Chapter 8

SUMMARY OF FINDINGS, CONCLUSIONS, IMPLICATIONS AND SUGGESTIONS
8.1 Introduction

The Handloom Industry in India has a very long history, spanning over several centuries. Today, in India, handlooms industry holds a prime place for three reasons viz. it provides the largest employment among the traditional industries; handlooms have maintained one-forth share of total textile production in the country; and the textile industry, including handlooms, is a major foreign exchange earner of the country. The major handloom states in India are West Bengal, Tamil Nadu, Uttar Pradesh, Andra Pradesh, Assam and Manipur. These six states account for 75% of handloom weaving in the country.

The state of Kerala enjoyed a dominant position in the handloom production arena in India till 1995. The number of weavers, number of looms, and number of handloom weavers’ cooperative societies have come down over the years. Therefore, the handloom industry in Kerala lost much of its past glory during the last few years. Handloom sector in the state is also facing encroachment of power loom product items from the state of Tamil Nadu camouflaged as handlooms. In order to revive and make the handloom industry a competitive one in the post globalisation era, various strategies like cluster development approaches, participation of Self-Help Groups (SHG’s) in handloom production, extending the National Employment Guarantee Scheme to the handloom sector, promotion of regional brands and various other schemes are implemented by the Central and State Government.
Handloom weaving provides livelihood to millions of weavers and
craftsperson in Tamil Nadu. The sector has not only survived but also grown over
the decades. Tamil Nadu has several popular weaving centers with specific varieties
of handloom cloth weaving. The government has continuously tried to develop the
sector through active support to the co-operative units. The working handloom units
are not uniform all over the state; and the organization of handloom weavers can be
brought under three categories viz., Co-operatives, Master Weavers, and Individual
or Independent Owners. Weaving cooperatives have been formed as governmental
effort to relieve the weavers from the clutches of the master weavers. Almost 84 per
cent of the weavers in Tamil Nadu are under cooperative fold. However, in the state
of Tamil Nadu, it has been observed that the number of handloom weavers, number
of looms, and number of handloom weavers’ cooperative societies have come down
over the years; while at the same time the number of power looms and shift of
handloom weavers to power looms have increased. Due to the need of cost effective
products in the domestic market, and export market; and timely delivery of product
items; handloom units have resorted to power loom cloths for export camouflaged as
handloom cloths. Owing to productivity differences, the prices of power loom
products are naturally lower and so consumer preference for power loom cloths.
Therefore, handloom weavers leaving handlooms for employment in power loom
sector and other occupations is widely noticed.

It is against this background, an in-depth comparative study on the structural
characteristics, and appraisal of the handloom industrial units in Kerala and Tamil
Nadu becomes relevant and useful. Hence, the present study has been undertaken.
The study is both descriptive and empirical in nature. Both primary and secondary
data have been used for the purpose of the study. In order to conduct a comparative investigation, Handloom Industrial units coming under the Co-operative folder alone are selected for the in-depth study. Thus, altogether a total of 440 sample PHWCS consisting of an equal number of 220 units from the state of Kerala and 220 units from the state of Tamil Nadu have been selected as sample handloom units. The data collected for the study was related to a five year financial period from 2007-08 to 2011-12. To analyse the data, paired sample ‘t’ test, Levene's Test of Equality of Variances, Pearson Chi-Square test, Mann-Whitney (‘U’) test, and mean score ranking have been suitably employed.

8.2 Findings of the study

The followings sections reveal major findings derived from the analysis of data collected from the sample units taken from the state of Kerala and Tamil Nadu in a comparative fashion.

❖ Profile of the Units

(a) Type of the Unit

➢ Out of the 440 units surveyed, majority of the units (81.60%) were coming under the cottage type. The percentage share in this respect is comparatively very high (95%) in the state of Tamil Nadu and it was 68.18% in the state of Kerala.

(b) Average Years of Experience of the Unit

➢ The average experience of cottage type units in the state of Kerala is 56.37 years, and that of factory type units is 41.47 years. In the state of Tamil Nadu, it was 46.21 years and 50 years respectively in factory and cottage type units. It is observed that cottage type handloom units in Kerala have longer years of experience than that of Tamil Nadu. But, in the case of factory type handloom
units, the state of Tamil Nadu has longer tradition when compared to the state of Kerala.

**Objective 1: Structural Characteristics of Weavers of the Unit**

(a) *Composition of Weavers of the Unit*

- In the state of Kerala, the average number of registered weavers of sample units is 367.60; but, in the state of Tamil Nadu, the figure is 674.90 (Nos). There is significant difference between the states of Kerala and Tamil Nadu in respect number of registered weavers of the handloom units. It also reveals that the number of registered weavers of the handloom units of Tamil Nadu is more when compared to the state of Kerala.

- The average number of active weavers of sample units is 62.90, which is lower than the state of Tamil Nadu (242.95). There is significant difference between the two States in respect of number of active weavers of the handloom units. This implies that the total number of active weavers of sample units in Tamil Nadu is more than that of Kerala.

- In the state of Kerala, the average percentage of active weavers of the handloom units is 17.52; but, in the state of Tamil Nadu, the figure is 43.05%. There is significant difference in the percentage of active weavers of the handloom units between the two States. It also implies that the percentage of active weavers of sample units in Tamil Nadu is comparatively higher than the state of Kerala.

- The average number of active male weavers of sample units is 18.76 in the state of Kerala; while, in the case of Tamil Nadu, the figure is 136.20 (Nos). There is significant difference between the two States in respect of number of active male
weavers of sample units. This brings to light the fact that total number of active male weavers of units in Tamil Nadu is more when compared to Kerala.

- In the state of Kerala, average number of active female weavers of sample units is 43.66; and in Tamil Nadu it is 106.25 (Nos). There is significant difference in the number of active female weavers of the Handloom units between the two States; and implies that the number of active female weavers of handloom units in Tamil Nadu is more than that of Kerala.

- The average number of active weavers of cottage units is 68.63, and of factory type units are 50.61 in the State of Kerala. Similarly, in Tamil Nadu, the mean score obtained for cottage type units is 224.79, and for factory type units, it is 588. Both in cottage and factory type units, number of active weavers of handloom units in Tamil Nadu are comparatively more than in the state of Kerala. There is a significant difference in the number of active weavers of cottage and factory type units between the state of Kerala and Tamil Nadu.

(b) Educational Status of Weavers of the Unit

- The average percentage of weavers of the unit having no formal education in the state of Kerala is 3.49; whereas it is 23.35% in the state of Tamil Nadu. The percentage of weavers having education below SSLC in the state of Kerala was 81.78, which is comparatively higher than the state of Tamil Nadu. The average percentage of weavers of the units who have passed SSLC in the State of Kerala was 14.21, whereas it was only 1.30% in the state of Tamil Nadu. Similarly, in the case of average percentage of weavers who have education of pre-degree/plus two and above qualification in the state of Kerala was below one per cent, but, in the state of Tamil Nadu, none of weavers have coming under
this category. It can be concluded that there is no significant difference in the educational status of weavers between the state of Kerala and Tamil Nadu.

(c) **Hereditary and Non-Hereditary Weavers of the Unit**

- The average percentage of hereditary weavers of units in Kerala is 53.21; whereas it is 96.50 in the state of Tamil Nadu. This shows that there is significant difference in the percentage of hereditary and non-hereditary weavers between the state of Kerala and Tamil Nadu. It also indicates that majority of weavers from the state of Tamil Nadu belongs to hereditary category, when compared to the state of Kerala.

(d) **Average Monthly Income of Weavers of the Unit**

- The average monthly income of cottage weavers of the handloom units in Kerala is Rs.3110.80, but, in the state of Tamil Nadu, the figure is Rs.4128.90. There is significant difference between the states in respect of average monthly income of cottage weavers of the handloom units. The study also shows that the average monthly income of cottage weavers of Tamil Nadu is high when compared to that of Kerala.

- The average monthly income of factory weavers of the handloom units in Kerala is Rs.2477.80, but, in the state of Tamil Nadu, the figure is Rs.5000.00. There is significant difference between the states in respect of average monthly income of factory weavers of the handloom units. The study also shows that the average monthly income of factory weavers of Tamil Nadu is high when compared to Tamil Nadu.
(e) *Family Size of the Weavers of the Unit*

- The average percentage of weavers of units having 1-2 members in the family is 5.07 in the state of Kerala; while it was 11.20 in the state of Tamil Nadu. Family size of weavers having 3-4 members in the state of Kerala was 76.72%, and it was 61.45% in Tamil Nadu. The mean percentage of weavers of units having a family size of more than 05 members in the state of Kerala was 19.23; whereas it was 27.35 in Tamil Nadu. There is no significant difference on the family size of weavers in Kerala and Tamil Nadu.

(f) *Assistance Received by the Unit for the Benefit of Weavers*

- Out of 440 units surveyed, majority of units in the state of Kerala and Tamil Nadu has not received assistance towards self-sustainability and co-operativation of weavers under cluster development programmes of Government. The percentage share in this respect in Kerala and Tamil Nadu were 74.09 and 80 respectively. The statistical test shows no significant difference between the units in Kerala and Tamil Nadu in respect of assistance received towards self sustainability and co-operativation of weavers under cluster development programmes.

