Chapter 3

METHODOLOGY

The methodology relating to the current study on **"Economic Empowerment of Dalit women through Entrepreneurship in Coimbatore District"** is discussed under the following heads:

3.1 Selection of the area;

3.2 Selection of the sample;

3.3 Collection of data;

3.4 Period of study;

3.5 Hypothesis formulated;

3.6 Concepts used;

3.7 Theoretical framework;

3.8 Estimation of Entrepreneurial economic success index;

3.9 Estimation of Economic empowerment index;

3.10 Quantitative tools used and

3.11 Tabulation and analysis of data

3.1 Selection of the area:

The current study was related to Coimbatore District in Tamil Nadu. According to 2011 Census, Coimbatore District had 5,58,727 scheduled caste people consisting of 3,27,791 males and 2,30,936 females and Coimbatore District had 15.5 percent of scheduled caste population of Tamil Nadu. Coimbatore District occupied 6th rank in scheduled caste women population of Tamil Nadu (Primary Census abstract of Tamil Nadu, 2011).

Profile of Coimbatore District:

3.1.1 General characteristics:

Originally Coimbatore District formed part of the Kongu country, the history of which dates back to the Sangam age. It is found that in early days the area was inhabited by tribes, the most predominant among them being the Kosars who are

reported to have had their headquarters at Kosam path which probably later became the present Coimbatore. On the decline of Cholas, the Kongu territory was occupied by the Chalukyas and then by the Pandyas and the Cysalas. In 1981, Coimbatore was constituted as a Corporation. Coimbatore is situated in the extreme west of Tamil Nadu, near the State of Kerala. It is surrounded by mountains on the west, with reserve forests and the Nilgiri Biosphere Reserve on the northern side. The eastern side of the District, including the city is predominantly dry. The entire western and northern part of the District borders the Western Ghats with the Nilgiri biosphere as well as the Anaimalai and Munnar ranges. Because of its close proximity to the Western Ghats, the District is rich in fauna.

3.1.2 Location:

The District lies between10” 10’and 11”30’ degrees of the Northern latitude and between 76”40’ and 77”30’ Degrees of the Eastern longitude. It has an area of 7469 square kilometre and is bounded by the Nilgiris District on the North, Periyar District on the East, Dindigul District on the South and the State of Kerala on the West.

3.1.3 Topography:

In the rain shadow region of the Western ghats, Coimbatore enjoys a very pleasant climate all the year round, aided by the fresh breeze that flows through the 25 kilometers long Palakkad gap. The rich black soil of the region has contributed to Coimbatore's flourishing agriculture and the successful growth of cotton served as a foundation for the establishment of it’s famous textile industry.

3.1.4 Demographics:

According to 2011 census, Coimbatore had a population of 3,458,045 with a sex ratio of 996 females for every 1000 males. Scheduled castes and scheduled tribes respectively accounted for 10.26 percent and 0.07 percent of the total population. There were total of 4,25,115 workers comprising of 1,539 cultivators, 2,908 main agricultural labourers, 11,789 workers in household industries and 3,85,802 other workers.

