1976) indicates that the co-operatives have reduced poverty and increased employment opportunities in the villages. The co-operative movement has been of immense help to the farmers.

Patel et al., (1977) have analysed Mehasana District of North Gujarat. Only the credit needs of selected borrowers were taken for the study. The study shows that the savings of the community are not satisfactory as overdues accumulate and sometimes fresh loans are taken to repay the old ones. Farmers continue to resort to the alternative sources of borrowing. There are also diversions in the utilization of loan. For example crop loan was mainly in the form of (purchasing) fertilizers. There was discrimination in the sanctioning of the loan as it was easier for influential people.

Seetharaman (1978) has studied "Co-operation in Pondicherry which has concluded that, in Pondicherry in export oriented handloom project has been set up to cover 1,000 handlooms presently outside the co-operative fold and to specialise in the production of export

varieties at a total cost of Rs.30 lakhs. For the first time in this union territory it is proposed to construct houses for handloom weavers under the Integrated subsidised. Housing Scheme for economically weaker sections of the community. As a novel experiment Pondicherry has created handloom development fund, from the public contribution out of which interest free loans are issued to the weavers belonging to the co-operative sector for meeting their urgent consumption needs.

Patil and Sawant (1978) have analysed the characteristics of the members of the co-operative society in Shetkan Sahakan Sangh limited at Korhapur, which has achieved district success in co-operative services. They have mentioned the important characteristics of the co-operative society. They are,

Theodor Begman (1977) has studied the Industrial activities of the co-operative movement in India. Of the three Industrial Co-operatives i. Weavers' societies, ii. Co-operative sugar mills and iii. Other industrial societies. The contribution of the Industrial Co-operatives towards the solution of the people of unemployment and removal of cost barriers, too is insignificant. To him educative values of Industrial Co-operatives must be reorganised so as to solve the above mentioned problems.

Venkatappa (1977) in his paper, progress and problems of Handloom Weavers' Co-operative in Karnataka State had discussed the problems faced by the Weavers' Co-operatives under various heading viz., social problems. Problems relating to management, administrative and organisational defects. Of these the toughest problem way the inadequate supply of raw materials at reasonable rates. Hence he had conclude that the parent (Apex) Organization had to be strengthened financially to take care of the primaries.

Choubey (1978) in his article". Problems and prospects of Weavers' Co-operative in Bihar" had narrated the problems faced by the weavers. Societies such as the problem of organization revitalisation, management and supercision, the problem of education and training, the problem of moting and otherproblems.

Choudhary (1978) committee of Goa Government found that 16 units out of 26 samples units reported that they were facing acute shortage of labour. The main reason for the non-availability of labour was their low wages.

Doraiswami reported that co-operative societies which existed on paper in 1978 covered about 10 lakh looms, of which only 4.5 lakh were in active co-operative societies.

Garg (1978) report has found the major problems of the handloom industry. The major problems are procurement of raw material at a reasonable rate, marketing of finished products, improper technological development, ineffective quality control, lack of co-operative societies, exploitation of weavers' idle capacity etc. Rate of interest charged on the loans was also high and there was variation in it from source to source besides, since most of the handloom workers were working in country side they were unable get feed back of marketing conditions.

Haque and Maji, (1978) have analysed structure and laws of Agricultural co-operative credit in India. Their study shows the statewise distribution of co-operative credit. Different items of expenditure has been collected and analysed for the period 1965-'66 and 1974-'75. Their study reveals that the new agricultural production technology has changed the structure and composition of the short term as well as

medium and long term - co-operative credit in almost all the states.

Hate committee (1978) of Government of India reported that in States like Bihar, U.P. Karnataka, Punjab, Rajasthan, and Tripura the number of darment societies were between 45 per cent and 94 per cent of the total number of co-operative societies. Under the sixth plan it was envisaged that the co-operative coverage of handloom could be raised to 60 per cent of the total number of handlooms in the country. It was therefore, recommended that the state government should take efforts to bring more number of active looms with the co-operative fold.

Pandey and Murlidaran (1978) have studied the socio-economic factors which influence the overdues in co-operative credit societies. They have taken into account small medium, large and wilful and non-wilful defaulters. The overall conclusion reached by them is that mostly the size of the loan and the consumption expenditure were responsible for the overdues that is the utilization of loan.

- i. Institutional participation score,
- ii. Level of participation in-formal co-operative ventures,

- iii. Level of securing current co-operative information,
- iv. Adjustment Index in the co-operative sector,
- v. Identification with co-operative norms and standard,
- vi. Level of shouldering co-operative responsibility,
- vii. Level of understanding the basic principles of the co-operative.

Thangamuth (1978) had analysed the socio-economic conditions of member weavers in the Chennimalai. His study showed that the socio-economic condition of member weavers' are better than that of the non-member weavers'. The reasons attributed for the low economic status of the non-member weavers are due to low wages, irregular supply of raw materials, under employment, inadequate arrangement for marketing their finished goods, poor credit - worthiness, indebtedness and so on.

Chellapan (1980) in his article "Marketing problems of Handloom Co-operatives" had outlined the major problems faced by the handloom co-operatives while marketing their products viz.. The competition from mill

and powerloom sector, failure to keep in tune with changing fashion, existence of two tier co-operative structure.

He had suggested, to conduct surveys to identify the consumer preference by apex level agencies to improve the efficiency of salesman and to introduce quality control to promote the marketing of the handloom co-operatives.

Rao and Shanmuga Sundaram (1980) have studied the utilisation of weavers' co-operative society by members in Peelamedu. They have identified some of the important factors and measured their influence on the degree of utilisation of the society by members. To achieve a higher degree of utilisation, they have suggested some measures also.

Bhaskvafi Ghoshal (1984) in his article "Role of State Weavers' co-operatives in the Upsurge of Bengal Handloom Industry" had pointed out the failure of co-operativization norms of literacy and lack of co-operative training and education among the rural weavers' and the lack of adequate raw materials and infrastructure.

Banerjee and Sarker (1986) have undertaken a study in Uttar Pradesh and observed that the nationalised banks including other financial institutions especially co-operative societies should come forward to extend their credit facilities to the farmers particularly small and marginal farmers with liberal form.

Dr. Gopalan and Duraiswamy (1986). In their study "Production and Marketing of Handloom Goods by Weavers' co-operative" had discussed constraints confronted by the selected units as the favourable cyclical trade conditions 'not-loyalty of member weavers. The permanent problem of the weavers'. Society was the stiff competition from the powerloom owners and master weavers.

Obul Reddy (1986) in his case study of Andhra Pradesh regarding co-operative Agricultural Development Banks analysed that the co-operative institutions play a vital role in providing credit and other services to the small and marginal farmers and other weaker sections in the rural sector.

In the 5th Jawaharlal Nehru Memorial, IFFCO, Rao (1987) had delivered a lecture on co-operation in New Delhi. He has pointed out the desequating features

of the co-operative movement. It has been shown that there is no perceptible improvement in the recovery of loans, and overdues continue to be very high at various levels of the credit sector. In the long term credit sector, the problem of mounting dues almost crippled the land development banks.

III. METHODOLOGY

The data base of the study and the methods of analysis used there in are described below:

- A. Selection of the Study
- B. Period of the Study
- C. Collection of Data
- D. Methods of Analysis
- E. Concepts used in this Chapter
- F. Limitations of the Study
- G. Design of the Study.

A. Selection of the Study:

The investigator had selected the Chenkumar Weavers' Co-operative Society and Chennimalai Industrial Weavers' Co-operative Society for the study, since they are the most important societies in Chennimalai Panchayat Periyar District.

B. Period of Study:

The investigator had analysed the performance of the above mentioned societies from 1979 - '80 to 1988 - '89. From 1979 - '80 there is significant growth of the Chenkumar Weavers' Co-operative Society and Chennimalai Industrial Weavers' Co-operative Society due to the various types of assistance shown the development of the Government.

C. Collection of Data:

The study was based on secondary data which was collected from the Annual Reports with the Chenkumar Weavers' Co-operative Society and Chennimalai Industrial Weavers' Co-operative Society.

The investigator used the following statistical tools for the study.

D. Methods of Analysis:

In order to examine the growth and performance of the two societies namely Chenkumar Weavers' Co-operative Society and Chennimalai Industrial Weavers' Co-operative Society, the following analysis was utilised for the study.

- a. Growth Rate Analysis
- b. Simple Percentage Analysis
- c. Test of Significance
- d. Co-efficient of Variation
- e. Profitabilty Ratio
- f. Diagrammatic and Graphical Representation.

a. Growth Rate Analysis:

Growth rate analysis is a tool to understand the trend analysis. In other words growth rate estimates are showing the total behaviour of the variable concerned during the reference period (1979 - '80 to 1988 - '89).

- Y = A + Bt
- Y = Variable
- A = Constant
- B = Growth Rate

b. Simple Percentage:

To sum of the all values over ten years period (1979 - '80 to 1988 - '89) had been taken and the percentage for the each year had been calculated for the membership, shares, production, sales, net profit and total profit of the Chenkumar Weavers' Co-operative Society and Chennimalai Industrial Weavers' Co-operative Society.

c. Test of Significance:

Test of significance was used to find out the significant difference between the Chenkumar Weavers' Co-operative Society and Chennimalai Industrial Weavers' Co-operative Society at 1 per cent level.

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{s_1^2 + s_2^2}{n - 1}}}$$

\bar{X}_1 = Mean for the first sample

\bar{X}_2 = Mean for the second sample

S_1^2 = Standard Deviation for the first sample

S_2^2 = Standard Deviation for the second sample

n = number of observation

d. Co-Efficient of Variation:

Co-efficient of variation was used to find out the homogeneity of the two samples (Chenkumar Weavers' Co-operative Society and Chennimalai Industrial Weavers' Co-operative Society) co-efficient of variation is useful to measure the variation that had taken place in the factors such as membership, shares, production, sales, total profit and net profit.

$$\text{Co-efficient of variation} = \frac{\sigma}{\bar{X}} \times 100$$

σ = Standard Deviation

\bar{X} = Mean

e. Profitability Ratio:

Profitability ratios shows the over all performance of the societies in different ways. A lower profitability may arise due to the lack of control over the expenses. Owners are interested to know the profitability as it indicates the return which they can get on their investment. This profitability ratio was

used to find out the efficiency of the Chenkumar Weavers' Co-operative Society and Chennimalai Industrial Weavers' Co-operative Society.

$$\text{Profitability Ratio} = \frac{\text{Net Profit}}{\text{Sales}} \times 100$$

f. Diagrammatic and Graphical Representation:

Diagrammatic representation was used for facilitate comparison of data relating to different periods of time. It is more attractive, fascinating and impressive than the set of numerical data.

Graphs reveals the trends, if any present in the data more vividly than the tabulated numerical figures and also exhibit the way in which the trends change.

Diagrams and graphs are readily show information that might otherwise be lost amid the details of numerical tabulations.

This diagrams and graphs was used to facilitate comparison of membership, shares, production, sales, total profit and net profit of the Chenkumar Weavers' Co-operative Society and Chennimalai Industrial Weavers' Co-operative Society.

E. Concepts Used in the Study:

1. Membership:

Persons engaged in weaving over 18 years of age residing in the area of operation are eligible for administration as members. Any person who has faith in the co-operative philosophy can become its member.

2. Shares:

One function of the society is received shares from the members. The capital of a society is divided into parts, called shares.

3. Production:

Total production refers to the total output produced by the combination of a fixed factors (land, building, machines etc.,) and variable factors (labour, input etc.).

4. Total Profit:

Total revenue minus total explicit cost is called total profit.

(Total Revenue = Total income earned by the society by selling products,

Explicit Costs = Total expenses incurred by the organiser in hiring the factors of production)

5. Net Profit:

Total profit minus implicit costs know as the net profit (Implicit Costs = Depreciation and Miscellaneous Costs).