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**Objective 2: Structural Analysis in the Area of Production**

(a) *Type of Loom Used by the Unit*

- Out of the 440 sample units surveyed, most (54.77%) of the units are using frame loom. The percentage share in this respect is more (69.54) in the state of Kerala when compared to Tamil Nadu (40). But, in the case of pit loom, the percentage share in both the states is very low (10-13%). However, the number of units having both pit and frame was 39 (17.73%) in Kerala and 110 (50%) in...
Tamil Nadu. There is significant difference in the type of loom used by the sample units between the states of Kerala and Tamil Nadu. The study indicates that frame loom is more popular among the handloom units in both the states.

(b) Type of Yarn Used by the Units

- The average percentage of dyed yarn used in Kerala is 73.88; whereas it is 92.90 in Tamil Nadu. Similarly, mean percentage of bleached yarn used in Kerala is 6.755, but, it was not found among the sample units in Tamil Nadu. Use of unbleached yarn in Kerala is 19.366%, and it is 7.10% in the state of Tamil Nadu. There is significant difference between the units in Kerala and Tamil Nadu in respect of average percentage of types of yarn used in the unit. The study also indicates that majority of units in both the states is using dyed yarn, and its proportion is comparatively higher in the state of Tamil Nadu.

(c) Sources of Yarn Procured by the Unit

- The average percentage of yarn procured by the handloom units from shops within the state of Kerala is 14.51, whereas, it is 7.55 in the state of Tamil Nadu. Similarly, in the state of Kerala, average percentage of yarn procured from shops outside the state, yarn procured from yarn bank, and yarn procured from apex society is 2.64, 49.09 and 31.80 respectively, and it was 0.00, 0.00 and 7.85 respectively in Tamil Nadu. Likewise, mean percentage of yarn procured from the customers in Kerala is 1.96, whereas, in Tamil Nadu it was zero. In the state of Tamil Nadu, yarn procured from NHDC and Yarn procured from TANSILK is 65.10% and 19.50% respectively; and none of the units in Kerala procured yarn from NHDC and TANSILK. However, no significant difference has been
observed in the average percentage of yarn procured from different sources by the handloom units between the state of Kerala and Tamil Nadu.

(d) Types of Dyes Used by the Units

- The mean percentage of VAT dyes used in Kerala is 93.39, whereas it is 30.5 in Tamil Nadu. Similarly, the average percentage of Naphthol dyes used in Kerala is 6.61, whereas it is 69.50 in Tamil Nadu. There is significant difference between the sample units in Kerala and Tamil Nadu on various types of dyes used. This also reveals that in the state of Kerala, percentage use of VAT is comparatively high when compared to Tamil Nadu, and Naphthol dyes are more popular among the units in Tamil Nadu.

(e) Technology of Production

- Majority (94.32%) of sample units in both the states is adopted traditional technology in the area of production. The chi-square test shows no significant difference between the handloom units in the state of Kerala and Tamil Nadu in respect of technology of production adopted.

(f) Types of Cloths Produced by the Units

- The average percentage of Cotton cloth produced by the handloom units in Kerala is 98.47, whereas for Tamil Nadu it is 68.40. Similarly, mean percentage of Silk cloth, Art-silk cloth, and Kora-silk cloth produced by the units in Kerala is zero, whereas it was 16.55%, 10.75% and 3% respectively in Tamil Nadu. Likewise, mean percentage of polyester, and linen cloth produced by the units in Kerala is 0.35 and 1.17 respectively, whereas it was 10.75 and zero respectively in Tamil Nadu. There is no significant difference between the average
percentage of types of cloths produced by the handloom units in Kerala and Tamil Nadu.

(g) Production Capacity Utilised by the Unit

- Compared to the sample units of Tamil Nadu, the units in the state of Kerala were underutilising their production capacity. Out of the 220 sample units in the state of Kerala, only 80 (38.83%) units are utilising their production capacity above 80%. In contrast to this, in the state of Tamil Nadu, out of 220 units, 126 units (61.17%) are utilising their production capacity above 80%. The number of units utilising capacity of 60-80% in the state of Kerala was 52 units, while it was 33 units in the state of Tamil Nadu. It is concluded that there is a significant difference in the number of units utilising production capacity at different levels between the state of Kerala and Tamil Nadu.

(h) Average Percentage of Weavers Shifted to Other Sectors

- The mean score for the average labours shifted per annum is 4.77%; while it was 3.58% in the state of Tamil Nadu. There is significant difference between states in respect of average percentage of labour force shifted per annum. It also shows that average percentage of labour force shifted from handloom units to other sectors is comparatively higher in the state of Tamil Nadu.

(i) Production Assistance Received by the Units under CDS

- Majority of sample units in the state of Kerala and Tamil Nadu have not received any production assistance under cluster development programmes of Government. However, the statistical test shows that significant difference has been reported between the units in two states in respect of assistance towards basic inputs, and yarn depots. In the case of assistance towards basic inputs,
number of units which received the assistance was 47 in Kerala, which was comparatively lower than Tamil Nadu (88 units). But, in the case of assistance towards yarn depot, number of units which received assistance was comparatively more (178 units) in Kerala, when it was 143 units in Tamil Nadu.

Objective 2: Structural Analysis in the Area of Marketing

(a) Channels of Distribution

Handloom units in the state of Kerala record maximum percentage of their sales through Exhibitions/fairs; but, in the state of Tamil Nadu, the handloom units made maximum percentage of sales through apex society. The second preference on the channel of distribution among the sample units in Kerala was own shops/sales outlets; while, in the state of Tamil Nadu, it was direct sales to consumers. The third predominant channel of distribution in the state of Kerala was ‘sales made through Apex society’; but, in the state of Tamil Nadu, it was constituted by ‘Sales made through own shops/sales outlets’. There is no significant difference between the percentage of sales of handloom units routed through different channels between the state of Kerala and Tamil Nadu.

(b) Warehousing Facilities

It has been observed that in the state of Kerala, out of 220 units surveyed, majority 211 (95.91%) of units using ‘own warehouse’; but in the state of Tamil Nadu, it was 90% of units. The remaining percentage of units in the state of Kerala and Tamil Nadu were using rented warehousing facilities. There is significant difference in the nature of warehousing facilities used by the handloom units between the state of Kerala and Tamil Nadu.
(c) **Branding of Products**

- Majority of the sample units in both the states have given their own brand name to the handloom items produced by them. The percentage share in this respect is comparatively higher (80%) in Tamil Nadu than the state of Kerala (70%). However, it has been observed 4.5% of sample units in Kerala and 16.36% of sample units in Tamil Nadu are not using any brand to sell their products. At the same time, 35.45% of sample units in Kerala, and 3.63% of sample units in Tamil Nadu were using local brand names to market their products. 04.55% of units in Kerala, and 16.36% of units in Tamil Nadu have ‘No brand name’ to sell their products. There is significant difference in the adoption of brand among the sample units between the state of Kerala and Tamil Nadu.

(d) **Promotional Practices**

- The advertisement through Posters/Banners ranks first preferred media among the sample units in the state of Kerala and Tamil Nadu. The Magazines/Journals ranks second one preferred by the sample units in Kerala and Tamil Nadu. Use of newspaper advertisement ranks third in the most preferred media among the sample units in the state of Kerala and Tamil Nadu. There is no significant difference between the handloom units between the states in respect of advertisement media preferred by them.

(e) **Frequency of Advertisement**

- Most of the sample units were not giving advertisement regularly. Out of 220 units surveyed, 131 (59.55%) in Kerala adopted advertisement occasionally/sometimes. Likewise in the state of Tamil Nadu, 53.64% of units follow occasional advertisement. The percentage of units following regular
advertisement is comparatively higher (43.18%) in Tamil Nadu when compared to the state of Kerala (33.63%). There is a significant difference in the pattern of advertisement given by the handloom units between the state of Kerala and Tamil Nadu.

(f) Marketing Assistance under Cluster Developments Programmes

- The majority of sample units in the state of Kerala and Tamil Nadu were not received marketing assistance under cluster development programmes of Government. The chi-square test reveals no significant difference in the number of units that received marketing assistance under cluster development programmes of Government between the state of Kerala and Tamil Nadu.

Objective 3: Problems of Handloom Units in the Area of Finance

- In the state of Kerala, high degree of financial leverage was found to be the major problem in the area of finance experienced by the handloom units. Shortage of funds for expansion/diversification ranks the second. The third predominant issue faced by the units was inability to meet working capital requirements in time. The other financial problems in the order of rank are difficulty in the timely repayments of loans; difficulty in getting financial assistance from banks; lack of credit facilities from suppliers of raw materials; delay in collection of sales proceeds from traders/agents; high volume of credit sales; and high rate of bad debts on credit sales.

Similarly, in the state of Tamil Nadu the most severe financial problem of the units was high degree of financial leverage; and inability to meet working capital requirements in time was found to be second major problem. The third issue experienced by the units in Tamil Nadu was shortage of funds for expansion/
diversification. The other financial problems in the order of rank are delay in collection of sales proceeds from traders/agents; difficulty in the timely repayments of loans; lack of credit facilities from suppliers of raw materials; high volume of credit sales; difficulty in getting financial assistance from banks; and high rate of bad debts on credit sales.