3.1.5 Administrative divisions:

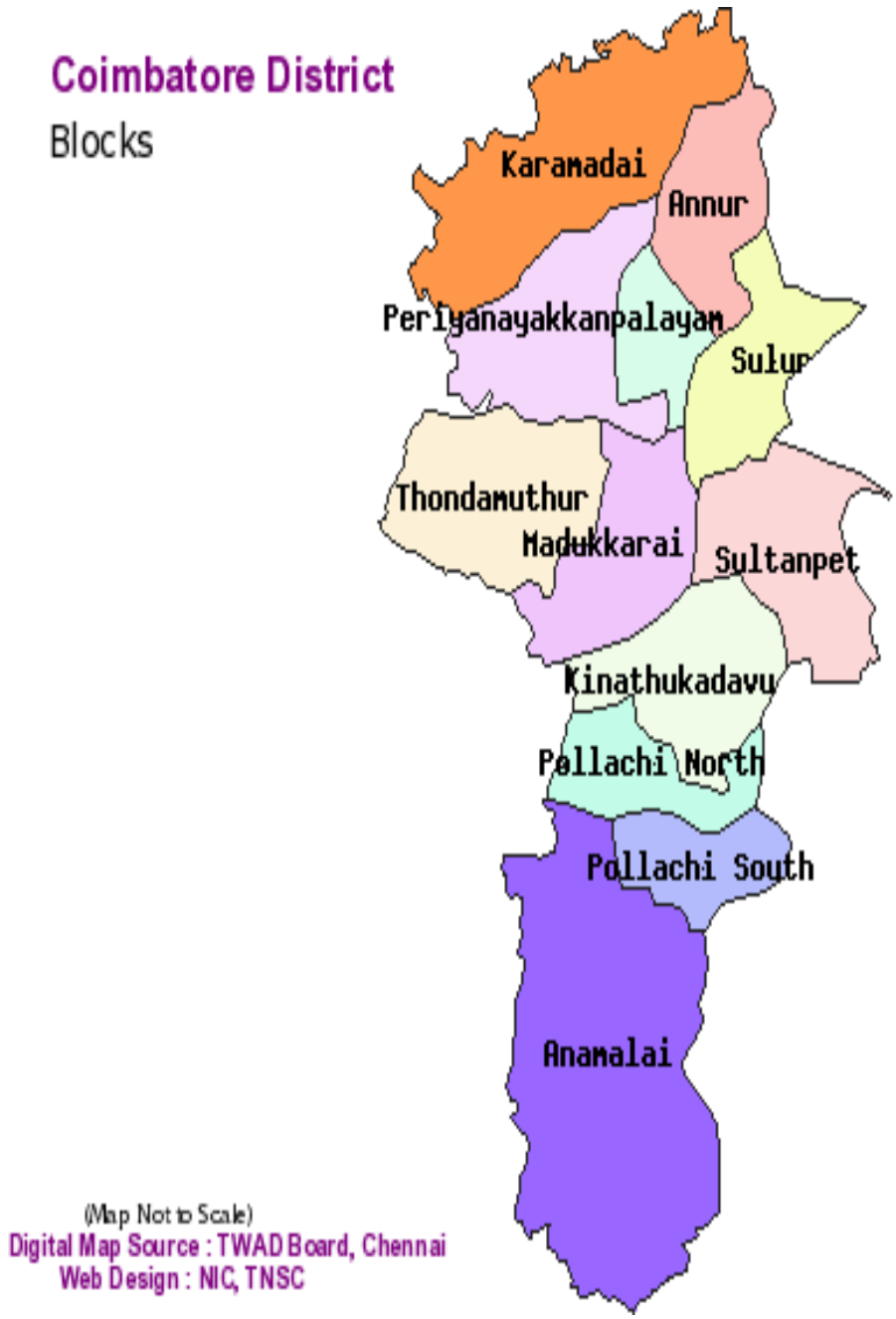
In 1979, Coimbatore District was bifurcated into Coimbatore and Periyar Districts. Again in 2008, four taluks from Coimbatore District namely Tiruppur,

Udumalpet, Palladam and Avinashi were carved out to form part of the newly formed Tiruppur District. The present Coimbatore District consists of two revenue divisions of Coimbatore and Pollachi and contains six taluks namely Coimbatore (North), Coimbatore (South), Mettupalayam, Sulur, Pollachi and Valparai. Coimbatore is a municipal Corporation as well as the headquarters of the Coimbatore District. The city is divided into five administrative zones: East, West, North, South and Central, each further sub divided into 20 wards. Coimbatore District has twelve blocks namely Karamadai,Periyanaickenpalayam, Sarcarasamakulam, Madukkarai, Thondamuthur, Annur, Sulur, Sultanpet, Pollachi North, Pollachi South, Kinathukadavu and Anaimalai.

Figure 1 represents Coimbatore District Map

Figure 1

Coimbatore District Map



3.1.6 Industries:

Coimbatore is one of the most industrialized cities in Tamil Nadu, known as the textile capital of South India or the Manchester of the South. There are more than 25,000 small, medium and large scale industries. Coimbatore is also famous for the manufacture of motor pump sets and varied engineering goods. Coimbatore is also home to a common facility for the manufacturers of wet grinders. The city also houses numerous jewellers engaged in jewellery exports. The city is the second largest software producer in Tamil Nadu, next only to Chennai. Coimbatore is ranked at 17th place among the global outsourcing cities.