F. Limitations of the Study:

- (i) The study was covered only ten years period from (1979 - '80 to 1988 - '89). This may have own limitation for the exploration of findings.
- (ii) The study was based only on Chenkumar Weavers' Co-operative Society. Hence, the result of the study cannot be taken as a generalisation for all societies in Chennimalai Panchayat Periyar District.

Design of the Study:

"A comparative study on the performance of Chenkumar Weavers' Co-operative Society and Chennimalai Industrial Weavers' Co-operative Society in Chennimalai Panchayat Periyar District had studied in five chapters.

The first chapter dealt with the development of Co-operative movement in Foreign Countries and in India. A detailed explanation about the Handloom Weavers' Co-operatives in Tamil Nadu was presented in the same

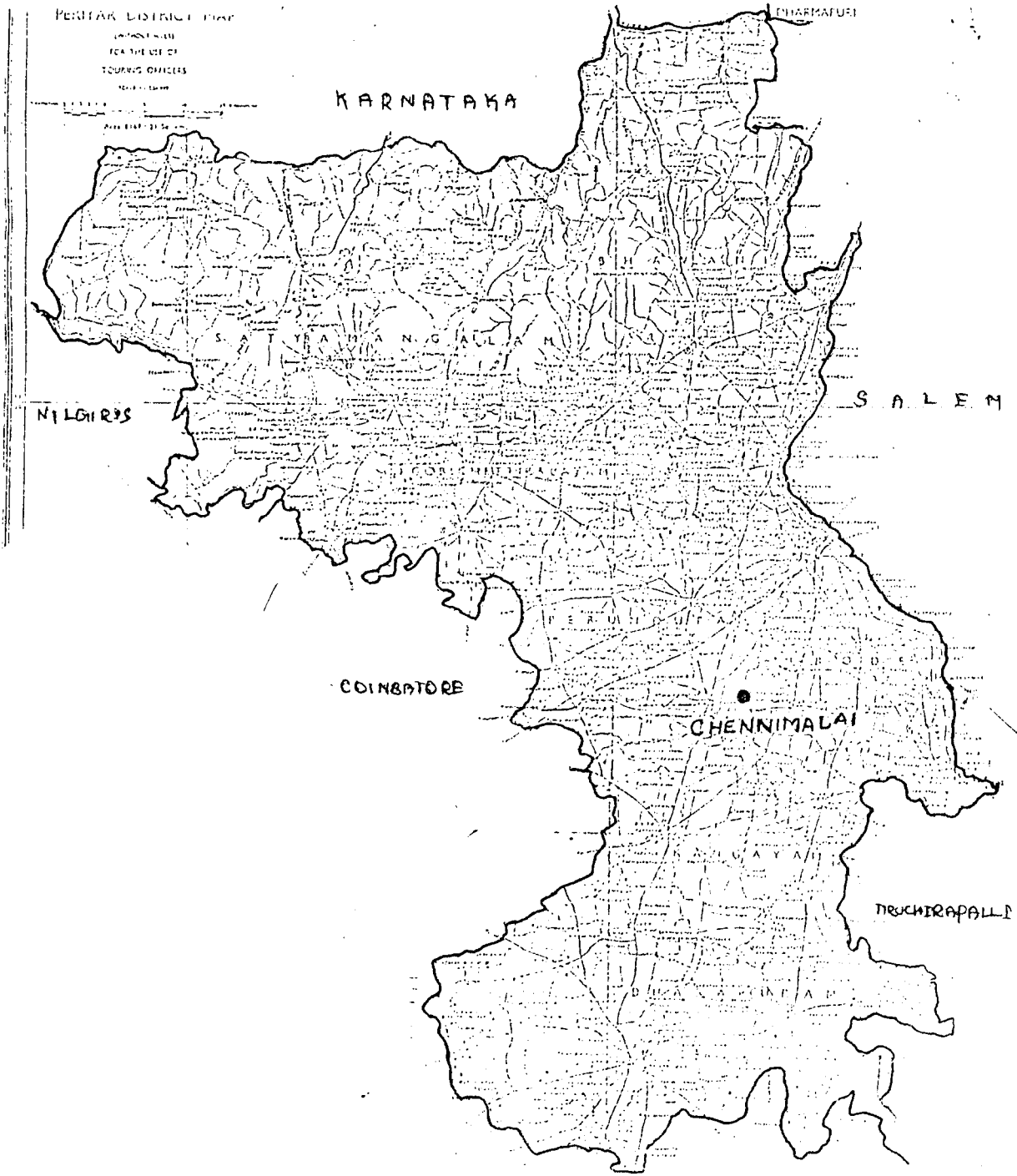
chapter. A brief account of Chenkumar Weavers' Co-operative Society and Chennimalai Industrial Weavers' Co-operative Society were also dealt in the first chapter. In the same chapter the investigator had listed out the important objectives of the study.

Some of the earlier studies on co-operatives and also the reports of the various committees on co-operatives were reviewed in chapter second.

In the third chapter methodology adopted in the study were dealt.

The fourth chapter dealt with the result and discussion of the study. The summary and conclusion of the study were discussed chapter five.

PERIYAR DISTRICT MAP



Results and Discussion

IV. RESULTS AND DISCUSSION

Results of the study on "A comparative study on the performance of Chenkumar Weavers' Co-operative Society and Chennimalai Industrial Weavers' Co-operative Society in Chennimalai Panchayat, Periyar District (1979 - '80 to 1988 - '89)" are discussed under the following heads:

1. Membership
2. Shares
3. Production
4. Sales
5. Total Profit
6. Net profit

The investigator has analysed the performance of the Chenkumar Weavers' Co-operative Society and Chennimalai Industrial Weavers' Co-operative Society with the help of the following tools.

- a. Growth Rate Analysis
- b. Simple Percentage Analysis
- c. Test of Significance
- d. Co-efficient of Variation
- e. Profitability Ratio
- f. Diagrammatical and Graphical Representation.

1. Growth of Number of Members, Shares, Production, Sales, Total Profit and Net Profit of the Chenkumar Weavers' Co-operative Society During the Period Consideration (1979 - '80 to 1988 - '89):

Membership:

An overview of number of members of the Chenkumar Weavers' Co-operative Society during the period under consideration is presented in the following paragraphs.

Table 4-1 gives the details of number of members of the Chenkumar Weavers' Co-operative Society (1979 - '80 to 1988 - '89).

TABLE - 4.1

GROWTH OF MEMBERSHIP OF THE CHENKUMAR WEAVERS' CO-
OPERATIVE SOCIETY (1979 - '80 to 1988 - '89)

Years	Membership Y	Percentage
1979 - '80	503	7.29
1980 - '81	507	7.36
1981 - '82	530	7.69
1982 - '83	640	9.28
1983 - '84	640	9.28
1984 - '85	776	11.26
1985 - '86	774	11.23
1986 - '87	771	11.19
1987 - '88	878	12.74
1988 - '89	874	12.68

Growth Rate is, $Y = A + B_t$

$$Y = \text{Antilog}(2.7079) + \text{Antilog}(0.0272)_t$$

$$Y = 510.4 + 1.064_t$$

6 per cent growth rate

$$R^2 = 0.85$$

$$t^* = 7.0232$$

From the above table 4.1, we understand that the growth rate of the membership is 6 per cent as seen by the 'B' value. The growth rate is significant as seen by the 'R²' value (0.85) which is also significant.

The percentage analysis further supports the view that the number of members in the Chenkumar Weavers' Co-operative Society has increased from 7 per cent in 1979 - '80 to 13 per cent in 1988 - '89.

Further the table 4.1 reveals the fact that over a period of ten years, the number of members has increased nearly one and a half times. One point to be noted that the number members has increasing continuously throughout the period and it implies the increasing popularity among the Weavers.

Shares:

Handloom Weavers' Co-operative Societies to have share, capital, reserve fund and they do accept deposits out of it they have funds for credit and working capital etc., They do enjoy profits which may be the remuneration for the services to the needy people.

A clear picture about the amount of shares of the Chenkumar Weavers' Co-operative Society during 1979 - '80 to 1988 - '89 is given in table - 4.2.

TABLE - 4.2

GROWTH OF SHARES OF THE CHENKUMAR WEAVERS' CO-OPERATIVE SOCIETY (1979 - '80 to 1988 - '89)

Years	Shares (Y)	Percentage
1979 - '80	269340	2.64
1980 - '81	382420	3.75
1981 - '82	493860	4.85
1982 - '83	660220	6.48
1983 - '84	795000	7.80
1984 - '85	1133000	11.12
1985 - '86	1288000	12.64
1986 - '87	1429000	14.02
1987 - '88	1802300	17.68
1988 - '89	1939540	18.73

Growth Rate

$$Y = A + Bt$$

$$= \text{Antilog}(5.5010)$$

$$= \text{Antilog}(0.0951)_t$$

$$Y = 317000 + 1.245_t$$

24.5 per cent growth rate

$$R^2 = 0.97$$

$$t^* = 17.03$$

Table 4.2 shows the growth rate of the key variable namely shares which had been witnessing only a raising trend in the Chenkumar Weavers' Co-operative Society during the period under consideration (1979 - '80 to 1988 - '89). The absolute values of the share capital has been increased more than nine times showing great interest of Weavers to become the members of the society.

The growth rate of the shares of the Chenkumar Weavers' Co-operative Society which is 24.5 per cent as seen by the 'B' value. The value of ' R^2 ' (0.97) also confirms that the rate of growth of shares over the period is significant.

From the percentage analysis, the society has increased its shares from 3 percentage in 1979 - '80 to 19 percentage in 1988 - '89.

Production:

The table 4.3 shows the growth of production of the Chenkumar Weavers' Co-operative Society during 1979 - '80 to 1988 - '89.

TABLE - 4.3

GROWTH OF PRODUCTION OF THE CHENKUMAR WEAVERS'
CO-OPERATIVE SOCIETY (1979 - '80 to
1988 - '89)

Years	Production (Y)	Percentage
1979 - '80	6444820	4.03
1980 - '81	7349208	4.69
1981 - '82	9696297	6.06
1982 - '83	11854796	7.41
1983 - '84	15671780	9.79
1984 - '85	18243870	11.39
1985 - '86	20899800	13.06
1986 - '87	223123000	13.94
1987 - '88	19719300	12.32
1988 - '89	27862000	17.41

Growth Rate $Y = A + Bt$
 $= \text{Antilog}(6.8509) +$
 $= \text{Antilog}(P.0687)t$

$Y = 7094144 + 1.1714t$

17 per cent Growth Rate

$R^2 = 0.93$

$t^* = 10.91$

From the above table 4.3 we understand that there is an increase in the total production of the Chenkumar Weavers' Co-operative Society which indicates the soundness of the society except in the year 1987 - '88. This indicates, an increase of four and a half times in production from 1979 - '80, to 1988 - '89. An increase in the total production of the society is due to the increased demand for the products of the society in the market.

The 'B' value explains the role of growth of production which is 17 per cent. This has been significantly confirmed by the 'R²' value (0.93).

From the percentage of the society, production has been increased from 4 per cent in 1979 - '80 to 17 per cent in 1988 - '89.

It implies that both economic and non-economic factors would have been highly suited for the Chenkumar Weavers' Co-operative Society to increase its production.

Sales:

The total production of the Chenkumar Weavers' Co-operative Society depends not only on the capital.

But also on the level of sales. Sales is an important indicator of the growth of the society. As sales increased, it will be an incentive for the out-put to increase. Therefore, the analysis of sales is considered to be important of the Chenkumar Weavers' Co-operative Society. The society sells its finished goods to private merchants and local people for cash and to the State Handloom Weavers' Co-operative Society on Credit.

The table 4.4 shows the growth of sales over the ten years period (1979 - '80 to 1988 - '89) of the Chenkumar Weavers' Co-operative Society.