It has been observed that there is no significant difference between the score assigned by the sample units on various financial problems experienced by the handloom units in Kerala and Tamil Nadu. Further, there is no significant difference between the states in respect of the severity of problems in the area of finance experienced by the handloom units.

(a) Problems Experienced in Obtaining Financial Assistance from Banks

- The first rank assigned by the handloom units in Kerala on the problems experienced in getting finance from bank was lack of creditworthiness of the borrower. Too many complicated procedures and formalities to get loan from the banks constitute second major problem. The third issue faced by the units was lack of subsidy on loan amount and interest obligation. The other problems faced by the units in the order of ranks are inadequate financial assistance compared to actual requirements, delay in sanctioning the loan amount, and difficulty to provide adequate securities/guarantee to the loan.

On the other hand, in the state of Tamil Nadu, too many complicated procedures and formalities ranks first among the problems experienced in getting finance from banks. The second rank is assigned to lack of subsidy on loan amount and interest. Difficulties to provide adequate securities/guarantee to the loan constitute the third rank. The other problems in the order of their rank are inadequate
financial assistance, delay in sanctioning the loan amount, and lack of creditworthiness.

There is no significant difference between the score assigned by the units in Kerala and Tamil Nadu on various problems experienced in getting finance from banks.

**Objective 3: Problems in the Area of Production**

- In the state of Kerala, the problem of high cost of raw materials is the most severe one faced by the handloom units. Lack of skilled labour ranks the second among the production problems of handloom units in Kerala. Wide fluctuations in prices of raw materials is the third major problem experienced by the sample units of Kerala. Underutilization of installed capacity is found to be the fourth problem confronted by the sample units in Kerala. Traditional preparatory work ranks the fifth problem of sample units in Kerala. The other problems in the order of rank are high cost of transportation; technological issues in weaving and dyeing process; lack of non-credit input assistance from Government agencies; lack of timely delivery of raw materials; use of old looms; inadequate design and product development; poor quality of raw materials; damage of raw materials during handling; lack of facilities to check the quality of raw materials; scarcity of raw materials; high cost of labour; poor quality of dyeing; lack of storage facility for raw materials; and high rate of defectives/abnormal wastage of materials on weaving process.

In the state of Tamil Nadu, the most severe problem experienced by the handloom units in the area of production is lack of skilled labour with a rank score of 3.30. High cost of raw materials is the second major problem faced by the sample
units. Under utilization of the installed capacity ranks the third problem in the state of Tamil Nadu. Wide fluctuation in prices of raw materials is found to be the fourth problem of sample units of Tamil Nadu. The other problems in the order of rank are traditional preparatory work; inadequate design and product development; use of old looms; lack of non credit input assistance from Government agencies; high cost of transportation of raw materials; high cost of labour; lack of timely delivery of raw materials; damage of raw materials during handling; poor quality of dyeing; technological issues in weaving and dyeing process; poor quality of raw materials; lack of facilities to check the quality of raw materials; scarcity of raw materials; high rate of defectives/abnormal wastage of materials on weaving process; and lack of storage facility for raw materials.

There is significant difference between the states in respect of production related problems faced by the handloom units. Further, it has been observed that there is significant difference between the states in respect of severity of production problems faced by the handloom units. It indicates that the severity of production problems of handloom units in Kerala is high when compared to Tamil Nadu.

(a) Factor Analysis of the Problem in the Area of Production

- It has been observed that 69.20% of the total variance after the rotation of the different components forming the factors “Scanty raw material availability and volatility in price”, 64.80% of the total variance after the rotation of the different components forming the factors “Lack of innovative models”, 66.00% of the total variance after the rotation of the different components forming the factors “Moderate effluence of internal threats”, 89.90% of the total variance after the rotation of the different components forming the factors “Improper self
contained storage”, 73.90% of the total variance after the rotation of the different components forming the factors “Stumpy congenital practice” and finally 86.60% of the total variance after the rotation of the different components forming the factor “Absence of sincere Stimulus and Drive”. These are the identified major factors/problems affecting production activities of the handloom units in the state of Kerala and Tamil Nadu.

(b) Underutilization of Production Capacity

➢ The study reveals that the prime reasons for the under utilization of production capacity among the sample units in Kerala was shortage of skilled labour. The second factor to the phenomenon was shortage of working capital. The third predominant reason reported by the units was poor condition of looms. The factors reported among the sample units of Kerala in the order of rank are Marketing problems, Shortage of raw materials, and Problems of warehousing.

On the other hand, in the state of Tamil Nadu, Marketing problems constitute the main reason for under utilization of full capacity. The second rank is attributed by shortage of raw materials. The third predominant reason reported by the units was poor condition of looms. The other factors in the order of ranks are problems of warehousing, shortage of skilled labour, and shortage of working capital.

It is inferred that there is no significant difference between the score assigned by the sample units in Kerala and Tamil Nadu in respect of the reasons for not utilizing the production capacity.
(c) \textit{Shifting of Handloom Weavers/Workers to Other Sectors}

- In the state of Kerala, it was observed that low wages in the sector is the most prominent reason for shifting of employees from the handloom sector. The second major reason is lack of support from the family members of the workers especially new generation of existing employees are not interested in this sector. The third predominant reason among the sample units was personal reason of the employees. The other reasons for the phenomenon in the order of their ranks are cumbersome work, lack of job security, lack of incentives, lack of better job prospects, lack of job satisfaction, and poor working conditions.

In contrast to this, in the state of Tamil Nadu, the main reason for the shifting of labour force to other sectors is low wages. The second rank is given to the reason of lack of support from the family members. The third rank is assigned to personal reasons (marriage, sickness etc.) of the employees. The other reasons for in the order of their ranks are cumbersome work, lack of job security, lack of better job prospects, lack of job satisfaction, poor working conditions, and lack of incentives.

The study observed that there is no significant difference between the score assigned by the units in Kerala and Tamil Nadu regarding the reasons for shifting of labour force from handloom to other sectors.

\textbf{Objective 3: Problems in the Area of Marketing}

- In the state of Kerala, seasonal demand is the most severe marketing problem faced by the handloom units. Competition from power looms/mills ranks the second in the marketing problems of handloom units in Kerala. Low margin on selling price is the third major problem experienced by the sample units of Kerala. Difficulty in timely marketing of products is found to be the fourth
problem confronted by the sample units in Kerala. The other problems in the order of rank are lack of marketing support from Government and Apex society; effect of price fluctuations; existence of spurious/inferior handloom products in the market; lack of advertisement and sales promotion; frequent changes in fashion and trends; no effort for brand promotion; lack of exporting facilities; low demand from local market; lack of customers’ awareness about the quality/standard of handloom products; lack of market information/knowledge; poor communication/linkage with big traders; lack of warehousing facilities; exploitation by intermediaries; and competition from rivals.

In the state of Tamil Nadu the most prominent problem of the handloom units in the area of marketing is competition from power looms/mills. Seasonal demand is the second major problems faced by the sample units of Tamil Nadu. Lack of marketing support from Government/Apex society is the third problem in the state of Tamil Nadu. Effect of price fluctuations is found to be the fourth problem of sample units of Tamil Nadu. Difficulty in timely marketing of products is identified as the fifth problem of sample units in Tamil Nadu. The other problems in the order of rank are existence of spurious/inferior handloom products in the market; frequent changes in fashion and trends; low margin on selling price; lack of exporting facilities; lack of advertisement and sales promotion; lack of warehousing facilities; low demand from local market; no effort for brand promotion; poor communication/linkage with big traders; lack of customers’ awareness about the quality/standard of handloom products; competition from rivals; exploitation by intermediaries; and lack of market information/knowledge.
It has been observed that there is significant difference between the states in respect of ranking of marketing problems faced by the handloom units. Further, there is no significant difference between the states in respect of the severity of marketing problems experienced by the handloom units.

(a) Factor Analysis of Problems in the Area of Marketing

- It has been stated that 63.70% of the total variance after the rotation of the different components forming the factors “External intimidation in market”; 48.90% of the total variance after the rotation of the different components forming the factors “Drifting demand and supply”; 89.80% of the total variance after the rotation of the different components forming the factors “Inappropriate and Irrational intercession by the Government”; 56.30% of the total variance after the rotation of the different components forming the factors “Lack of awareness among stakeholders”; 62.50% of the total variance after the rotation of the different components forming the factors “Poor performance of domestic market”; 62.50% of the total variance after the rotation of the different components forming the factors “Inept output price and brand”; and finally 80.70% of the total variance after the rotation of the different components forming the factor “Intervention by middlemen”. These are the identified factors/problems which constitute major problems in the area of marketing of handloom units.

Objective 4: Analysis of Fixed Cost

- It has been observed that the mean score for the Total fixed cost of the handloom units in Kerala is Rs. 492777.91. But, in the case of handloom units in Tamil Nadu, the figure is Rs. 912911.00 There is significant difference in the total
fixed cost of the handloom units between the state of Kerala and Tamil Nadu. This also shows that total fixed cost of the handloom units in Tamil Nadu is high when compared to Kerala.

- The average fixed cost per unit of Cotton Saree of the handloom units is Rs.92 in Kerala; but, in the state of Tamil Nadu, the figure is Rs.62.64. There is significant difference between the states in respect of fixed cost per unit of Cotton Saree of the handloom units. It also reveals that fixed cost per unit of Cotton Sarees of Kerala is high when compared to Tamil Nadu.