3.1.7 Education:

Coimbatore is the educational hub of Tamil Nadu. There are seven universities, 90 arts and science colleges, 59 engineering colleges, 870 primary schools and 113 higher secondary schools.

3.1.8 Transport:

The Coimbatore airport caters to domestic flights to all the major Indian cities and international flights to Sharjah and Singapore. The Coimbatore Junction is well connected to major Indian cities like Chennai, Bangalore, Indore, Bhopal, Gwalior, Jabalpur, New Delhi and Mumbai, besides the neighbouring State of Kerala. It is second highest revenue yielding station in the Southern Railway division of Indian Railways. The city has six major arterial roads and three National Highways - NH-47 (Cochin–Salem), NH-67 (Mysore–Nagappattinam) and NH-209 (Bangalore–Dindigul). The number of inter-city routes operated by Coimbatore division is 119 with a fleet of 500 buses. The number of town buses in the city is around 800 in 228 different routes (www.coimbatore.nic.in)

3.2 Selection of the sample:

The study was related to dalit women entrepreneurs registered with District Industries Centre and dalit women entrepreneurs of self help groups.

In Coimbatore District there were 821 dalit women entrepreneurs registered with District Industries Centre in 2011(Annual Report of District Industries Centre, 2011-12) By adopting proportionate sampling method, the study covered 50 percent

of dalit registered women entrepreneurs in various blocks of Coimbatore District. Every alternate women entrepreneur among 821 registered dalit women entrepreneurs formed the sample for the study. Based on the response of registered women entrepreneurs the study finally covered 410 registered dalit women entrepreneurs.

Table 1 gives the block wise details of selected dalit women entrepreneurs in registered units.

Table 1

Block wise details of selected dalit women entrepreneurs in registered units

Block	Number of dalit women entrepreneurs in registered units*	Number of selected dalit women entrepreneurs in registered units
Karamadai	78	39
Madukkarai	79	40
Periyanaickanpalayam	65	32
Sarkarsamakulam	64	32
Thondamuthur	72	36
Anaimalai	32	16
Kinathukadavu	98	49
Pollachi (North)	62	31
Pollachi (South)	54	27
Annur	64	32
Sulur	87	43
Sultanpet	66	33
Total	**821**	**410**

Source: * Annual Report of District Industries Centre, 2011-12

With regard to selection of self help groups dalit women entrepreneurs, the study tried to adopt proportionate random sampling. The study concentrated on 5 percent of dalit women self help groups members in various blocks. Anaimalai block was excluded for the study since there was a non-existence of dalit women self help groups. The study concentrated on 365 dalit women self help groups entrepreneurs in 11 blocks of Coimbatore District.

Table 2 gives block wise details of selected dalit women entrepreneurs in self help groups.

Table 2

Block wise details of selected dalit women entrepreneurs in self help groups

Block	Number of dalit women Self help groups*	Number of dalit women entrepreneurs in Self help groups*	Number of selected dalit women entrepreneurs in Self help groups
Karamadai	144	1845	92
Madukkarai	126	722	36
Periyanaickanpalayam	97	762	38
Sarkarsamakulam	74	152	8
Thondamuthur	125	945	47
Kinathukadavu	126	487	24
Pollachi (North)	108	478	23
Pollachi (South)	121	641	32
Annur	96	703	35
Sulur	139	245	12
Sultanpet	106	358	18
Total	**1262**	**7338**	**365**

Source: *Records maintained by the District Collectorate and Block Development office, 2013

As a whole, the study covered 410 registered dalit women entrepreneurs and 365 self help groups dalit women entrepreneurs and hence the total sample size was 775.

3.3 Collection of data:

The data relating to general information, family background, property, savings, year of starting the enterprise, type of activity, labour employed, source of fund, expenditure incurred, profit earned, income contributed to the family, motivating factors, areas of family support, strengths, weakness, opportunities, threats, problems faced and measures required were collected by administering an interview schedule to the respondents. (Appendix I)

3.4 Period of study:

The study was related to 2013 – 2014. To check the accuracy and reliability of the interview schedule, pilot study was conducted during May 2014. The final data were collected during June 2014 – December 2014.