TABLE - 4.4

GROWTH OF SALES OF THE CHENKUMAR WEAVERS' CO-OPERATIVE SOCIETY (1979 - '80 to 1988 - '89)

Years	Sales (Y)	Percentage
1979 - '80	8167831	4.9
1980 - '81	8360213	4.20
1981 - '82	11935000	5.99
1982 - '83	14074879	7.07
1983 - '84	20248572	10.17
1984 - '85	22595544	11.35
1985 - '86	26138617	13.13
1986 - '87	26504271	13.31
1987 - '88	24783571	12.45
1988 - '89	36327727	18.24

Growth Rate

$$Y = A + Bt$$

$$= \text{Antilog}(6.9289) +$$

$$= \text{Antilog}(0.0959)$$

$$Y = 84898449.6 + 1.2470968t$$

25 per cent growth rate

$$R^2 = 0.94$$

$$t^* = 11.95$$

The growth rate shows that there is an increase in the sales of the Chenkumar Weavers' Co-operative Society for except for the year 1987 - '88. The sales has increased from Rs.8167831 in 1979 - '80 to Rs.2,6504277 in 1986 - '87. In 1987 - '88 the sales was only Rs.24783571. This is due to the low level of production during that particular period, whereas in the next year 1988 - '89, the Chenkumar Weavers' Co-operative Society managed to increase its sales to the extent of Rs.36327727. Sales has increased four times from 1979 - '80 to 1988 - '89. In general, the Chenkumar Weavers' Co-operative Society has witnessed raising trend in its sales. This may be due to greater demand for the products.

From the above table 4.4, the growth rate of the share of the Chenkumar Weavers' Co-operative Society is 25 per cent as seen by the 'B' value. The value of ' R^2 ' (0.92) also confirms that the rate of growth of sales over the period is significant.

The percentage analysis further supports the view that the percentage of sales is 5 per cent in 1979 - '80 and 18 per cent in 1988 - '89.

Regarding the sales of the Chenkumar Weavers' Co-operative Society, the concerned figures shows that it had increased its sales which may be due to the fact that the quality of the product of the society are favourable compared to the other society.

Total Profit:

The analysis of total profit is important, because in co-operative society total profit is shared among the members. So as to improve the standard of welfare of their members , which is suppose to be the one of the important functions of the society. One of the main items that indicates the effective working of the society is its profit. So the investigator had tried to identify the fluctuations that had taken place in the total profit and net profits of the Chenkumar Weavers' Co-operative Society.

The table 4.5 gives ua a complete picture of the total profit of the Chenkumar Weavers' Co-operative Society over ten years period (1979 - 80 to 1988 - '89).

TABLE - 4.5

GROWTH OF TOTAL PROFIT OF THE CHENKUMAR WEAVERS'
CO-OPERATIVE SOCIETY (1979 - '80 to 1988 - '89)

Years	Total Profit (Y)	Percentage
1979 - '80	1375462	4.25
1980 - '81	1115576	3.44
1981 - '82	1926225	5.95
1982 - '83	2789456	8.61
1983 - '84	3515848	10.85
1984 - '85	3990084	12.32
1985 - '86	4150707	12.81
1986 - '87	4972484	15.35
1987 - '88	3884960	11.99
1988 - '89	4674292	14.43

Growth Rate

$$Y = A + Bt$$

$$Y = \text{Antilog}(6.1559) + \text{Antilog}(0.0689)$$

$$Y = 1431858.2 + 1,1719255t$$

17 per cent Growth Rate

$$R^2 = 0.83$$

$$t^* = 6.84$$

The figure 4.5 has supported the fact that the profit has increased throughout the period except for the year 1987 - '88, realised its maximum amount of profit Rs.4972484 in 1986 - '87.

In general the rising trend of the Total Profit shows the successful functioning of the Chenkumar Weavers' Co-operative Society from 1979 - '80 onwards. Total profit has increased three and a half times from 1979 - '80 to 1988 - '89.

From the table 4.5, it is clear that total profit has grow over the years except for the year 1987 - '88 which may be due to low level of production and sales during the particular period.

The growth rate of the total profit of the society is 7 per cent as seen by the 'B' value. The value of ' R^2 ' (0.84) also confirms that the rate of growth of total profit over the ten years period is significant.

The percentage of total profit has increased 4 per cent in 1979 - '80 to 14 per cent in 1988 - '89.

A rising trend had been taken by the total profit which may due to the increasing sales of the Chenkumar Weavers' Co-operative Society.

Net Profit:

Though the society is ment for services to the needy Weavers they do have the aim of obtaining profit out of their services.

The table 4.6 shows the growth of net profit over ten years period (1979 - '80 to 1988 - '89) of the Chenkumar Weavers' Co-operative Society.

TABLE - 4.6

GROWTH OF NET PROFIT OF THE CHENKUMAR WEAVERS'
CO-OPERATIVE SOCIETY (1979 - '80 to 1988 - '89)

Years	Net Profit (Y)	Percentage
1979 - '80	915677	4.18
1980 - '81	720106	3.28
1981 - '82	1362358	6.21
1982 - '83	1842933	8.40
1983 - '84	2406490	10.98
1984 - '85	2742337	12.51
1985 - '86	2668658	12.17
1986 - '87	3200283	14.80
1987 - '88	2688245	12.26
1988 - '89	3379925	15.41

Growth Rate $Y = A + Bt$
 $= \text{Antilog } (5.9742) +$
 $= \text{Antilog } (0.0703)^t$

18 per cent growth rate

$$R^2 = 0.84$$

$$t^* = 7.07$$

The table 4.6 shows that the net profit has increased three and a half times, the growth of net profit shows that, there is an increase in the net profit of the Chenkumar Weavers' Co-operative Society. Except for the years 1985 - '86 and 1987 - '88 the net profit has increased Rs.915677 in 1979 - '80 to Rs.3379925 in 1988 - '89. The net profit has increased three and a half times from 1979 - '80 to 1988 - '89.

A detailed analysis of the growth rate shows that, there is 17 per cent increase in the growth rate as seen by the 'B' value. The ' R^2 ' value (0.94) also confirms that there is significant growth rate.

The percentage analysis supports the view that the amount of Net Profit in the Chenkumar Weavers' Co-operative Society has increased from 4 per cent in 1979 - '80 to 15 per cent in 1988 - '89.

It implies that the Chenkumar Weavers' Co-operative Society increases its net profit may be due to the fuller utilisation of the assets of the

society and the increased sales of the Chenkumar Weavers' Co-operative Society.

2. Growth of Number of Members, Shares, Production, Sales, Total Profit and Net Profit of the Chennimalai Industrial Weavers' Co-operative Society During the Period Under Consideration:

Membership:

An overview of number of members of Chennimalai Industrial Weavers' Co-operative Society during the period under consideration is presented in the following paragraphs.

Table - 4.7 gives the details of number of members of Chennimalai Industrial Weavers' Co-operative Society (1979 - '80 to 1988 - '89).

TABLE - 4.7

GROWTH OF MEMBERSHIP OF THE CHENNIMALAI INDUSTRIAL
WEAVERS' CO-OPERATIVE SOCIETY (1979 - '80 to
1988 - '89)

Year	Membership (Y)	Percentage
1979 - '80	404	8.03
1980 - '81	406	8.07
1981 - '82	417	8.29
1982 - '83	434	8.63
1983 - '84	426	8.47
1984 - '85	483	9.61
1985 - '86	485	9.64
1986 - '87	675	13.42
1987 - '88	651	12.94
1988 - '89	649	12.90

Growth Rate

$$Y = A + Bt$$

$$Y = \text{Antilog}(2.5691) +$$

$$= \text{Antilog}(0.0275)t$$

$$Y = 370,76608 + 0.0653689t$$

7 per cent growth rate

$$R^2 = 0.84$$

$$t^* = 6.88$$

The above table shows the growth rate of the numbership of the Chennimalai Industrial Weavers' Co-operative Society is 6 per cent as seen by the 'B' value. The value of 'R²' (0.84) also confirms that the rate of growth of membership over the period is significant.

The percentage of the society, membership has been increased 8 per cent in 1979 - '80 to 13 per cent in 1988 - '89.

Further the table 4.7 reveals the fact that over a period of ten years the number of members has increased nearly one and a half times. One point to be noted that the number of members has been increasing continuously throughout the period and it implies the increasing popularity among the weavers.

Shares:

Handloom Weavers' Co-operative Societies to have share capital, reserve fund, and they do accept deposits out of it they have funds for credit and working capital etc. They do enjoy profits which may be the remuneration for the services to the weavers.

The table 4.8 shows the growth of the shares over ten years period (1979 - '80 to 1988 - '89) of the Chennimalai Industrial Weavers' Co-operative Society.

TABLE - 4.8

GROWTH OF SHARES, OF CHENNIMALAI INDUSTRIAL WEAVERS' CO-OPERATIVE SOCIETY (1979 - '80 to 1988 - '89)

Years	Shares (Y)	Percentage
1979 - '80	97291	4.99
1980 - '81	108652	5.57
1981 - '82	166218	8.53
1982 - '83	177175	9.08
1983 - '84	1530188	7.84
1984 - '85	192649	9.88
1985 - '86	222963	11.43
1986 - '87	254819	13.06
1987 - '88	297891	15.27
1988 - '89	279969	14.35

Growth Rate

$$Y = A + Bt$$

$$Y = \text{Antilog}(5.0297) + \text{Antilog}(0.0531)t$$

$$Y = 107077.94 + 1.1300561t$$

13 per cent Growth Rate

$$R^2 = 0.92$$

$$t^* = 10.21$$

Table 4.8 shows the growth rate of the key variable namely shares which had been witnessing only a raising in the Chennimalai Industrial Weavers' Co-operative Society during the period under consideration. The absolute value of the share capital has been increased more than three times showing in great interest of the weavers' to become the member of the society.

The growth rate of the shares is 13 per cent as seen by the 'B' value. The growth rate is significant as seen by the ' R^2 ' value (0.85).

From the percentage analysis, the percentage of shares is 5 per-centage in 1979 - '80 and it has been increased in 14 per cent in 1988 - '89.

In the case of shares shows that the Chennimalai Industrial Weavers' Co-operative Society had grow well in respect of the shares of the members over a period of ten years may be due to the number of membership.

Production:

The table 4.9 shows the growth of production over ten years period (1979 . '80 to 1988 - '89) of the Chennimalai Industrial Weavers' Co-operative Society.

TABLE - 4.9

GROWTH OF PRODUCTION OF THE CHENNIMALAI INDUSTRIAL
CO-OPERATIVE SOCIETY (1979 - '80 to 1988 - '89)

Years	Production (Percentage
1979 - '80	3957436	5.57
1980 - '81	4387689	6.19
1981 - '82	5477488	7.73
1982 - '83	5795947	8.16
1983 - '84	5958390	8.34
1984 - '85	8129310	11.44
1985 - '86	8586964	12.08
1986 - '87	9962764	14.02
1987 - '88	6846185	9.64
1988 - '89	11952966	16.83

Growth Rate

$$Y = A + Bt$$

$$Y = \text{Antilogy (6.6193)} + \text{Antilogy (0.0462)}t$$

$$Y = 4161980.1 + 1.1122438t$$

11 per cent Growth Rate

$$R^2 = 0.83$$

$$t^* = 6.70$$

The above table 4.9 indicates that there is an overall improvement in the production except in the year 1987 - '88. This indicates an increase of three and a half times in production from 1979 - '80 to 1988 - '89. An increase in the total production of the society is due to the increased demand for the products of the society.

The 'B' value explains the role of growth of production which is 11 per cent. This has been significantly confirmed by the 'R²' value of (0.83).

From the percentage analysis, the percentage of production is 6 per cent in 1979 - '80 and it has been increased in 17 per cent in 1988 - '89.

It implies that both economic and non-economic factors would have been highly suited for the Chennimalai Industrial Weavers' Co-operative Society to increase its production.