- In the state of Kerala, the mean score for the fixed cost per unit of Dhothies of the handloom units is Rs.68.20; while, in Tamil Nadu the figure is Rs.41.25. There is significant difference in the fixed cost per unit of Dhothies of the handloom units between the states. The fixed cost per unit of Dhothies of Kerala is high when compared to Tamil Nadu.

- The mean score for the fixed cost per unit of Lungie of the handloom units in Kerala is Rs.37.68; but, in Tamil Nadu, the figure is Rs.24.85. There is significant difference between the states in respect of fixed cost per unit of Lungie of the handloom units. This shows that fixed cost per unit of Lungies of Kerala is high when compared to Tamil Nadu.

- The average fixed cost per unit of Bed Sheets of the handloom units in Kerala is Rs.44.04; and while, in Tamil Nadu, the figure is Rs.26.40. There is significant difference in the fixed cost per unit of Bed Sheets of the handloom units between the states. This shows that fixed cost per unit of Bed Sheet of the handloom units in Kerala is high when compared to Tamil Nadu.
Objective 4: Analysis of Variable Cost

- The mean score for the variable cost per unit of Cotton Saree of the handloom units in Kerala is Rs. 460; but, in the state of Tamil Nadu, the figure is Rs. 417.60. There is no significant difference between the states in respect of variable cost per unit of Cotton Saree of the handloom units.

- In the state of Kerala, the mean score for the variable cost per unit of Dhothies of the handloom units is Rs. 341; but, in Tamil Nadu, the figure is Rs. 275. There is significant difference in the variable cost per unit of Dhothies of the handloom units. This shows that variable cost per unit of Dhothies of Kerala is high when compared to Tamil Nadu.

- The average the variable cost per unit of Lungie of the handloom units in Kerala is Rs. 188.40; while, in Tamil Nadu, the figure is Rs. 165.65. There is significant difference between states in respect of variable cost per unit of Lungie of the handloom units. This shows that variable cost per unit of Lungie of Tamil Nadu is high when compared to Kerala.

- The mean score for the variable cost per unit of Bed Sheet of the handloom units in Kerala is Rs.220.20; and but, in Tamil Nadu, the figure is Rs. 176.76. There is significant difference between the states in respect of variable cost per unit of Bed Sheet of the handloom units; and the variable cost per unit of Bed Sheet of Kerala is high when compared to Tamil Nadu.

(a) Material Cost per unit

- The mean score for the material cost per unit of Cotton Saree of the handloom units in Kerala is Rs.160; while in Tamil Nadu, the figure is Rs.135.10. There is
significant difference between states in respect of material cost per unit of 
*Cotton Saree* of the handloom units. This also shows that material cost per unit 
of *Cotton Saree* of Kerala is high when compared to Tamil Nadu.

- In the state of Kerala, the mean score for the material cost per unit of *Dhothies* of 
  the handloom units is Rs.141; and in Tamil Nadu, the figure is Rs.114. There is 
significant difference between the states in respect of the material cost per unit of 
*Dhothies* of the handloom units; and material cost per unit of *Dhothies* of Kerala 
is high when compared to Tamil Nadu.

- The average material cost per *Lungie* of the handloom units in Kerala is 
  Rs.104.70; and but, in the state of Tamil Nadu, the figure is Rs.90.65. There is 
significant difference between the states in respect of material cost per unit of 
*Lungie* of the handloom units; and material cost per unit of *Lungie* of Kerala is 
high when compared to Tamil Nadu.

- It has been observed that the mean score for the material cost per unit of *Bed 
  Sheet* of the handloom units in Kerala is Rs.164; while, in Tamil Nadu the figure 
is Rs.140.81. There is significant difference in the material cost of *Bed Sheet* of 
the handloom units between two states; and the material cost of *Bed Sheet* of 
Kerala is high when compared to Tamil Nadu.

*(b) Labour cost per unit*

- The mean score for the labour cost per unit of *Cotton Saree* of the handloom 
  units in Kerala is Rs.300; but, in Tamil Nadu, the figure is Rs.282.50. There is 
significant difference between the states in respect of labour cost per unit of
Cotton Saree of the Handloom units. This shows that the labour cost per unit of Cotton Saree of Kerala is high when compared to Tamil Nadu.

- In the state of Kerala, the mean score for the labour cost per unit of Dhothies of the handloom units in Kerala is Rs.200; while, in Tamil Nadu, the figure is Rs.161. There is significant difference in respect of labour cost per unit of Dhothies of the handloom units between the state of Kerala and Tamil Nadu; and the labour cost per unit of Dhothies of Kerala is high when compared to Tamil Nadu.

- The average labour cost per unit of Lungie of the handloom units in Kerala is Rs.83.70; and it was Rs.75 in Tamil Nadu. There is significant difference between states in respect of labour cost per unit of Lungie of the handloom units; and labour cost per unit Lungie of Kerala is high when compared to Tamil Nadu.

- In the state of Kerala, the mean score for the labour cost per unit of Bed Sheet of the handloom units is Rs.56.20; but, in Tamil Nadu, the figure is Rs.35.95. There is significant difference between the states in respect of labour cost per unit of Bed Sheet of the handloom units; and labour cost per unit of Bed Sheet of Kerala is high when compared to Tamil Nadu.

Objective 4: Analysis of Total Cost

- The mean score for the total cost per unit of Cotton Saree of the handloom units in Kerala is Rs. 552; but, in Tamil Nadu, the figure is Rs. 480.24. There is no significant difference in the total cost per unit of Cotton Saree of the handloom units between the two states.
In the state of Kerala, the mean score for the total cost per unit of *Dhothies* of the handloom units is Rs. 409.20; while, in Tamil Nadu, the figure is Rs. 316.25. There is significant difference between the states in respect total cost per unit of Dhothies of the handloom units; and total cost per unit *Dhothies* of Kerala is high when compared to Tamil Nadu.

It has been observed that the average total cost per unit of *Lungie* of the handloom units is Rs. 226.08; but, in Tamil Nadu, the figure is Rs. 190.50. There is no significant difference between the states in respect of total cost per unit of *Lungie* of the handloom units.

The average total cost per unit *Bed Sheet* of the handloom units in Kerala is Rs. 264.24; while, the figure was Rs. 203.16 in Tamil Nadu. There is significant difference in the total cost per unit Bed Sheet of the handloom units between the two states; and the total cost per unit of *Bed Sheet* of Kerala is high when compared to Tamil Nadu.

(a) Percentage Share of Components of Total Cost

The study reveals that variable cost of the products constitutes a major share (83-87%) of total cost of the selected products. The percentage share of fixed cost is 12.99-16.67. The share of material cost and labour cost vary with type of products manufactured by the handloom units. In the case of *bed sheets*, the percentage share of material cost is 62.06%, and that of labour cost is only 27.27 in the state of Kerala; while it was 69.31 and 17.70 respectively in Tamil Nadu. In the case of *Cotton Sarees* (CS) and *Dhothies* (DH), labour cost occupies 48.88-58.82% of total cost in both the states. The percentage share of material cost is 28.13-36.05. In the case of *Lungies* (LG), material cost occupies a share
of 46.31-47.59%, and the share of labour cost is 37.02-39.37% of total cost. The percentage of fixed cost is almost same in all the selected product categories, which is 16.66% in Kerala and 12.99-13.05% in Tamil Nadu.

Objective 4: Analysis on Profitability of the Products

(a) Average Selling Price per Unit

The average selling price per unit of Cotton Saree of the handloom units in Kerala is Rs. 650; while in Tamil Nadu, the figure is Rs. 547. There is no significant difference between the states in respect of selling price per unit of Cotton Saree of the handloom units.

In the state of Kerala, the mean score for the selling price per unit of Dhothi of the handloom units is Rs. 470; but, in Tamil Nadu, the figure is Rs. 350. There is significant difference in the selling price per unit of Dhothies of the handloom units between the states. This shows that selling price per unit of Dhothies of the handloom units in Kerala is high when compared to Tamil Nadu.

It has been noted that the mean score for the selling price per unit of Lungie of the handloom units is Rs. 260; and in Tamil Nadu, the figure is Rs. 210. There is no significant difference between the states in respect of selling price per unit of Lungie of the handloom units.

The mean score for the selling price per unit of Bed Sheet of the handloom units is Rs.300; while, in Tamil Nadu, the figure is Rs. 225. There is a significant difference between the states in respect selling price per unit of Bed Sheet of the handloom units. This shows that selling price per unit of Bed Sheet of the handloom units in Kerala is high when compared to Tamil Nadu.
(b) Contribution per Unit

- The average Contribution per unit of Cotton Sarees of the handloom units in Kerala is Rs.190; and but, in Tamil Nadu, the figure is Rs.129.40. There is significant difference between states in respect of contribution per unit of cotton Sarees of the handloom units. This shows that contribution per unit of cotton Sarees of the handloom units in Kerala is high when compared to Tamil Nadu.

- In the state of Kerala, the mean score for the contribution per unit of Dhothi of the handloom units is Rs.129.00; while, in Tamil Nadu, the figure is Rs.75. There is significant difference in the contribution per unit of Dhothi of the handloom units between the state of Kerala and Tamil Nadu. This shows that contribution per unit of Dhothi of the handloom units in Kerala is high when compared to Tamil Nadu.