3.5 Hypothesis formulated in the study:

- The motivational factors of dalit women entrepreneurs are independent of their age, education, choice of ownership, location of enterprise and type of enterprise;

- There is no significant difference in strengths, weaknesses, opportunities and threats of the respondents in the registered units and self help groups;

- Years of experience, age of enterprise, labour employed, capital invested, type of enterprise and location of enterprise are insignificant determinants of entrepreneurial economic success of dalit women entrepreneurs;

- There is no significant difference in economic empowerment index of the respondents of registered units and self help groups women entrepreneurs;

- There is no significant relation between personal factors, enterprise related factors and Government related factors and economic empowerment of dalit women entrepreneurs and

- There is no difference in rank assigned for the problems faced by registered dalit women entrepreneurs and self help groups dalit women entrepreneurs.

3.6 Concepts used:

- **Category of enterprise:**

  It refers to type of enterprise- whether it is manufacturing or business or service.

- **Sole proprietorship:**

  It is a type of business entity that is owned and run by one person and in which there is no legal distinction between the owner and the business.

- **Family partnership:**

  It is a type of business partnership that places control of the entity with family members.

- **Entrepreneurial training:**

  It refers to individual entrepreneurs undergoing skill based, managerial and professional training programmes.

- **Entrepreneurial motivation:**

  It refers to inner or environmental stimulus to action that are responsible for initiation for venturing into business.

- **Fixed capital:**

  It is that portion of the total capital outlay that is invested in fixed assets such as land, buildings, vehicles, plant and equipment.

- **Working capital:**

The capital which is needed for the regular operation of business is called working capital. It is used for purchase of raw materials, for the payment of wages, payment of rent and of other expenses.

- **Own capital:**

It is the capital contributed by the entrepreneur of a business, and obtained by means of savings or inheritance.

- **Borrowed capital:**

Borrowed capital is funds borrowed from either individuals or financial institutions.

- **Raised capital:**

Raised capital refers to funds obtained from friends, relatives and also through donations and grants.

- **Gross profit:**

Gross profit is the residual profit after selling a product or service and deducting the cost associated with its production and sale.

Gross Profit = Gross Sales – Cost of goods sold

- **Net profit:**

Net profit is the money left over after paying taxes.

Net Profit = Gross profit - Taxes paid

- **Profit reinvested:**

It has been measured as the ratio of net profit reinvested to total profit

- **Strengths:**

Strengths are the characteristics of the business that give it an advantage over others.

- **Weakness:**

Weaknesses are the characteristics that place the business at a disadvantage relative to others.

- **Opportunities:**

Opportunities are the elements that the business could exploit to it's advantage. It indicates the scope of enterprises in future.

- **Threats:**

  Threats are the elements in the environment that could cause trouble for the business.

- **Self help groups:**

Self help groups (SHG) is a group of entrepreneurs having homogenous social and economic background, voluntarily coming together to save small amounts regularly, to mutually agree to contribute to a common fund and to meet their emergency needs on mutual help basis. The group members have collective wisdom and peer pressure to ensure proper end use of credit and repayment.

- **Entrepreneurial economic success:**

Entrepreneurial economic success is related with firm's growth, profitability and turnover.

3.7 Theoretical framework of economic empowerment:

- **Integrated approach:**

An integrated approach addresses the underlying structural barriers to economic empowerment of women. An integrated approach can put into action by implementing eight building blocks for achieving economic empowerment. The eight building blocks are access to equitable and safe employment, education and training, access to and control over economic resources and opportunities, voice in society and policy influence, freedom from the risk of violence, freedom of movement, access to control over health and family formation and social protection and child care.

Based on **resource theory**, women's contribution of their wages to the family should increase their negotiating power. Women who maintain a hold over their own earnings are more likely to be empowered (Papanek and Schewede, 1988; Wilson-Moore, 1989). Facilitating women's access to money is an effective means for achieving women empowerment.