Sales:

The total production of the Chennimalai Industrial Weavers' Co-operative Society, depends not only on the capital. But also on the level of sales . As sales increases it will be an incentive

for the output to increase.

The table 4.10 shows the growth of sales over ten years period (1979 - '80 to 1988 - '89) of the Chennimalai Industrial Weavers' Co-operative Society.

TABLE - 4.10

GROWTH OF SALES OF THE CHENNIMALAI INDUSTRIAL
WEAVERS' CO-OPERATIVE SOCIETY (1979 - '80 to
1988 - '89)

Years	Sales	Percentage
1979 - '80	4484814	5.26
1980 - '81	5448853	6.40
1981 - '82	5215584	6.18
1982 - '83	6919156	8.12
1983 - '84	8182418	9.65
1984 - '85	9981290	11.75
1985 - '86	10548057	12.38
1986 - '87	11315411	13.28
1987 - '88	8458803	9.93
1988 - '89	14524122	17.05

Growth Rate

$$Y = A + B \frac{P}{t}$$

$$Y = \text{Antilogy (6.6770)} + \text{Antilogy (0.0501)} \frac{P}{t}$$

$$Y = 4753352.2 + 1.1222708 \frac{P}{t}$$

12 per cent growth rate

$$R^2 = 0.85$$

$$t^* = 7.14$$

From the table 2.4 the growth of sales the Chennimalai Industrial Weavers' Co-operative Society has increased except in 1987 - '88. Because of the low level of production during this period. This may be due to the Government policy. The growth rate of the sales of the society is 12 per cent.

The sales has increased three and a half times from 1979 - '80 to 1988 - '89 as seen by the 'B' value. The value of ' R^2 ' (0.85) also confirms that the rate of growth of sales over the ten years period is significant.

The percentage analysis further supports the view that the percentage of sales is also declined in 1987 - '88 which is 10 per cent.

Regarding the sales of the Chennimalai Industrial Weavers' Co-operative Society the concerned figures shows that it has increased its sales which may be due to the fact the quality of the product is good.

Total Profit:

The analysis of total profit is important. Because co-operative society total profit is shared among the members 80, as to improve the standard of welfare of their members, which is suppose to be the

one of the important functions of the society. One of the main items that indicates the effective working of the society is its profit. So, the investigator has tried to identify the fluctuations that have taken place in the total profit of the Chennimalai Industrial Weavers' Co-operative Society.

The table 4.11 shows the growth of total profit over ten years period (1979 - '80 to 1988 - '89) of the Chennimalai Industrial Weavers' Co-operative Society.

TABLE - 4.11

PROGRESS OF TOTAL PROFIT OF THE CHENNIMALAI INDUSTRIAL
WEAVERS' CO-OPERATIVE SOCIETY (1979 - '80 to
1988 - '89)

Years	Total Profit	Percentage
1979 - '80	955123	5.77
1980 - '81	1043773	6.30
1981 - '82	1189163	7.18
1982 - '83	1323202	7.99
1983 - '84	1467229	8.86
1984 - '85	1861304	11.24
1985 - '86	1980126	11.96
1986 - '87	2448982	14.79
1987 - '88	1749542	10.56
1988 - '89	2541838	15.35

Growth Rate

$$Y = A + Bf$$

$$Y = \text{Antilog}(5.9820) + \text{Antilog}(0.0477)f$$

$$Y = 959400.63 + 1.116092f$$

12 per cent growth rate

$$R^2 = 0.48$$

$$t^* = 3.38$$

The figure 4.11 shows that, the profit has increased throughout the period except 1987 - '88 which may be due to the low level of production and sales during the particular period. Total profit has increased two and a half times from 1979 - '80 to 1988 - '89.

The growth rate of production of the society is 12 per cent as seen by the 'B' value. The value of the ' R^2 ' (0.48) is not significant. Because ' R^2 ' value is less than .5. So, the growth of the total profit is not significant. This may be due to the low amount of sales of Chennimalai Industrial Weavers' Co-operative Society.

The percentage of the total profit has increased 6 per cent in 1979 - '80 to 15 per cent in 1988 - '89.

Net Profit:

The amount of net profit depends on total profit and expenditure. Net profit could be distributed among the members.

The table 4.12 shows the growth of net profit, over ten years period (1979 - '80 to 1988 - '89) of the Chenkumar Weavers' Co-operative Society.

TABLE - 4.12

PROGRESS OF NET PROFIT OF THE CHENNIMALAI INDUSTRIAL
WEAVERS' CO-OPERATIVE SOCIETY (1979 - '80 to
1988 - '89)

Years	Net Profit	Percentage
1979 - '80	534880	7.46
1980 - '81	670775	9.36
1981 - '82	676749	9.44
1982 - '83	686241	9.57
1983 - '84	604058	8.43
1984 - '85	803968	11.22
1985 - '86	769194	10.73
1986 - '87	983878	13.73
1987 - '88	526567	7.35
1988 - '89	911225	12.71

Growth Rate

$$Y = A + Bt$$

$$Y = \text{Antilogy (5.7820) +}$$

$$= \text{Antilogy (0.0144)t}$$

$$Y = 605340.87 + 1.0337131t$$

$$3 = \text{Growth Rate}$$

$$R^2 = 0.23$$

The table 4.12 shows that the net profit has increased at a decreasing rate. The growth of net profit of the Chennimalai Industrial Weavers' Co-operative Society has increased its net profit one and a half times from 1979 - '80 to 1988 - '89.

From the growth rate, the amount of net profit is not stable. The growth of net profit is only 3 per cent. The growth rate is not significant, because the 'R²' value (0.02) is less than .5. This may be due to the low level of total profit.

The percentage of the net profit also confirms, the net profit over ten years period is not stable.

From the above table 4.12 the amount of net profit is not stable. The growth rate of net profit is 3 per cent. The growth is not significant, because the 'R²' value (0.23) is less than .5.

The percentage of the net profit also confirms, the net profit over ten years period is not stable. This is may be due to less amount of total profit. Regarding the net profit, the Chennimalai Industrial Weavers' Co-operative Society had not grown well may be due to low level of total profit.

3.4. 't' Test and Co-efficient of Variation:

To find out whether there is any significant difference in between the Chenkumar Weavers' Co-operative Society and Chennimalai Industrial Weavers' Co-operative Society the 't' test have been calculated.

With the help of the Co-efficient of variation we can find out the variation in membership, shares, production, sales, total profit and net profit to witness the effective functioning of the Chenkumar Weavers' Co-operative Society and Chennimalai Industrial Weavers' Co-operative Society during the reference period.

Membership:

The following table 4.13 shows the growth of membership in Chenkumar Weavers' Co-operative Society (X_1) and Chennimalai Industrial Weavers' Co-operative Society (X_2) over the ten years period (1979 - '80 to 1988 - '89).

TABLE - 4.13

MEMBERSHIP OF THE CHENKUMAR WEAVERS' CO-OPERATIVE SOCIETY AND CHENNIMALAI INDUSTRIAL WEAVERS' CO-OPERATIVE SOCIETY (1979 - '80 to 1988 - '89)

Years	Membership X_1	Membership X_2
1979 - '80	503	404
1980 - '81	507	406
1981 - '82	530	417
1982 - '83	640	434
1983 - '84	640	426
1984 - '85	776	483
1985 - '86	774	485
1986 - '87	771	675
1987 - '88	878	651
1988 - '89	874	649

$$t_1 = 3.2265$$

$$t_0 = 2.878$$

(1 per cent level)

$$C.V. X_1 = 19.96 \text{ per cent}$$



$$C.V. X_2 = 20.93 \text{ per cent}$$

From the table 4.13 shows that the calculated value (3.2265) is greater than table value to (2.878). So, there is significant difference between Chenkumar Weavers' Co-operative Society and Chennimalai Industrial Weavers' Co-operative Society with regard to their membership at 1 per cent level.

Regarding the membership of the Chenkumar Weavers' Co-operative Society and Chennimalai Industrial Weavers' Co-operative Society, we could understand that membership varies between 20 and 21 per cent. This shows that variation in the Chenkumar Weavers' Co-operative Society and Chennimalai Industrial Weavers' Co-operative Society is negligible. The reason for the low level of variation is due to the fact that people have the same interest towards the Chenkumar Weavers' Co-operative Society and Chennimalai Industrial Weavers' Co-operative Society.

Comparison of the Chenkumar Weavers' Co-operative Society and Chennimalai Industrial Weavers' Co-operative Society with regard their membership over ten years period 1979 - '80 to 1988 - '89) is depicted in the figure - 1.

1 cm = 100 Members

 Society X₁
 Society X₂

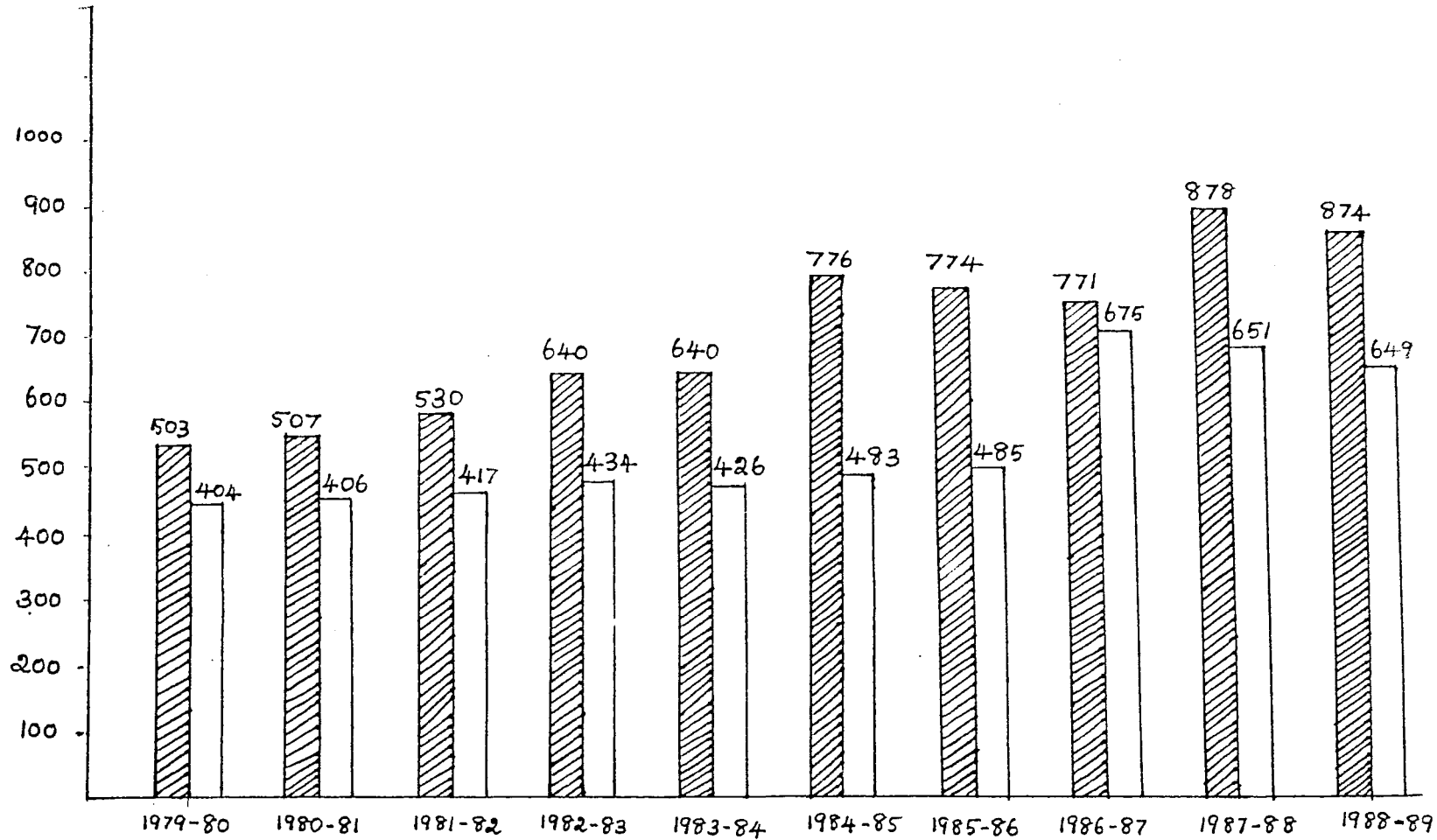


FIGURE .1

COMPARISION OF MEMBERSHIP IN THE CHENKUNAR WEAVERS' CO-OPERATIVE SOCIETY (X₁) AND CHENNALAI INDUSTRIAL WEAVERS' CO-OPERATIVE SOCIETY (X₂) (1979-80 to 1988-89)

Shares:

The following table 4.14 shows the growth of shares in the Chenkumar Weavers' Co-operative Society (X_1) and Chennimalai Weavers' Co-operative Society (X_2) over ten years period (1979 - '80 to 1988 - '89).