- It has been stated that the mean score for the contribution per unit of Lungie of the handloom units is Rs.71.60; but, in Tamil Nadu, the figure is Rs.44.35. There is significant difference between states in respect of contribution unit of Lungie of the handloom units; and contribution per unit of Lungie of Kerala is high when compared to Tamil Nadu.

- The mean score of the contribution per unit of Bed Sheet of the handloom units in Kerala is Rs.79.80; and while, in Tamil Nadu, the figure is Rs.48.24. There is significant difference between states in respect of contribution per unit of Bed Sheet of the handloom units; and contribution per unit of Bed Sheet of Kerala is high when compared to Tamil Nadu.
Summary of Findings, Conclusions, Implications and Suggestions

(c) Contribution per Unit of Key Factor

- It has been observed that if raw material cost is taken as key factor, contribution per unit of bed sheet is comparatively higher in both the states. In the case of key factor on labour cost, the profitability of cotton sarees is comparatively higher in both the states. When the unit takes overhead/fixed cost as key factor, lungies provide comparatively higher contribution in Kerala and Tamil Nadu. In the case of contribution per unit of selling price (key factor), higher profitability is accounted by bed sheets in Kerala; and lungies in Tamil Nadu.

(d) Contribution Margin Ratio or Profit-Volume Ratio (P/V Ratio)

- In the state of Kerala, the mean score of P/V Ratio of Cotton Saree of the handloom units is Rs.29.23%; while in Tamil Nadu, the ratio is 23.66%. There is significant difference between the states in respect of P/V Ratio of Cotton Saree of the handloom units; and P/V Ratio of Cotton Saree of Kerala is high when compared to Tamil Nadu.

- The mean score for the P/V Ratio of Dhothies of the handloom units in Kerala is 27.44%; but, in Tamil Nadu, the ratio is 21.43%. There is significant difference between the P/V Ratio of Dhothies of the handloom units between the state of Kerala and Tamil Nadu; and the P/V Ratio of Dhothies of Kerala is high when compared to Tamil Nadu.

- The average P/V Ratio of Lungie of the handloom units is 27.54%; but, in Tamil Nadu, the ratio is 21.12%. There is significant difference between the states in respect of P/V Ratio of Lungie of the handloom units; and the P/V Ratio of Lungie of Kerala is high when compared to Tamil Nadu.
It is observed that the mean score for the P/V Ratio of Bed Sheet of the handloom units in Kerala is 26.60%; but, in Tamil Nadu, the ratio is 21.44%. There is significant difference in the P/V Ratio of Bed Sheet of the handloom units between the states; and P/V Ratio of Bed Sheet of Kerala is high when compared to Tamil Nadu.

The analysis on the overall/composite P/V ratio shows that the mean score of the overall P/V ratio of the handloom units in Kerala is 27.98%, but, in the state of Tamil Nadu, the ratio is 22.30%. The statistical test shows that there is significant difference in the overall P/V ratio of handloom units between the state of Kerala and Tamil Nadu. It also reveals that the overall P/V Ratio of handloom units in Kerala is high when compared to Tamil Nadu.

(e) Profit per Unit of Products

The mean score for the profit per Cotton Saree of the handloom units is Rs. 98; while, in Tamil Nadu, the figure is Rs. 66.76. There is significant difference between the states in respect of profit per Cotton Saree of the handloom units; and the profit per unit of Cotton Saree of the handloom units of Kerala is high when compared to Tamil Nadu.

In the state of Kerala, the mean score for the profit per unit of Dhothies of the handloom units is Rs. 60.80; and in Tamil Nadu, the figure is Rs. 33.76. There is significant difference between the states in respect of profit per Dhothies of the handloom units; and the profit per Dhothies of Kerala is high when compared to Tamil Nadu.
It has been noted that the mean score for the profit per *Lungie* of the handloom units is Rs. 33.92 in Kerala; but, in Tamil Nadu, the figure is Rs. 19.50. There is significant difference in the profit per *Lungie* of the handloom units between the state of Kerala and Tamil Nadu. This shows that Profit per *Lungie* of the handloom units in Kerala is high when compared to Tamil Nadu.

The mean score for the profit per unit *Bed Sheet* of the handloom units in Kerala is Rs.35.76; and but, in Tamil Nadu, the figure is Rs. 21.84. There is significant difference between states in respect of profit per *Bed Sheet* of the handloom units; and the profit per unit *Bed Sheet* of Kerala is high when compared to Tamil Nadu.

**Objective 4: Break Even Analysis**

The mean score for the break-even point (output) of *Cotton Saree* of the handloom units is 2566; and in Tamil Nadu, the figure is 7056 units. There is significant difference between the states in respect of break-even point (output) of *Cotton Saree* of the handloom units; and the break-even point (output) of *Cotton Sarees* of the handloom units in Tamil Nadu is more when compared to Kerala.

In the state of Kerala, the mean score for the break-even point (units) of *Dhothies* of the handloom units is 3779 units; and While, in the state of Tamil Nadu, the figure is 12173.00. There is significant difference in the break-even point (units) of *Dhothies* of the handloom units between the two states. This shows that break-even point (units) of *Dhothies* of Tamil Nadu is high when compared to Kerala.
It has been observed that the mean score for the break-even point (output) of Lungie of the handloom units in Kerala is 6809 units with a S.D. of 6.554. But, in Tamil Nadu, the figure is 20586.00 with a S.D. of 4.582. Since the standard error is low for Tamil Nadu when compared to Kerala, the break-even point (output) of Lungie of the handloom units is comparatively stable and consistent. The Statistical $t$-test for Equality of Means is -18042.85 and $P$ Value is 0.000 ($P<0.05$); and thus $H_0$ formulated in this regard is rejected. There is significant difference between the two states in respect of break-even point (units) of Lungie of the handloom units; and the break-even point (output) of Lungie of Tamil Nadu is high when compared to Kerala.

The mean score for the break-even point (output) of Bed Sheet of the handloom units is 6109 units; and in Tamil Nadu, the figure is 18926.00. There is significant difference in the break-even point (output) of Bed Sheet of the handloom units between the states of Kerala and Tamil Nadu. This shows that break-even point (output) of Bed Sheet of Tamil Nadu is high when compared to Kerala.

In the state of Kerala, the mean score for the BES of Cotton Saree of the Handloom units is Rs.1667900, but, in Tamil Nadu, the figure is Rs. 3859632.00. There is significant difference between the states in respect of BES of Cotton Saree of the Handloom units. This shows that BES of Cotton Saree of Tamil Nadu is high when compared to Kerala.

The mean score for the BES of Dhothies of the handloom units in Kerala is Rs. 1776130; but, in Tamil Nadu, the figure is Rs. 4260550.00. There is significant difference between the states in respect of BES of Dhothies of the Handloom
units; and the BES of Dhothies of handloom units in Tamil Nadu is high when compared to Kerala.

- It has been found that the mean score for the BES of Lungie of the handloom units is Rs.1770340; while, in Tamil Nadu, the figure is Rs.4323060.00. There is significant difference in the BES of Lungie of the handloom units between the states of Kerala and Tamil Nadu. This shows that BES of Lungie of the handloom units in Tamil Nadu is high when compared to Kerala.

- The mean score for the BES of Bed Sheet of the handloom units in Kerala is Rs.1832700; while in Tamil Nadu, the figure is Rs. 4258350.00. There is significant difference between the states in respect of BES of Bed Sheet of the handloom units; and the BES of Bed Sheet of Tamil Nadu is high when compared to Kerala.

- In the case of overall/composite BES, the mean score of the handloom units in Kerala is Rs. 1742315.97; but, in the state of Tamil Nadu, the figure is Rs. 4094165.00. There is a significant difference between the two states in respect of overall/composite BES of the handloom units. This also indicates that the overall BES of the handloom units in Tamil Nadu is high when compared to Kerala.

Objective 5: Analysis of Capital Employed and Assets

(a) Capital Employed by the Unit

- The average amount of capital employed of the handloom units is Rs. 92.70 in the state of Kerala; and in Tamil Nadu, the figure is Rs. 128.03. There is significant difference in the average amount of capital employed by the handloom units between the state of Kerala and Tamil Nadu. It also reveals that
average amount of capital employed by the handloom units in Tamil Nadu is comparatively higher than the state of Kerala.

(b) Investment in Loom

- The average investment per loom among the sample units in Kerala was Rs. 29154.55; but, in Tamil Nadu, the figure was Rs. 17600. There is significant difference between the two States in respect of average investment per loom made by the sample units. It also shows that average amount of investment per loom of the handloom units in Kerala is higher when compared to Tamil Nadu.

- The average investment per loom of cottage type units in Kerala is Rs. 28340, and that of factory type units in Kerala is 30900. In the state of Tamil Nadu, the mean obtained for cottage type unit is Rs.18000, and that of factory type unit in Tamil Nadu is Rs.10000. This shows that average investment per loom of cottage and factory type handloom units between the states of Kerala and Tamil Nadu are different.