- **Ripples approach:**

Marlyin Carr (1996) viewed economic empowerment as the core vehicle in promoting women empowerment. He argued that many organizations promote

women empowerment in their economic lives as the best base for achieving over all empowerment. The main instrument of empowerment was through specific economic strategies, which are: financial interventions, enterprise development, marketing strategies, bargaining for better wages and working conditions and socio-political strategies.

According to Carr (1996), “economic empowerment” is “economic change/ material gain plus increased bargaining power and / or structural change, which enables women to secure economic gains on an on-going and sustained basis”. They see women empowerment as a mutually reinforcing process, such that the effects of economic empowerment have impact on many levels namely, the household, community, markets and Governments and in all spheres of life: social, economic and political.

- **Minimalist Approach:**

In the micro-finance literature, Hashemi and Riley (1996), promoted the "Minimalist Approach" to empowerment. The main focus is on provision of credit and not necessarily on other supplementary support services.

- **The Comprehensive Approach:**

Mayoux (1998) emphasised the importance of having a comprehensive approach to empowerment. He tried to adopt a feminist empowerment paradigm as exemplified in the matrix of the four forms of power: “Power from within”, “Power to”, “Power over” and “Power with”. "Power from within": refers to the increased will for change and aspiring to challenge patriarchal cultures through self-confidence and enhancement of decision making abilities. This encompasses cultural and political as well as economic forms of empowerment. “Power to”: refers to increased access to education, income, market, better health and enhanced mobility. “Power over”: entails the minimization of obstacles faced at the household and community level. *“Power with*”: refers to increased solidarity with other women for change at different levels: the household and community and this includes the creation of networks for support in times of crisis.

3.8 Estimation of entrepreneurial economic success index:

Entrepreneurial economic success index was evolved by Rahaman (1978) based on the criteria of own capital, borrowed capital and entrepreneur's capacity to invest. The formula used was:

Entrepreneurial economic success index = $[\frac{OC2}{OCTY} + \frac{BC2}{\mathrm{OC}} + \frac{\mathrm{RC2}}{\mathrm{OC}}]\mathrm{X}[\frac{\mathrm{NP}}{\mathrm{TI}} + \frac{\mathrm{PR}}{\mathrm{NP}}]$

where

OC= Own capital

BC= Borrowed capital

RC= Raised capital

NP= Net profit

PR= Profit reinvested

OCTY= Entrepreneur's own capacity to invest

TI = Own capital, borrowed capital and raised capital

Following Akhouri (1979) modified entrepreneurial economic success index, the current study tried to calculate entrepreneurial economic success index as follows:

Entrepreneurial economic success index = $[\frac{OC2}{OCTY} + \frac{BC2}{\mathrm{TI}} + \frac{\mathrm{RC2}}{\mathrm{TI}}]\mathrm{X}[\frac{\mathrm{NP}}{\mathrm{TI}} + \frac{\mathrm{PR}}{\mathrm{NP}}]$

where,

OC= Own capital

OCTY= Own capacity to invest

BC= Borrowed capital

RC= Raised capital

TI= Total investment

NP= Net profit

PR= Profit reinvested

Entrepreneurial economic success index was calculated for the respondents of registered units, self help groups and for the total dalit women entrepreneurs. Based on entrepreneurial economic success index, the dalit women entrepreneurs were classified as follows:

Entrepreneurial economic success index	Type of entrepreneurs
<0.3	Unsuccessful
0.3-0.6	Successful
0.6-0.9	Very successful

3.9 Estimation of economic empowerment index:

By adopting the method followed by Ramananda Singh and Dhaneshwar Singh (2008) for estimation of economic empowerment index, the current study tried to calculate economic empowerment index as rating score of economic parameters measured in terms of own source of income, contribution to family income, ownership of assets, own savings and proportion of income spent on her and children. The value of economic empowerment index ranges from 0 to 1. The closer the value is to one it implies that the selected entrepreneur is economically more empowered.