TABLE - 4.14

SHARES OF THE CHENKUMAR WEAVERS' CO-OPERATIVE SOCIETY
AND CHENNIMALAI INDUSTRIAL WEAVERS' CO-OPERATIVE
SOCIETY (1979 - '80 to 1988 - '89)

Years	Shares X_{1ip}	Shares X_{2ip}
1979 - '80	269340	97291
1980 - '81	382420	108652
1981 - '82	893860	166218
1982 - '83	660220	177175
1983 - '84	795000	153018
1984 - '85	1133000	192649
1985 - '86	1288000	222963
1986 - '87	1429000	254819
1987 - '88	1802300	297891
1988 - '89	1939540	279969

$$t_1 = 4.3581$$

$$t_0 = 2.878 \text{ (1 per cent level)}$$

$$\text{C.V. } X_1 = 54.94 \text{ per cent}$$

$$\text{C.V. } X_2 = 33.26 \text{ per cent.}$$

From the table 4.14 the calculated value $t_1 =$ (4.3581) which is greater than the table value to (2.878). So, there is significant difference in sharing between the Chenkumar Weavers' Co-operative Society and Chennimalai Industrial Weavers' Co-operative Society at 1 per cent level.

Analysis of co-variation between the two societies in respect of shares indicates that the variation lies between 55 per cent which is higher in Chenkumar Weavers' Co-operative Society and 33 per cent lower in Chennimalai Industrial Weavers' Co-operative Society. The Chennimalai Industrial Weavers' Co-operative Society is highly stable than the Chenkumar Weavers' Co-operative Society. This may be due to the fact that people are more interested in Chennimalai Industrial Weavers' Co-operative Society to become the members than Chenkumar Weavers' Co-operative Society.

Comparision of Chenkumar Weavers' Co-operative Society and Chennimalai Industrial Weavers' Co-operative Society with regards their shares over ten years period (1979 - '80 to 1988 - '89) is presented in the figure - 2.

1 cm = 1 percent

— Society X₁
- - - Society X₂

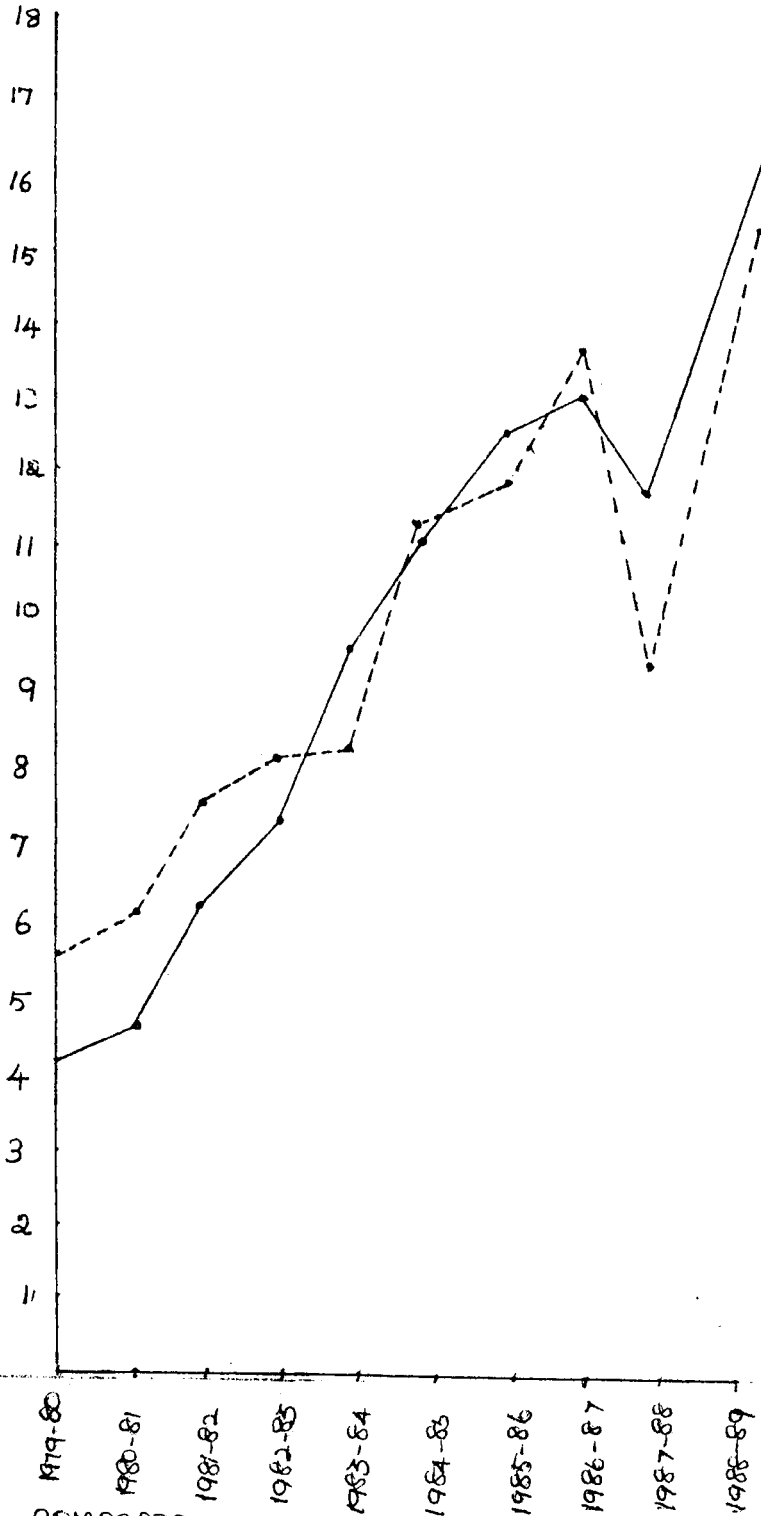


FIGURE. 2

COMPARISON OF SHARES IN THE CHENKUNAR WEAVERS' CO-OPERATIVE SOCIETY (1979-80 TO 1988) AND CHENNIMALAI INDUSTRIAL WEAVERS' CO-OPERATIVE SOCIETY (1979-80 TO 1988)

Production:

The table 4.15 shows the growth of production of the Chenkumar Weavers' Co-operative Society (X_1) and Chennimalai Industrial Weavers' Co-operative Society (X_2) over ten years period (1979 - '80 to 1988 - '89).

TABLE - 4.15

PRODUCTION OF THE CHENKUMAR WEAVERS' CO-OPERATIVE SOCIETY
AND CHENNIMALAI INDUSTRIAL WEAVERS' CO-OPERATIVE
SOCIETY (1979 - '80 to 1988 - '89)

Years	Production X_1	Production X_2
1979 - '80	6444820	3957436
1980 - '81	7349208	4387689
1982 - '83	9696297	5477488
1983 - '84	11854796	5795947
1984 - '85	15671780	5958390
1985 - '86	18243870	8129310
1986 - '87	22312300	9962764
1987 - '88	19719300	6846185
1988 - '89	27862000	11952966
t_1	=	1.2553
t_0	=	2.878 (1 per cent)
C.V. X_1	=	41.75 per cent
C.V. X_2	=	33.88 per cent

From this table (4.15) calculated value t_1 (1.2553) is less than the table value t_0 (2.878). So, there is no significant difference in production between the Chenkumar Weavers' Co-operative Society and Chennimalai Industrial Weavers' Co-operative Society at 1 per cent level.

Regarding the co-efficient of variation in production, the variation for the Chenkumar Weavers' Co-operative Society is high (42 per cent) and unstable, whereas in the Chennimalai Industrial Weavers' Co-operative Society, the variation is low (34 per cent) and stable. The reason for low level of variation is caused by increased production, increased sales and increased demand for the products of the society.

Comparision of Chenkumar Weavers' Co-operative Society and Chennimalai Industrial Weavers' Co-operative Society with regard their production over ten years period (1979 - '80 to 1988 - '89) is depicted in figure 3 a and 3b.