(c) Investment in Current Assets/Working Capital

- The average amount of gross working capital employed by the handloom units in Kerala is Rs. 87.23 lakhs; but, in Tamil Nadu, the figure was Rs. 77.06 lakhs. There is no significant difference in the average amount gross working capital employed by the units between the state of Kerala and Tamil Nadu.

- The average amount of net Working capital of the handloom units in Kerala is Rs.10.42 lakhs; while in Tamil Nadu, the figure was Rs. 33.77 lakhs. There is significant difference between the states in respect average amount of net working capital employed by the units. It also reveals that average amount of
net working capital employed by the handloom units in Tamil Nadu is higher when compared to Kerala.

(d) Proportion of Investment in Fixed and Current Assets

- It has been noted that there is substantial difference in the proportion of investment in fixed and current assets between the sample units in the state of Kerala and Tamil Nadu. In the case of fixed assets, the proportion investment in handloom units in Tamil Nadu (35.81%) is comparatively higher than in the state of Kerala (05.90%). The proportion of investment in current assets among the sample units in kerala (94.10%) is comparatively higher than the state of Tamil Nadu (64.19%).

Objective 6: Analysis of Long-term Solvency of the Unit

(a) Borrowing Status of the Units

- In the state of Kerala, majority (97.27%) of the sample units has borrowed funds from banks. Like wise, 95 per cent of sample units in Tamil Nadu had borrowed funds from banks for the business activities. The chi-square test shows that there is no significant difference between the two states in respect of the borrowing status of the sample units.

(b) Debt-Equity Ratio

- The average debt-equity ratio of the handloom units in Kerala is 2.19 times; while, in Tamil Nadu, the ratio is 1.30. There is significant difference in the debt-equity ratio of the handloom units between the state of Kerala and Tamil Nadu. This shows the fact that debt-equity ratio of the handloom units of Kerala is more when compared to Tamil Nadu.
(c) Financial Assistance under the Cluster Development Programmes

- It is clear that the number of units in Kerala getting the financial assistance under the CDS was 70 (31.82%) which is comparatively lower than the units in Tamil Nadu 150(68.18%) units. The chi-square test shows that there is no significant difference in the number of units got financial assistance under CDS between the states of Kerala and Tamil Nadu.

(d) Ability to Repay the Loans Outstanding

- The ability to repay the borrowings of the handloom units shows that majority (67.73%) of the units in Kerala was not regular in the repayment of loans and advances. But, in the state of Tamil Nadu, majority (91.82%) of the units was able to repay the loans without any default. The statistical test shows significant difference in the ability to repay loans and advances between the handloom units in the state of Kerala and Tamil Nadu.

Objective 6: Analysis of Short-term Solvency Position of the Unit

(a) Current Ratio

- The mean score of the current Ratio of the handloom units in Kerala is 1.43 times; but, in the state of Tamil Nadu, the ratio is 2.02. There is significant difference between the states in respect of current ratio of the handloom units; and it reveals that current ratio of the handloom units of Tamil Nadu is high when compared to Kerala.

(b) Acid-test or Quick ratio

- In the state of Kerala, the mean score of the quick ratio of the handloom units is 1.07; while, in Tamil Nadu, the ratio is 1.19. There is no significant difference in the quick ratio of the handloom units between the states.
Objective 6: Analysis of Efficiency of Assets Utilisation

(a) Total Asset Turnover Ratio

- The mean score of the total asset turnover ratio of the handloom units in Kerala is 0.217; but, in Tamil Nadu, the ratio is 1.05 times. There is significant difference between the states in respect of total asset turnover ratio of the handloom units. This shows that total asset turnover ratio of the handloom units in Tamil Nadu is high when compared to Kerala.

(b) Fixed Assets Turnover Ratio

- In the State of Kerala, the mean score of the fixed assets turnover ratio of the handloom units is 0.223 times; and in Tamil Nadu, the ratio is 4.34 times. There is significant difference in the fixed assets turnover ratio of the handloom units between the states of Kerala and Tamil Nadu. This shows that the fixed assets turnover ratio of the handloom units in Tamil Nadu is high when compared to Kerala.

(c) Working Capital Turnover Ratio

- The mean score for the working capital turnover ratio of the handloom units in Kerala is 0.036 times; but, in the case of Tamil Nadu, the ratio is 0.086 times. There is a significant difference between the states in respect of working capital turnover ratio of the handloom units; and the working capital turnover ratio of handloom units of Tamil Nadu is high when compared to Kerala.

(d) Inventory Turnover Ratio and Inventory Conversion Period

- The average inventory turnover ratio of the handloom units in Kerala is 1.45 times; while, in Tamil Nadu, the ratio is 20.01 times. There is a significant difference between the states in respect of inventory turnover ratio of the
handloom units. This shows that inventory turnover ratio of handloom units in Tamil Nadu is high when compared to Kerala.

- It has been observed that average inventory conversion period of handloom units in Kerala is 252.07 days; but, in the state of Tamil Nadu, the mean score was 18.24 days only. There is significant difference in the inventory conversion period of handloom units between the states of Kerala and Tamil Nadu. It also states that the inventory conversion period of handloom units in the state of Kerala is longer than the state of Tamil Nadu.

(e) Percentage of Cash and Credit Sales

- The mean score for the percentage of cash sale of the handloom units in Kerala is 80.40; but, in Tamil Nadu, the figure is 61.55. In the case of average percentage of credit sales, the mean score of the handloom units is 19.60 in the state of Kerala; and it was 38.45 in Tamil Nadu. There is significant difference between the two states in respect of average percentage of cash sale and credit sales of the handloom units. The study reveals that cash sales constitute the major share in the total sales of handloom units in both the states; and the percentage of cash sale of Kerala is high when compared to Tamil Nadu.

(f) Debtors Turnover Ratio and Accounts Receivable Period

- The mean score of the debtors turnover ratio of the Handloom units in Kerala is 5.78 times; but, in the state of Tamil Nadu, the ratio is 8.35 times. There is a significant difference between the states in respect of debtors turnover ratio of the handloom units. It shows that debtors turnover ratio of handloom units in Tamil Nadu is high when compared to Kerala.
The mean score for the average receivable/collection period of the handloom units is 63.20 days in Kerala; while, it was is 43.71 days in the state of Tamil Nadu. There is significant difference between the states of in respect of average collection period of the handloom units. It shows that the average collection period of handloom units in Kerala is longer when compared to Tamil Nadu.

(g) Percentage Cash and Credit Purchases

The mean percentage of cash purchases of handloom units in Kerala is 85.63%; whereas the mean percentage of cash purchases in Tamil Nadu is only 91.72%. There is a significant difference in the average percentage of cash and credit purchases between the sample units in Kerala and Tamil Nadu. It also indicates that cash purchase constitute major share in the total purchases done by the handloom units; the percentage of cash purchase of handloom units in Tamil Nadu is high when compared to Kerala.

(h) Creditors Turnover Ratio and Accounts Payable Period

In the state of Kerala, the mean score for the creditors turnover ratio of the handloom units is 11.94 times; and in Tamil Nadu, the ratio is 22.46 times. There is significant difference in the creditors turnover ratio of the handloom units between the two states; and creditors turnover ratio of handloom units in Kerala is low when compared to Tamil Nadu.

In Kerala, the mean score for the average payment period of the handloom units is 30.56 days; but in Tamil Nadu, the figure is 16.25 days. There is a significant difference in the average payment period of the handloom units between the state of Kerala and Tamil Nadu. It also shows that average payment period of
the handloom units in Kerala is longer when compared to Tamil Nadu; which is more favourable to handloom units in the state of Kerala.

(i) Operating and Cash Conversion Cycle

- The mean score of the operating cycle of the handloom units in Kerala is 367.45 days; but, in the state of Tamil Nadu, the figure is 140.87 days. There is significant difference between the states in respect operating cycle of the handloom units; and operating cycle period of handloom units in Kerala is longer when compared to the state of Tamil Nadu.

- In the case of cash conversion cycle, it was recorded a mean score of 360.46 days among the sample units in Kerala; and it was 134.37 days in Tamil Nadu. There is significant difference in the cash conversion cycle of the handloom units between the state of Kerala and Tamil Nadu; and Cash Conversion period handloom units in Kerala is longer when compared to Tamil Nadu.

(j) Ability to Meet Working Capital Requirements in Time

- It has been observed that out of 220 units surveyed, 129(58.64%) units in Kerala were able to meet working capital requirement in time. But, in the case sample units in Tamil Nadu, majority of the units 197 units (89.55%) were able to meet working capital requirements in time. The chi-square test indicates the difference in this respect between the sample units in the state of Kerala and Tamil Nadu is significant.
Objective 6: Analysis of Profitability of the Units

(a) Gross Profit Ratio

The mean score of the gross profit margin ratio of the handloom units in Kerala is 15.30%; but, in Tamil Nadu, the ratio is 12.60%. There is no significant difference in the gross profit margin between the sample units of Kerala and Tamil Nadu.

(b) Net Profit Ratio

In the state of Kerala, the mean score for the net profit ratio of the handloom units is -57.50% (loss); but, in the state of Tamil Nadu, the ratio is 2.75% (profit). There is significant difference in the net profit ratio of the handloom units between the states of Kerala and Tamil Nadu. It is also observed that the handloom units in Kerala experience net loss when compared to the neighbouring state of Tamil Nadu which had reported net profit, though a meagre percentage.