The score assigned to different economic indicators for calculating economic empowerment index is as follows:

Table 3

Score assigned for calculating economic empowerment index

Scores / Econoimc indicators	1	2	3	4	5	6	Maximum score
Own source of income (in rupees)	Below 5000	5000-10000	10000-15000	15000-20000	20000-25000	Above 25000	**6**
Contribution to family income (in rupees)	Below 2500	2500-7500	7500-12500	12500-17500	17500-22500	Above 22500	**6**
Ownership of assets (in rupees)	Below 30000	30000-40000	40000-50000	50000-60000	60000-70000	Above 70000	**6**
Own savings (in rupees)	Below 2000	2000-4000	4000-6000	6000-8000	8000-10000	Above 10000	**6**
Proportion of income spent on her and children (in percent)	Below 10	10-15	15-20	20-25	25-30	Above 30	**6**
Total score							**30**

Based on the score, economic empowerment index was calculated as follows:

Economic empowerment Index = _Ei / _Ei(max)

where,

_Ei = score for ith economic indicators

_Ei (max) = Maximum scores for ith economic indicators.

In the current study economic empowerment index was calculated for the respondents of registered units, self help groups and for the total dalit women entrepreneurs. Based on the calculated economic empowerment index, dalit women entrepreneurs were classified as follows:

Economic empowerment index	Type of entrepreneurs
0.1-0.3	Less empowered
0.3-0.5	Moderately empowered
0.5-0.7	Highly empowered
0.7-0.9	Very highly empowered

3.10 Quantitative tools used:

- **Chi square analysis:**

The study used chi square analysis to find out the association between the motivational factors of dalit women entrepreneurs and age, education, choice of ownership, location of enterprise and type of enterprise. The formula used was

$$X^2 = \frac{\sum(O-E)2}{E}$$

where, O= Observed frequency and

E= Expected frequency

- **Likert rating scale:**

The study tried to use the five point likert rating scale to find out strength, weakness, opportunities and threats of selected entrepreneurs. Each point in the scale carries a score of 5=Strongly agree; 4=Agree; 3=Neutral; 2=Disagree and 1=Strongly disagree.

- **Cronbach's Alpha:**

Cronbach's alpha is a measure of the extent to which all the variables is a scale is positively related with each other.

The formula for Cronbach's alpha is

$$\alpha\, standardised = \frac{K2}{1 + (k-1)r}$$

Where k is the number of variables and r is the average correlation of all pairs of variables Cronbach's alpha value ranges from 0 to 1. The higher the score, the more reliable the generated scale is. Huntley (1978) has indicated 0.7 to be the acceptable reliability co-efficient. In the current study Cronbach's alpha was used to evaluate the unidimensionality of scale items.

- **Z test of significance:**

The study used z test to find out whether there is significant difference in mean score of strength, weakness, opportunities and threats of registered unit dalit women entrepreneurs and self help groups dalit women entrepreneurs.

The z statistic is calculated as:

$$Z = \frac{X_1 - X_2}{\sqrt{\frac{S_1^2}{N_1} + \frac{S_2^2}{N_2}}}$$

Discriminant analysis:

The current study applied discriminant analysis to find out the significant factors causing variations in entrepreneurial economic success index of the selected respondents. Based on the average score of entrepreneurial economic success index the respondents were classified into two categories. Group I comprises of the respondents having high entrepreneurial economic success index and Group II comprises of respondents having low entrepreneurial economic success index.

The estimated discriminant function is of the form

$Y=a_0+ a_1X_1+ a_2 X_2+ a_3 X_3+ a_4 X_4+ a_5 X_5+ a_6 X_6$

where,

Y=Entrepreneurial economic success index

X_1= Age of enterprise (in years)

X_2= Capital invested (in rupees)

X_3= Labour employed (in numbers)

X_4= Years of experience

X_5= Type of enterprise (1= Manufacturing enterprise; 2= Business enterprise and 3= Service enterprise) and

X_6= Location of enterprise (1= Rural; 2= Urban)

When group I was compared with group II on the basis of measurement of several variables, a discriminant co-efficient function, which can discriminate between the two groups significantly was derived. To test whether there exists a significant difference between the two groups, the following 'F' test was used.

$$F = \frac{N_1 + N_2 (P - 1)}{P} \cdot \frac{N_1 + N_2}{(N_1 + N_2)(N_1 + N_2 - 1)} XD^2$$

In order to find out the relative importance of variables that discriminate between the two groups, the relative share of different variables had been calculated.