1 cm = 20 lakhs

— original trend

- - - exponential trend

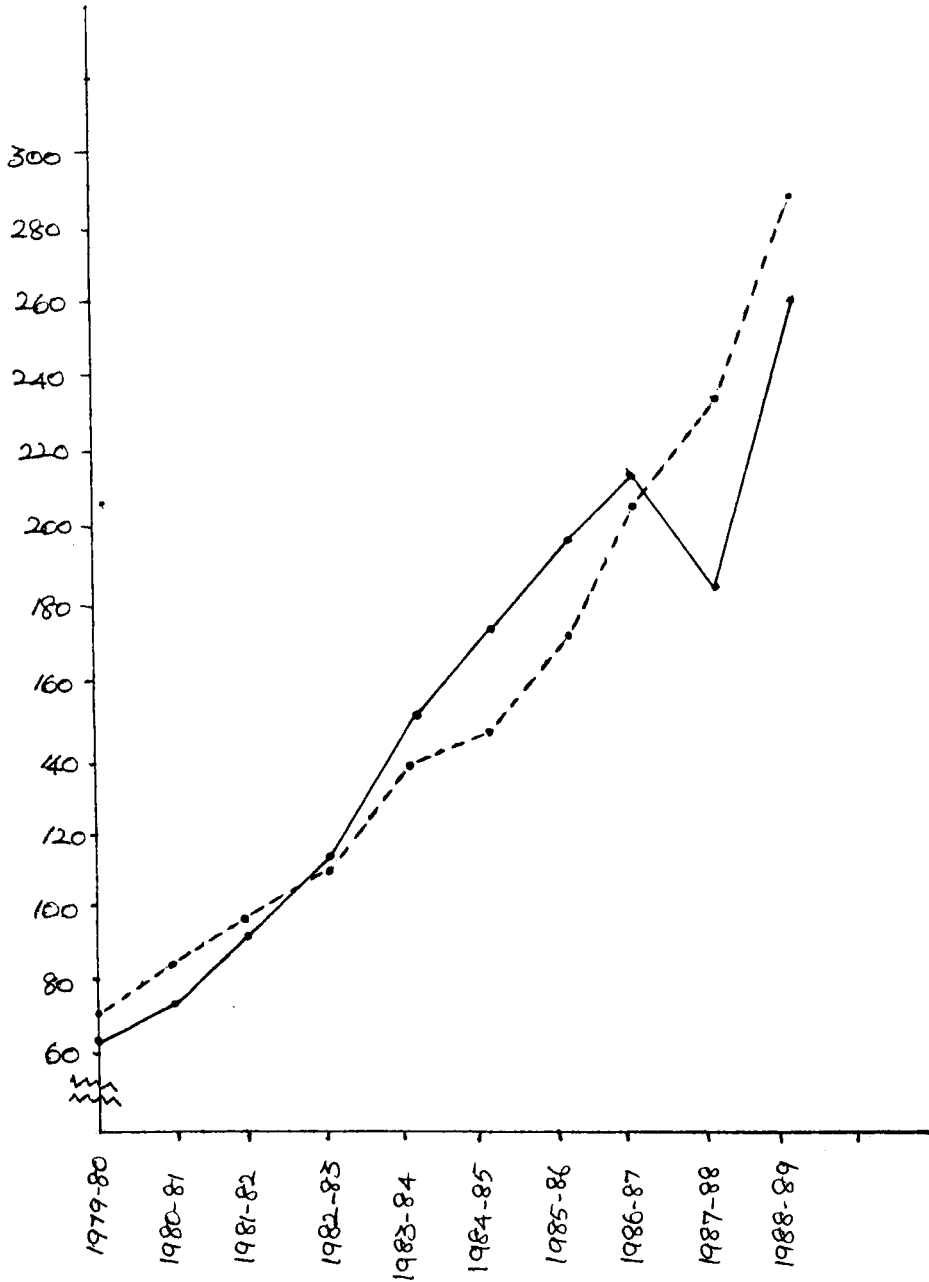


FIGURE 3.9

GROWTH OF PRODUCTION IN THE CHENKUMAR WEAVERS' CO-OPERATIVE SOCIETY (1979-80 TO 1988-89) AND EXPONENTIAL TREND

1 cm = 10 lakhs
— original trend
- - - exponential trend

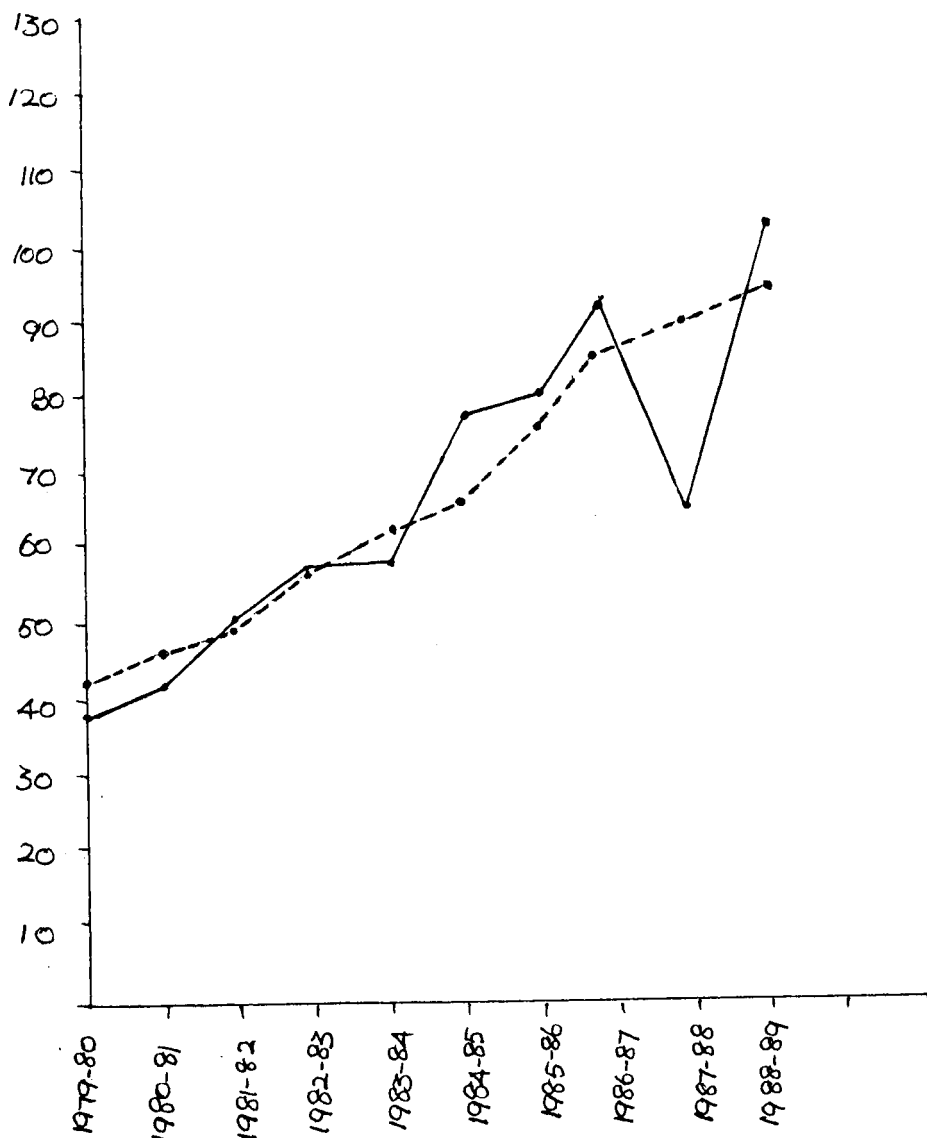


FIGURE 3.6

GROWTH OF PRODUCTION IN THE CHENNIMALAI INDUSTRIAL WEAVERS' CO-OPERATIVE SOCIETY (1979-80 TO 1988-89) AND EXPONENTIAL TREND

Sales:

The following table 4.16 shows the growth of sales of the Chenkumar Weavers' Co-operative Society (X_1) and the Chennimalai Industrial Weavers' Co-operative Society (X_2) over ten years period (1979 - '80 to 1988 - '89).

TABLE - 4.16

SALES OF THE CHENKUMAR WEAVERS' CO-OPERATIVE SOCIETY
AND CHENNIMALAI INDUSTRIAL CO-OPERATIVE SOCIETY
(1979 - '80 to 1988 - '89)

Years	Sales X_1	Sales X_2
1979 - '80	8167831	4484814
1980 - '81	8360213	5448853
1981 - '82	11935000	5215584
1982 - '83	4074879	6019156
1983 - '84	2024854	8182418
1984 - '85	22595544	9981290
1985 - '86	26138617	10548057
1986 - '87	26504277	11315411
1987 - '88	24783571	8458803
1988 - '89	36327727	14524122

t_1 = 4.8126
 t_0 = 2.878 (1 per cent level)
C.V. X_1 = 43.54 per cent
C.V. X_2 = 35.10 per cent

From the table 4.16, the calculated ' t_1 ' value (4.8126) is greater than the table value ' t_0 ' (2.878). So there is significant difference in sales between Chenkumar Weavers' Co-operative Society and Chennimalai Industrial Co-operative Society at 1 per cent level.

In the sales, the variation is much higher (44 per cent) and unstable in Chenkumar Weavers' Co-operative Society, compared to lower degree of (35 per cent) in the Chennimalai Industrial Weavers' Co-operative Society. The low level of variation in Chennimalai Industrial Weavers' Co-operative Society is due to the fact that the society is able to meet the market demand for its products.

Comparision of Chenkumar Weavers' Co-operative Society and Chennimalai Industrial Weavers' Co-operative Society with regard their sales over ten years period (1979 - '80 to 1988 - '89) is presented in the figure-4.

1 cm = 1 percent
—— Society X₁
----- Society X₂

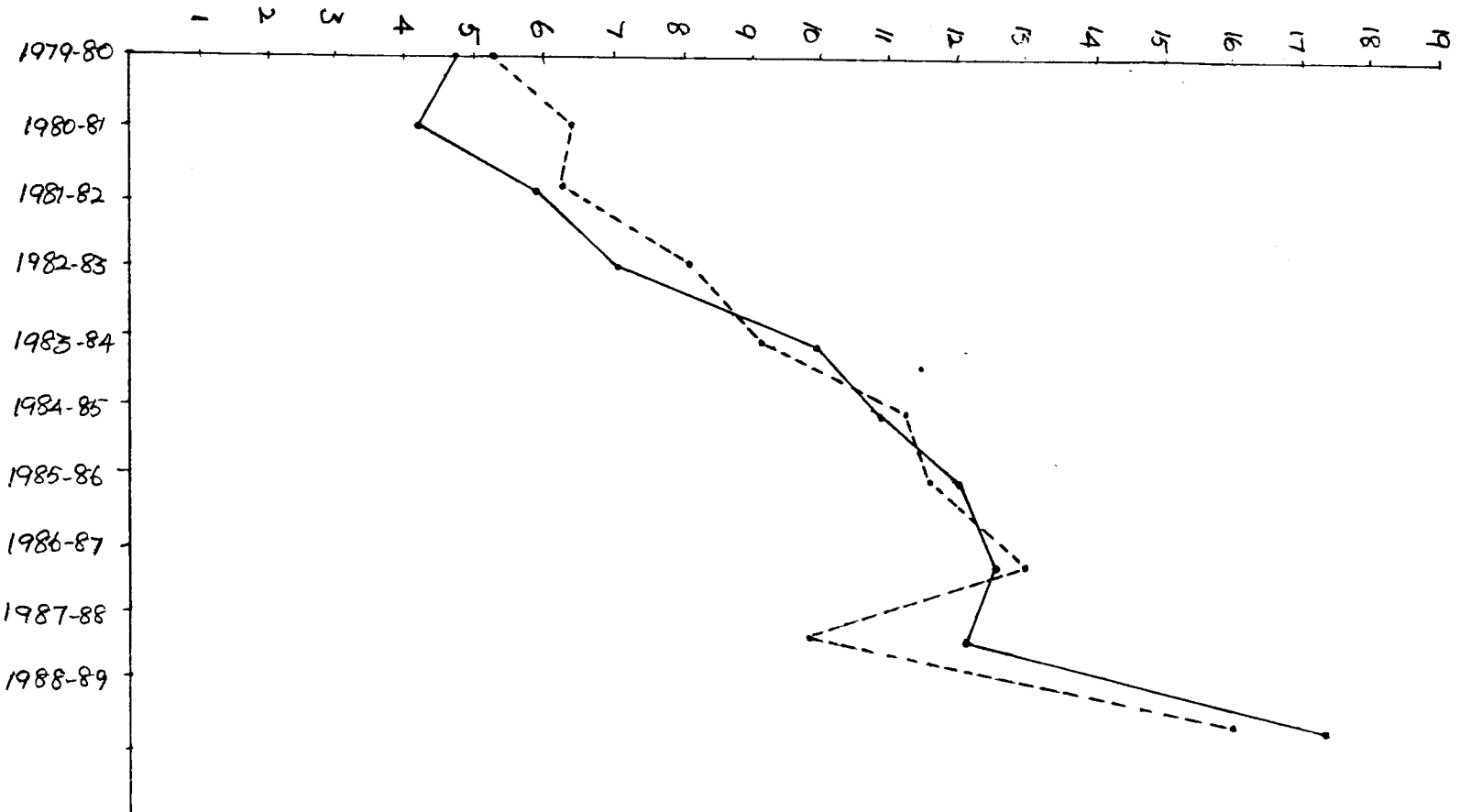


FIGURE. 4
COMPARISON OF SALES IN THE CHENMINNAJI INDUSTRIAL WEAVERS' CO-OPERATIVE SOCIETY (X₁) AND CHENMINNAJI INDUSTRIAL WEAVERS' CO-OPERATIVE SOCIETY (X₂) (1979-80 TO 1988-89)

Total Profit:

The following table 4.17 ~~shows~~ the growth of the Chenkumar Weavers' Co-operative Society (X_1) and Chennimalai Industrial Co-operative Society (X_2) over ten years period (1978 - '79 to 1988 - '89).

TABLE - 4.17

TOTAL PROFIT OF THE CHENKUMAR WEAVERS' CO-OPERATIVE SOCIETY AND CHENNIMALAI INDUSTRIAL CO-OPERATIVE SOCIETY (1979 - '80 to 1988 - '89)

Years	Total Profit X_1	Total Profit X_2
1979 - '80	1375462	955123
1980 - '81	1115576	1043773
1981 - '82	1926225	1189163
1982 - '83	2789456	1323202
1983 - '84	3515848	1467229
1984 - '85	3990084	1861304
1985 - '86	4150707	1980126
1986 - '87	4972484	2448982
1987 - '88	3884960	1749542
1988 - '89	4674292	2541038

$$t_1 = 3.3598$$

$$t_0 = 2.878 \text{ (1 per cent level)}$$

$$\text{C.V. } X_1 = 40.08 \text{ per cent}$$

$$\text{C.V. } X_2 = 31.95 \text{ per cent}$$

Table 4.17 shows that, the calculated, 't' value t'_1 (3.3598) is greater than the table value $t_0 = (2.878)$. So, there is significant difference in total profit between Chenkumar Weavers' Co-operative Society and Chennimalai Industrial Weavers' Co-operative Society and 1 per cent level.