(c) Return on Total Assets

The mean score of return on total assets of the handloom units in Kerala is -3.89; while, in Tamil Nadu, the ratio is 7.04. There is significant difference in the return on total assets of the handloom units between the state of Kerala and Tamil Nadu. The study shows that return on total assets of the handloom units in Tamil Nadu is positive; and it was negative in the state of Kerala.

(d) Return on Capital Employed

In the state of Kerala, the mean score of the return on capital employed among the handloom units is -7.32%; but, in the state of Tamil Nadu, the ratio is 9.91%. There is significant difference between the states in respect of return on capital
employed of the handloom units. It shows that return on capital employed of
handloom units in Tamil Nadu is positive, while it was negative among the
handloom units in Kerala.

Testing of Hypothesis

1. In order to test the significance level of the structural characteristics of weavers
of the handloom industrial units between the state of Kerala and Tamil Nadu,
there 12 variables are considered for analysis viz. composition of weavers of the
unit (Registered weavers, active weavers, male and female weavers; factory, and
cottage weavers) educational status, hereditary of weavers, average monthly
income, family size, and assistance for the benefit of weavers. Statistically
significant difference is noticed in 09 variables (except educational status, family
size, and assistance for weavers) between the sample units in Kerala and Tamil
Nadu. Therefore, the first null hypothesis is that there is significant difference in
the structural characteristics of weavers of the handloom industrial units
between the state of Kerala and Tamil Nadu (H0) is rejected.

2. For conducting a comparative assessment of structural characteristics in the area
of production of the handloom industrial units in the state of Kerala and Tamil
Nadu, nine variables have been analysed. The statistical test shows significant
difference in respect of six variables such as type of loom, type of yarn, type of
dyes, capacity utilisation, shifting of weavers, and production assistance (except
sources of yarn, technology of production, and type of cloth) between the
sample units in Kerala and Tamil Nadu. Therefore, the null hypothesis that the
structural characteristics in the area of production of the handloom industrial
units in the state of Kerala and Tamil Nadu are the same, (H0) is rejected.
3. In order to conduct a comparative review on the structural characteristics in the area of marketing of the handloom industrial units between the states of Kerala and Tamil Nadu, eight variables have been analysed. Out of these eight variables, significant difference observed between the sample units of two states in respect of three variables viz., warehousing, branding, and frequency of advertisement. Therefore, the null hypothesis that there is no significant difference in the structural characteristics in the area of marketing of the handloom industrial units between the states of Kerala and Tamil Nadu (H0) may be accepted.

4. To understand the structural characteristics of the unit in the area of finance, six variables have been taken into account. Out of these six variables significant difference between the sample units in Kerala and Tamil Nadu has been observed in respect of four variables viz. capital employed, investment per loom, net working capital, and debt-equity ratio. Therefore, the null hypothesis that the structural characteristics in the area of finance of the handloom industrial units in the state of Kerala and Tamil Nadu are same (H0) may be rejected.

5. The statistical test shows that the ranking of finance related problems experienced by the sample units in Kerala and Tamil Nadu are almost same. Therefore, the null hypothesis stated there is no significant difference in the finance related problems experienced by the handloom industrial units between the states of Kerala and Tamil Nadu (H0), is accepted.

6. The study on problems in the area of production experienced by the sample units shows that there is significant difference in the ranking of the problems between the handloom units in the state of Kerala and Tamil Nadu. Therefore, the null
hypothesis that the problems experienced in the area of production of the handloom industrial units in the state of Kerala and Tamil Nadu are same \((H_0)\) is rejected.

7. It has been observed significant difference in the ranking of problems in the area of marketing between the sample units in the state of Kerala and Tamil Nadu. Therefore, the null hypothesis stated that the handloom industrial units in the state of Kerala and Tamil Nadu are facing same problems in the area of marketing \((H_0)\), is rejected.

8. In order to analyse the cost structure of selected handloom products between the sample units in the State of Kerala and Tamil Nadu, five variables such as fixed cost, variable cost, total cost, cost of material, and labour have taken into consideration. The statistical test shows significant difference in all the selected five variables. Therefore, the null hypothesis that there is no significant difference in the cost structure of the handloom products manufactured by the units between the state of Kerala and Tamil Nadu \((H_0)\), is rejected.

9. To analyse the profitability of selected handloom products manufactured by the sample units in the state of Kerala and Tamil Nadu, five variables viz. contribution per unit, key factor, P/V ratio, profit per unit, and BEP have been taken into account. The statistical test shows significant difference in all the five selected variables. Therefore, the null hypothesis stated that the profitability of the handloom products manufactured by the units in the state of Kerala and Tamil Nadu are same \((H_0)\), is rejected.
10. The study on the pattern of capital investment in fixed and current assets, four variables have taken into consideration. Significant differences between the sample units in the state of Kerala and Tamil Nadu has been found in respect of three variables namely, investment in loom, net working capital, and proportion of current and fixed assets. Therefore, the null hypothesis that there is no significant difference in the pattern of capital investment in fixed assets and current assets employed by the handloom industrial units between the states of Kerala and Tamil Nadu (H0), is rejected.

11. To analyse the long-term solvency of the sample units in the state of Kerala and Tamil Nadu, debt-equity ratio has been taken into account. The statistical test shows significant difference between the sample units in the state of Kerala and Tamil Nadu in respect of debt-equity ratio. Therefore, the null hypothesis that there is no significant difference in the long-term solvency position of the handloom industrial units between the state of Kerala and Tamil Nadu (H0), is rejected.

12. In order to assess the short-term solvency position of the sample units in the state of Kerala and Tamil Nadu, two variables such as current and quick ratio have been analysed. Out of the two variables, statistically significant difference has been found in the prominent variable such as current ratio of the sample units between the two states. Therefore, the null hypothesis stated that the short-term solvency position of the handloom industrial units in the state of Kerala and Tamil Nadu are same (H0), may be rejected.

13. To evaluate the efficiency of assets utilisation of sample units in the state of Kerala and Tamil Nadu, nine variables of turnover ratios such as total assets,
fixed assets, working capital, inventory, debtors, creditors, operating and cash conversion cycle, ability to meet working capital requirements have been considered. The statistical test shows significant difference in all the nine selected variables between the sample units in Kerala and Tamil Nadu. Therefore, the null hypothesis that there is no significant difference in the efficiency of assets utilisation of handloom industrial units between the state of Kerala and Tamil Nadu (H0), is rejected.

14. The study on overall profitability of the sample units in the state of Kerala and Tamil Nadu, four variables viz. gross profit ratio, net profit ratio, return on total assets, and return on capital employed has been evaluated. Out of these four variables, significant difference between the sample units has been observed in three variables viz. net profit ratio, return on total assets, and return on capital employed. Therefore, the null hypothesis that the profitability of handloom industrial units in the state of Kerala and Tamil Nadu are same (H0), is rejected.

8.3 Conclusions
The present study reveals that depth and outreach of the handloom units in the state of Kerala and Tamil Nadu are not in a better position. The numbers of weavers, number of looms, and number of handloom weavers’ cooperative societies in both the states have been come down over the years. Further, underutilisation of production capacity, and shifting of weavers to other sector have been reported among the handloom units in both states. This phenomenon is happened due to the different problems and challenges faced by the handloom units. The handloom units in both the states are experiencing problems in the area of production, and marketing; which are significantly different. However, the severity of the problems
in the area of production among the handloom units in Kerala is more when compared to Tamil Nadu. But, the handloom units in both the states are facing same problems in the area of finance including difficulty in obtaining finance from banks.

The structural characteristics of handloom units in the state of Kerala and Tamil Nadu are different in the area of production, and finance. The cottage type handloom units are more common in both the states of Kerala and Tamil Nadu. The handloom units in Kerala have more years of experience than Tamil Nadu. There is significant difference in the structural characteristics of weavers of the handloom units between the states of Kerala and Tamil Nadu. Majority of weavers in Tamil Nadu are hereditary in nature when compared to the state of Kerala. The handloom units in Tamil Nadu have comparatively more strength in terms of number of registered weavers, active weavers, and gender-wise participation than the state of Kerala. The average monthly income of the weavers in Tamil Nadu is comparatively better than the state of Kerala. Majority of handloom units in Kerala are adopted frame loom and VAT dyes for the production of handloom products; while, the handloom units in Tamil Nadu are engaging both pit and frame loom, and naphthol dyes during the production. The number of handloom units received assistance under CDS in the area of basic inputs in Tamil Nadu is more when compared to Kerala. The structural characteristics of handloom units in the area of marketing in the State of Kerala and Tamil Nadu are almost same in nature.

The cost structure, and profitability of selected similar handloom products manufactured by the units in the State of Kerala and Tamil Nadu is different. The total fixed cost, fixed cost per unit, variable cost per unit, material cost per unit, labour cost per unit; and total cost per unit of the selected similar handloom products
manufactured by the units in Kerala is comparatively higher than in the state of Tamil Nadu. The variable cost constitutes a major share in the total cost of the products in both the states. However, the contribution per unit, contribution margin ratio, and profit per unit of the selected similar products of the handloom units in Kerala is comparatively higher than in the state of Tamil Nadu. The higher profitability of the selected handloom products in Kerala is not because of the cost advantage the products. It is generated due to the higher selling price charged on the products. The contribution per unit of key factors indicates bed sheets, cotton sarees, and lungies are more profitable items among the handloom products in both the states. The break-even point (both units and sales value) of the selected product items of handloom units in Kerala is attained at low level when compared to the state of Tamil Nadu.

The financial structure and long-term solvency of handloom units in the state of Kerala and Tamil Nadu are different. Majority of the handloom units in both the states has borrowed funds from financial institutions. The handloom units in the state of Kerala have high financial leverage when compared to the state of Tamil Nadu. So, the long-term solvency position of handloom units in Tamil Nadu is better than in the state of Kerala. The pattern of investment in fixed and current assets made by the handloom units in the state of Kerala and Tamil Nadu are not uniform. The handloom units in Tamil Nadu are keeping more funds in respect of capital employed, investment in loom, and net working capital, when compared to the state of Kerala. The short-term solvency position of handloom units in Tamil Nadu is comparatively better than in the state of Tamil Nadu. The handloom units in the state of Tamil Nadu are more efficient in asset management when compared to the
handloom units in Kerala. The inventory conversion period, average collection period, operating, and cash conversion cycle of handloom units in Kerala is longer than in Tamil Nadu. The operating, and cash conversion cycle of the handloom units in Kerala takes around one year duration; while, in the case of handloom units in Tamil Nadu, it is around six months period. But, the handloom units in Kerala are getting more liberal credit period from the suppliers of raw materials, when compared to the units in Tamil Nadu. However, majority of the handloom units in Tamil Nadu are able meet working capital requirements in time; and they are in better position in this regard when compared to the units of Kerala.

The overall profitability of handloom units in the State of Tamil Nadu is better than that of Kerala. As a whole, it is observed that even though, the handloom units in both the states of Kerala and Tamil Nadu are facing problems and challenges in their working; but, the handloom units in Tamil Nadu is economically and financially more viable when compared to the handloom units in the State of Kerala.

8.4 Implications of the Study

The survival of handloom industry in the post-Multi Fibre Agreement (MFA) period will depend only on how and to what extent it can produce exclusive and value added products with unique style and structure, which cannot be produced or copied in any kind of power looms. The handloom industry exhibits considerable diversity in terms of products, and organizational base; that differ from region to region. It is this heterogeneity that needs empirical investigation on the functional areas of handloom industrial units working in the State of Kerala and Tamil Nadu. The present study clearly states this regional difference in the working of handloom
industry between the state of Kerala and Tamil Nadu in terms of structural characteristics of weavers, production, marketing and financial aspects of the handloom units. In the present scenario, the handloom industry which enjoyed protection-led growth is bound to accept a kind of competition led growth. It is essential that the handloom industrial units have to compete with power loom and the mills; and prove its merit so as to survive in the global market. The study on cost and profitability analysis of handloom products in the State of Kerala and Tamil Nadu may helpful to get insight on these aspects.

The study made an attempt to identify the major problems and challenges related with production, marketing and financial areas of the handloom units in the state of Kerala and Tamil Nadu. Further, the study also provides an appraisal of the handloom industrial units in the state of Kerala compared with the State of Tamil Nadu. The analysis on the problems experienced by the handloom units, and financial performance appraisal of the handloom units may help to identify the specific needs of this sector, as well as orient research and policy initiatives in a more focused manner. The findings of the study along with the data already available on the handloom sector may boost the development of appropriate institutional structures that support and strengthen the industry. The study enlightens a number of perspectives about the handloom industry: (a) the results of governmental efforts to revive and revamp the handloom sector, (b) depicts the growth, trends, competitiveness and survival of the handloom industry in the textile market (c) socio-economic development of the handloom weavers. The challenges on engaging with these perspectives are utmost important for the development of the handloom sector.
8.5 Suggestions

Based on the findings and conclusions of the study, the following suggestions are presented for improving the current situations.

1. The study found that majority of the handloom units in both the states adopt traditional technology in the area of production. No fruitful attempt has, so far, been made to make use of the unique facilities of handlooms to create exclusive and value added fabrics, which always have good demand in export market. Sincere and concerted efforts are to be made from all quarters to achieve this objective.

2. The study depicts that certain percentage of weavers are relinquishing their job from handloom sector in both the states. The shortage of skilled labour is also one of the major problems in the area of production faced by the handloom units in the state of Kerala and Tamil Nadu. The existing employees of the sector are either migrating to other professions or searching for suitable job. If suitable measures are taken to use their skill for the production of unique and value added fabrics, they will stick on to handloom sector to a great extent. Suitable scheme is need to be evolved to motivate these skilled and highly skilled weavers to strengthen the handloom industry.

3. The inventory conversion period, operating and cash conversion period of the handloom units in Kerala is much longer than in Tamil Nadu. A major portion of the products produced in a year is sold only once in the year (i.e. during festival like Onam season only), as the products are of traditional varieties which are to be used in festival seasons. This causes blocking of previous working capital during the remaining period leading to uneconomical
performance of co-operatives. A product diversification programme is needed to solve this problem.

4. Due to the low inventory turnover, most of the handloom units in the State of Kerala are facing difficulty to meet working capital requirements in time. The co-operative societies get financial assistance for working capital from NABARD as “Cash Credit Assistance”. Because of the above explained uneconomical performance, major portion of their working capital funds taken as loan from NABARD through Co-operative Banks is eroded. Separate working capital assistance is to be made available to such organisations, either new or existing, by bringing the jobless weavers under the new scheme.

5. The high degree of financial leverage of the handloom units in both the states leads the units into the debt crisis situation. Difficulty in timely repayment of loan obligations is one major problems experienced by the units. In this context, banks are not willing to provide further loans for expansion/diversification purpose. Therefore, the governmental agencies in the sector can support the handloom units by way of granting fresh interest-free loans/ extending repayment periods of the existing loans based on their performance and actual requirements.

6. Competition from power loom/mills and selling power loom products camouflaged as handloom cloths is one of the major marketing problems faced by the handloom units in the State of Kerala and Tamil Nadu. In this context, it is high time to restructure the production items of the industry so as to have exclusive products which cannot be produced or copied in any type of power looms. This can be made possible only if suitable measures are taken based on
a well designed scheme, by which the existing infrastructure facilities and skill of weavers are utilised to maximum extend possible, by upgrading their skill and technology. Such products should aim at export rather than domestic market.

7. Shortage of raw material such as yarn and dyes are one of the major problems in the area of production; and reason for the underutilisation of production capacity in the state of Kerala and Tamil Nadu. In order to solve this issue, a raw material bank may be established where all kinds of inputs for handloom weaving made available for effective and timely distribution to weavers. Concerted efforts are to be made to create adequate dyeing facilities so as to get the required quantity of dyed yarns in the desired quality. Modernisation/modification of the existing dye houses with better equipment and accessories for quality dyeing to be required for the benefit of handloom units.

8. Development of new products based on the local skill of weavers and available infrastructure facilities is to be handled by agencies or persons having vast knowledge in both technological and marketing aspects. The products are to be developed, in accordance with the taste of target customers in the domestic and export markets. No such product and market development facility is available in the state of Kerala. This is one of the main reasons for the downfall of the industry in the state. The co-operative societies and other producers should get all technical and marketing assistance for the production and marketing of products for export and domestic markets from such agency/agencies. New innovative concepts, and new products may be developed using new fibres in
line with the existing cluster products with the help of students from textile institutions.

9. The handloom industry needs good branding system in order to maintain the quality and uniqueness of the handloom products; and to prevent the entry of power loom products camouflaged as handloom products in the markets. A brand name/mark for the handloom products to be established and popularised through medias among the consumers. Efforts to be made for good publicity, brand building, G.I. registration, ISO and BIS standards for the promotion of the handloom products.

10. To increase the profitability of the handloom units, product diversifications with appropriate product mix/sales mix to be done on the basis of market requirements. Training Programmes on skill development, designing, products diversifications, and business management to be organised in the sector.

11. In order to reduce the cost of production, the handloom units can adopt new technologies/scientific methods in the process of production of handloom products. Further, a consortium of co-operative societies, master weavers, and dyers is to be formed to reduce the cost of inputs and improve the efficiency. Establishment of Common Facility Centre, raw materials bank, dye house, pre-loom processing unit, up-gradation of looms, post-loom processing centres, common effluent treatment plant, etc, may helpful to reduce the capital investment, and minimise the cost during the production process

12. Efforts to be taken to establish proper market linkages with Textile Retail showrooms all over India. Further, establishment of web-portal containing
customized products development information and on-line sales through internet may be helpful to widen the market.

8.6 Scope for Further Research

The present study is limited to the handloom units in the co-operative sector only. Future researchers can do investigations by considering the handloom units working under private sector, master weavers, and export-oriented units. The study of handloom units on the basis of Cluster may be more fruitful to understand the unique features of each cluster. There is ample scope for doing comparative study on the working of cooperative sector handloom units with corporate sector units. The cost-benefit analysis of handloom units on comparative fashion can be done with more competitive handloom products manufactured by different types of handloom units. The study on the impact/effectiveness of schemes/programmes implemented by the Central and State Government agencies for the promotion and development of the handloom sector can be undertaken by the researchers.