The variation in the total profit for the Chenkumar Weavers' Co-operative Society in high (40 per cent) compared to a lower degree (32 per cent) of variance in Chennimalai Industrial Weavers' Co-operative Society. The low of assets of the Chennimalai Industrial Weavers' Co-operative Society.

Comparision of Chenkumar Weavers' Co-operative Society and Chennimalai Industrial Weavers' Co-operative Society with regard their total profit over ten years period (1979 - '80 to 1988 - '89) is depicted in the figure - 5.

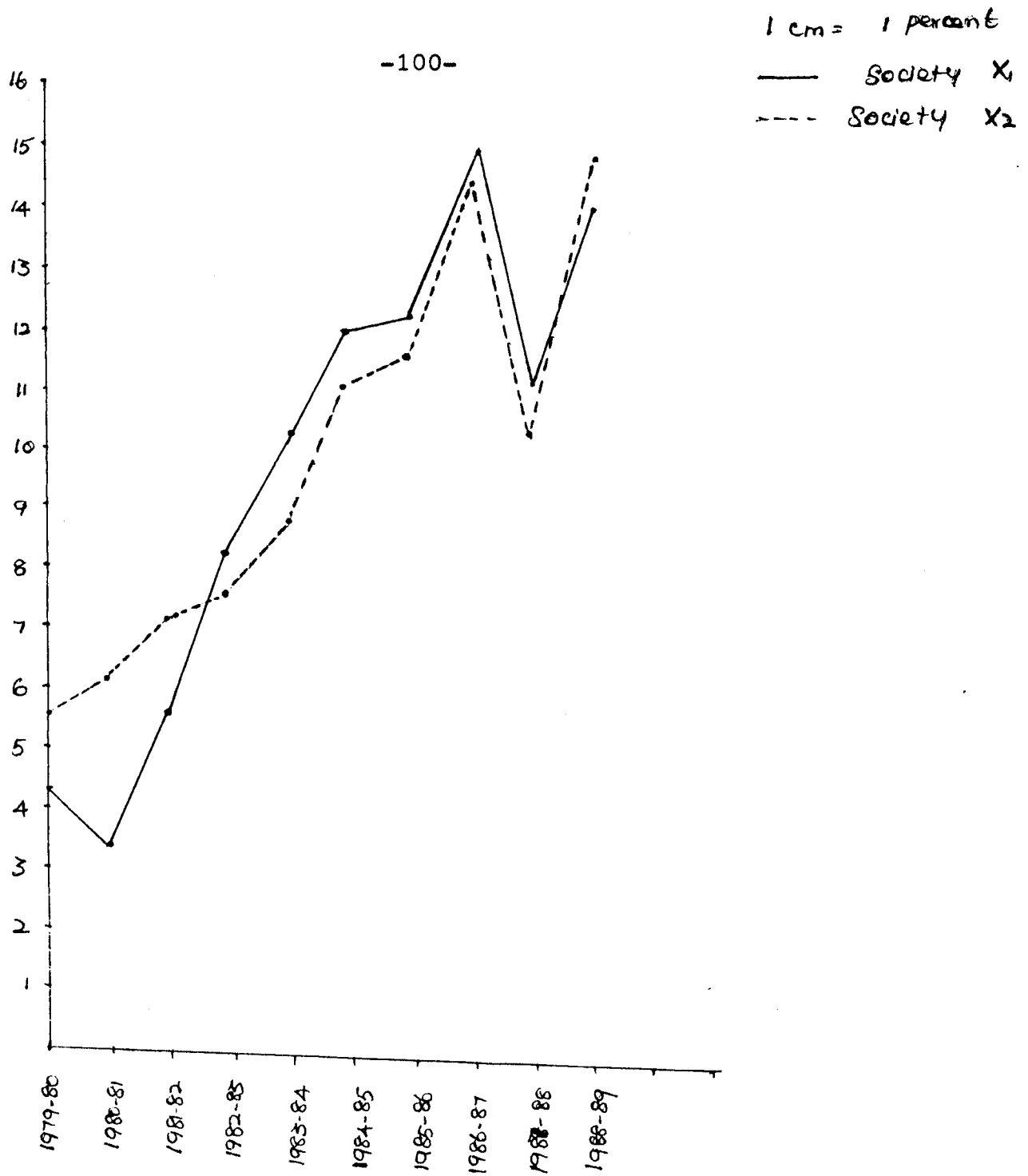


FIGURE. 5

COMPARISON OF TOTAL PROFIT IN THE CHENKUNAR WEAVERS' CO-OPERATIVE SOCIETY (X₁) AND CHANNIMALAI INDUSTRIAL WEAVERS' CO-OPERATIVE SOCIETY (X₂) (1979-80 to 1988-89)

Net Profit:

The following table 4.18 shows the growth of net profit. The Chenkumar Weavers' Co-operative Society (X_1) and Chennimalai Industrial Weavers' Co-operative Society (X_2) over ten years period (1979 - '80 to 1988 - '89).

TABLE - 4.18

NET PROFIT OF THE CHENKUMAR WEAVERS' CO-OPERATIVE SOCIETY AND CHENNIMALAI INDUSTRIAL WEAVERS' CO-OPERATIVE SOCIETY (1979 - '80 to 1988 - '89)

Years	Net Profit X_1	Net Profit X_2
1979 - '80	915677	534880
1980 - '81	720106	670775
1981 - '82	1362358	676749
1982 - '83	1842933	686244
1983 - '84	2406490	604058
1984 - '85	2742337	803968
1985 - '86	2668658	769194
1986 - '87	3200283	983878
1987 - '88	2688245	526567
1988 - '89	3379925	911225

t_1 = 4.9312
 t_0 = 2.878 (1 per cent level)
 C.V. X_1 = 40.42 per cent
 C.V. X_2 = 20.08 per cent

From the table(4.18) the calculated 't' value 't' (4.9314) is greater than the table value 't₀' (2.878). So, there is significant difference in net profit between Chenkumar Weavers' Co-operative Society and Chennimalai Industrial Weavers' Co-operative Society at 1 per cent level.

In respect of net profit, the Chenkumar Weavers' Co-operative Society (10 per cent) is high and unstable than the Chennimalai Industrial Weavers' Co-operative Society (20 per cent). The low level of the variation in Chennimalai Industrial Weavers' Society due to the further utilisation of the assets, which shows the efficiency of the Chennimalai Industrial Weavers' Co-operative Society.

Comparision of Chenkumar Weavers' Co-operative Society and Chennimalai Industrial Co-operative Society with regard their net profit over ten years period (1979 - '80 to 1988 - '89) is presented in the figure-6.

1 cm = 1 percent

— Society X₁
- - - Society X₂

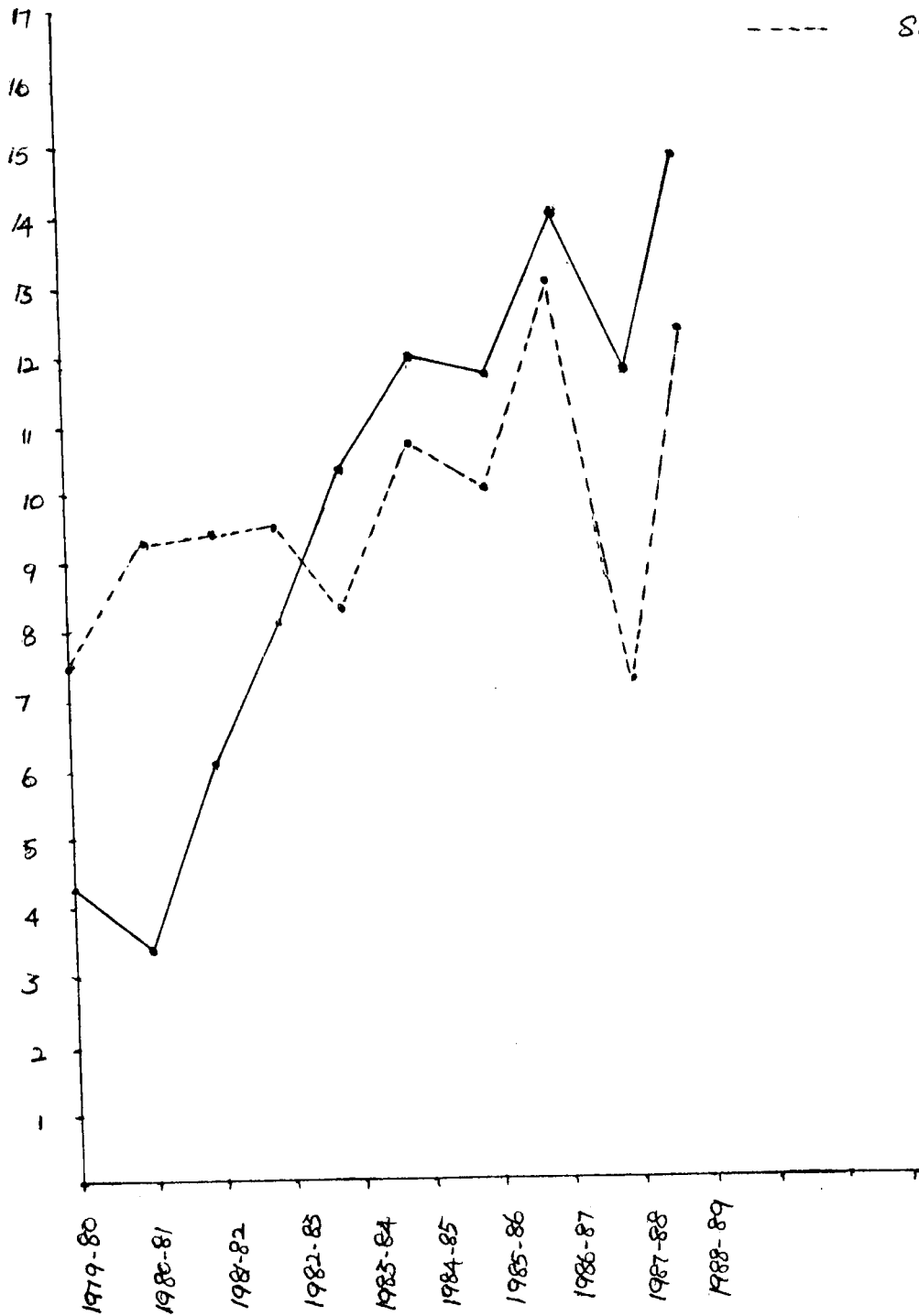


FIGURE . 6

COMPARISION OF NETPROFIT IN THE CHENKUNAR WBAVERS' CO-OPERATIVE SOCIETY (X₁) AND CHENNIMALAI INDUSTRIAL WBAVERS' CO-OPERATIVE SOCIETY (X₂) (1979-80 to 1988-89)

The sum up we can say that there is significant difference between Chenkumar Weavers' Co-operative Society and Chennimalai Industrial Weavers' Co-operative Society with regard to their membership, shares, sales, total profit, and net profit except in production.

The co-efficient of variation clearly tell us the fact that the variance is high and unstable in the Chenkumar Weavers' Co-operative Society in respect of shares, production, sales, total profit and net profit compared to a lower degree of variance and stable in Chennimalai Industrial Weavers' Co-operative Society.

4. Profitability Ratio:

Profitability ratio shows the over all performance of a societies in different ways. It is an indication of the efficiency with which the operations of the business are carried on poor operational performance may indicate poor sales and hence poor profit.

Profitability Ratio of the Chenkumar Weavers' Co-Operative Society:

The table 4.19 shows the profitability ratio of the Chenkumar Weavers' Co-operative Society over ten year period (1979 - '80 to 1988 - '89).

TABLE 4.19

PROFITABILITY RATIO OF THE CHENKUMAR WEAVERS' CO-
OPERATIVE SOCIETY

Years	Net Profit	Sales	Profitability Ratio
1979 - '80	915677	8167831	11.21
1980 - '81	720106	8360213	8.61
1981 - '82	1362358	11935000	11.41
1982 - '83	1842933	14074879	13.09
1983 - '84	2406490	20248572	11.88
1984 - '85	2742337	22595544	12.13
1985 - '86	2668658	26138617	10.21
1986 - '87	3200283	26504277	12.07
1987 - '88	2688245	24783571	10.85
1988 - '89	3379925	363227727	9.30

The table 4.19 tells us that, a poor ability (8.61 per cent) in 1980 - '81 in turn each rupee of sales into net profit, whereas, in 1982 - '83 the profitability ratio comparatively better (13.09 per cent). It shows that, in Chenkumar Weavers' Co-operative Society has increased its profitability ratio over the ten years period because of the higher level of net profit.

Profitability Ratio of the Chennimalai Industrial Weavers' Co-operative Society:

The table 4.20 shows the profitability ratios of the Chennimalai Weavers' Co-operative Society over the ten years period (1979 - '80 to 1988 - '89).

TABLE - 4.20

PROFITABILITY RATIO OF THE CHENNIMALAI INDUSTRIAL
WEAVERS' CO-OPERATIVE SOCIETY

Years	Net profit	Sales	Profitability Ratio
1979 - '80	534880	4484814	11.93
1980 - '81	670775	5448853	12.31
1981 - '82	676749	5215584	12.98
1982 - '83	686244	6919156	9.92
1983 - '84	604058	8182418	7.38
1984 - '85	803968	9981290	8.05
1985 - '86	769194	10548057	7.29
1986 - '87	983878	11315411	8.70
1987 - '88	526567	8458803	6.23
1988 - '89	911225	14524122	6.27

From the above table 4.2, a constant increase in the ratios year after year is definite indication of improving conditions of the business. A birds eye view of the table, further, tells us that a poor ability (6.23 per cent) in 1987 - '88 to turn each rupee of sales into net profit, whereas in 1981 - '82 the profitability ratio comparatively better (12.98 per cent). It shows that the profitability ratio is not constant over the ten years periods because of the fluctuations in the net profit and sales.

Summary and Conclusion

V. SUMMARY AND CONCLUSION

The current study on "A comparative study on the performance of the Chenkumar Weavers' Co-operative Society and Chennimalai Industrial Weavers' Co-operative Society (1979-'80) to 1988 - '89) in Chennimalai Panchayat - Periyar District" was undertaken with the following objectives.

1. To study and compare the performance of the two societies namely Chenkumar Weavers' Co-operative Society and Chennimalai Industrial Weavers' Co-operative Society by taking into consideration the following aspects.
 - a. Membership
 - b. Shares
 - c. Production
 - d. Sales
 - e. Total Profit
 - f. Net Profit
2. To estimate the economic viability of the unit in terms of profitability ratio.

For this study the investigator had chosen Chenkumar Weavers' Co-operative Society and Chennimalai Industrial Weavers' Co-operative Society in Chennimalai Panchayat and used the Annual Reports published by the Chenkumar Weavers' Co-operative Society and Chennimalai Industrial Weavers' Co-operative Society.

The main findings of the study are given below:

1. Regarding the number of members of Chenkumar Weavers' Co-operative Society, it had increased by one and a half times during the reference period.

Regarding the number of members of Chennimalai Industrial Weavers' Co-operative Society, it had increased by one and a half times during the reference period.

2. The amount of shares had increased by nine times of the Chenkumar Weavers' Co-operative Society.

The amount of shares had increased by three times during the reference period of the Chennimalai Industrial Weavers' Co-operative Society.

3. The production had increased by four and a half times during 1979 - '80 to 1988 - '89 of the Chenkumar Weavers' Co-operative Society.

4. The sales had increased by four times during 1979 - '80 to 1988 - '89 of the Chenkumar Weavers' Co-operative Society.

In Chennimalai Industrial Weavers' Co-operative Society had increased its sales by three and a half times during 1979 - '80 to 1988 - '89.

5. The total profit had increased by three and a half times of Chenkumar Weavers' Co-operative Society during 1979 - '80 to 1988 - '89.

The total profit had increased by two and a half times of Chennimalai Industrial Weavers' Co-operative Society. Growth rate was not significant in Chennimalai Industrial Weavers' Co-operative Society.

6. The net profit had increased by three and a half times of Chenkumar Weavers' Co-operative Society during 1979 - '80 to 1988 - '89.

The net profit had increased by one and a half times of Chennimalai Industrial Weavers' Co-operative Society during 1979 - '80 to 1988 - '89. In this society, the growth rate was not significant.

7. The percentage analysis shows that, rate at which membership, shares, production, sales, total profit and net profit increases was not uniform in the Chenkumar Weavers' Co-operative Society and Chennimalai Industrial Weavers' Co-operative Society. The percentage had increased in Chenkumar Weavers' Co-operative Society and Chennimalai Weavers' Co-operative Society over ten years period (1979 - '80 to 1988 - '89) except in the year 1987 - '88.

8. The test of significance analysis shows that there is significant difference between Chenkumar Weavers' Co-operative Society and Chennimalai Industrial Weavers' Co-operative Society with regards to their membership, shares, sales, total profit and net profit except in production.
9. The co-efficient of variation clearly tells us the fact that the variations is high and unstable in the Chenkumar Weavers' Co-operative Society in respect of shares, production, sales, total profit and net profit compared to a lower of variance in Chennimalai Weavers' Co-operative Society whereas variation is negliagible.
10. In the Chenkumar Weavers' Co-operative Society and Chennimalai Industrial Weavers' Co-operative Society the profitability ratio is not constant over the ten years period (1979 - '80 to 1988 - '89). The profitability ratio is high in the Chenkumar Weavers' Co-operative Society in the year 1981 - '82 whereas, in the next year, (1982 - '83) the profitability ratio is high in Chennimalai Industrial Weavers' Co-operative Society.

In conclusion, the study had tried to find out the trends of various variables of the Chenkumar Weavers' Co-operative Society and Chennimalai Industrial Weavers' Co-operative Society during 1979 - '80 to 1988 - '89.

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Appendix

$$\begin{aligned} \sum x_1 &= 6893 ; \bar{x}_1 = \frac{\sum x_1}{N} = \frac{6893}{10} = 689.3 \\ &= x_1 = 137.57 \end{aligned}$$

$$\begin{aligned} \sum x_2 &= 5030 ; \bar{x}_2 = \frac{\sum x_2}{N} = \frac{5030}{10} = 503 \\ &= x_2 = 105.27 \end{aligned}$$

$$\begin{aligned} \text{Co-efficient of variation by } x_1 &= \frac{\sigma_{x_1}}{\bar{x}_1} \times 100 \\ &= \frac{137.57}{689.3} \times 100 \\ &= \underline{\underline{19.96\%}} \end{aligned}$$

$$\begin{aligned} \text{Co-efficient of variation by } x_2 &= \frac{\sigma_{x_2}}{x_2} \times 100 \\ &= \frac{105.27}{503} \times 100 \\ &= \underline{\underline{20.93\%}} \end{aligned}$$

TABLE - II

GROWTH OF MEMBERSHIP IN CHENKUMAR WEAVERS' CO-OPERATIVE SOCIETY AND CHENNIMALAI INDUSTRIAL CO-OPERATIVE SOCIETY

Years	X ₁	X ₂
1979 - '80	503	404
1980 - '81	507	406
1981 - '82	530	417
1982 - '83	640	434
1983 - '84	640	426
1984 - '85	776	483
1985 - '86	774	485
1986 - '87	771	675
1987 - '88	878	651
1988 - '89	874	649

$$r = \frac{\sum t' y'}{\sqrt{\sum t'^2 \sum y'^2}}$$

$$= \frac{2.2472}{182.5 \times 0.0721} = \frac{2.2472}{2.4389} = \underline{\underline{0.9214}}$$

$$R^2 = \underline{\underline{0.8490}} \quad \text{or} \quad \underline{\underline{0.85}}$$

$$\sigma_u^2 = \frac{(1 - R^2) \sum y'^2}{N - 1} = \frac{(1 - 0.85) (0.721)}{9}$$

$$= \underline{\underline{0.0012}}$$

$$\text{var } \hat{b} = \frac{\sigma_u^2}{\sum t'^2} = \frac{0.0012}{82.5} = \underline{\underline{0.000015}}$$

$$t^* = \frac{B}{\text{S.E } \hat{b}} = \frac{0.0272}{0.0039} = \underline{\underline{7.0232}}$$

Null Hypothesis:

There is no significant difference between these societies with regard their membership

TABLE - III

GROWTH OF MEMBERSHIP OF CHENKUMAR WEAVERS' CO-OPERATIVE SOCIETY AND CHENNIMALAI INDUSTRIAL WEAVERS' CO-OPERATIVE SOCIETY

Years	X ₁	X ₂
1979 - '80	503	404
1980 - '81	507	406
1981 - '82	530	417
1982 - '83	640	434
1983 - '84	640	426
1984 - '85	776	483
1985 - '86	774	485
1986 - '87	771	675
1987 - '88	878	651
1988 - '89	874	649

X₁ = Chenkumar Weavers' Co-operative Society

X₂ = Chennimalai Industrial Weavers' Co-operative Society.

$$\sum \log Y = \underline{\underline{28.294}} \quad ; \quad \log \bar{Y} = \frac{\sum \log Y}{N} = \frac{28.294}{10} = 2.8294$$

$$\sum Y^2 = 0.0721 \quad t = 45; \quad \frac{\sum t}{N} = \frac{45}{10} = 4.5$$

$$\sum t^2 = 82.5$$

$$\sum t' y' = 2.2472$$

$$Y = A + Bt$$

$$B = \frac{\sum t' y'}{\sum t'^2} = \frac{2.2472}{82.5} = 0.0272$$

$$A = \log \bar{Y} - B (\bar{t})$$

$$= 2.8294 - 0.0272 \times 4.5$$

$$= \underline{\underline{2.7079}}$$

$$Y = A + Bt$$

$$= \text{Antilog } (2.7079) + \text{Antilog } (0.0272)t$$

$$= \underline{\underline{510.4 + 1.064}}$$

6 per cent of growth rate

$$\sum x = 6893 ; \bar{X}_1 = 689.3 \quad n = 10$$

$$\sum y = 5030 ; \bar{X}_2 = 503$$

$$s_1 = 137.57$$

$$s_2 = 105.27$$

$$t = \frac{\bar{X}_1^m - \bar{X}_2}{\sqrt{\frac{s_1^2 + s_2^2}{n-1}}}$$

$$t = 683.3 - 503$$

$$\frac{(137.57)^2 + (105.27)^2}{10 - 1}$$

$$= 689.3 - 503$$

$$= 186.3$$

$$= \frac{(137.57)^2 + (105.27)^2}{9}$$

$$\frac{18925.51 + 11081.77}{9}$$

$$= \frac{186.3}{57.74}$$

$$t_1 = 3.2265$$

$$v = n_1 = n_2 - 2$$

$$= 10 + 10 - 2 = 18$$

From the table, the value of t_0 when $(n_1 + n_2 - 2)$

$\Rightarrow n = 18$ at 1 per cent level of significance is, $= 2.878$

Therefore $t_1 > t_0$

The null hypothesis is rejected. There is significant between these societies with regard their membership.