The relative share of each variable was calculated from DP^2 which can be expressed as

$$DP^2 = \lambda_1 d_1 + \lambda_2 d_2 + \lambda_3 d_3 + \lambda_4 d_4 + \ldots\ldots + \lambda_p d_p$$

λ_1 is the co-efficient of first variable in the discriminant function separating the two groups and d_1 is the mean value of the two groups for the first variable. In DP^2, λi, d_i gave the contribution of i^{th} variable to the total distance. The percentage of each variable to the total distance has been calculated to bring out the relatively more important variables in discriminating the two groups. The discriminant function was estimated by using SPSS version 16.0

In the current study discriminant function was estimated for the respondents of registered units, self help groups and for the total dalit women entrepreneurs.

- **Analysis of variance (ANOVA):**

Analysis of variance (ANOVA) is a statistical method used to test differences between two or more means. ANOVA is essentially a procedure for testing the

difference among different groups of data for homogeneity. The essence of ANOVA is that the total amount of variation in a set of data is broken down into two types, that amount which can be attributed to chance and that amount which can be attributed to specified causes.

The basic principle of ANOVA is to test for differences among the means of the populations by examining the amount of variation within each of these samples, relative to the amount of variation between the samples. In terms of variation within the given population, it is assumed that the values of (*Xij*) differ from the mean of the population only because of random effects whereas in examining differences between populations we assume that the difference between the mean of the *j*th population and the grand mean is attributable to a 'specific factor'. Thus while using ANOVA, we assume that each of the samples is drawn from a normal population and that each of these populations has the same variance.

$$F = \frac{\text{Estimate of population variance based on variance between samples}}{\text{Estimate of population variance based on variance within samples}}$$

If the calculated *F* value exceeds the *F*-limit value there are significant differences between the sample means.

In the current study ANOVA was used to find out whether there is significant difference in the mean economic empowerment index of registered units dalit women entrepreneurs and self help groups dalit women entrepreneurs and also between the types of enterprise.

- **Structural equation model:**

Structural equation modeling is a multivariate statistical technique that is used to analyze structural relationships. This technique is the combination of factor analysis and multiple regression analysis. and it is used to analyze the structural relationship between measured variables and latent constructs. In this analysis, two types of variables are used - endogenous variables and exogenous variables. Endogenous variables are equivalent to dependent variables and exogenous variables are equal to the independent variables. This was based on the assumption

that there is a linear relationship and cause and effect relationship between endogenous and exogenous variables.

In structural equation model an essential step is to define the constructs theoretically and confirmatory test of the measurement model is conducted using confirmatory factor analysis. The overall measurement model is based on path analysis which depicts a set of relationship between exogenous and endogenous variables. Structural paths are drawn between the constructs.

In the current study structural equation model was used to find out the relationship between personal factors, enterprise related factors and Government related factors and economic empowerment index of dalit women entrepreneurs. The structural equation model was fitted separately for registered units dalit women entrepreneurs, self help groups dalit women entrepreneurs and total dalit women entrepreneurs by using AMOS version 4.The validity of the fitted model was tested by calculating Comparative Fit Index, Goodness of Fit Index, Adjusted Goodness of Fit Index, Root Mean Square Error of Approximation, Normalized Fit index and chi-square value.

- **Garrett ranking technique:**

Garrett ranking technique was used to analyse the constraints faced by dalit women entrepreneurs. As per this method, respondents have been asked to assign the rank for all constraints and the outcomes of such ranking have been converted into percent position with the help of the following formula:

$$\text{Percent position} = 100\left[\frac{Rij - 0.5}{Nj}\right]$$

where Rij = Rank given for the ith variable by jth respondents and Nj = Number of variable ranked by jth respondents. The percent position of rank obtained is converted into scores by referring to the table given by Henry E. Garrett and R.S. Woodsworth (1968). The scores of each individual were added and then total value of scores and mean values of scores were calculated. The mean scores were arranged in descending order and the corresponding ranks were allotted.

- **Kruskal Wallis test:**

The Kruskal Wallis test is an analysis of variance that uses the ranks of the observation than the data themselves. Kruskal Wallis test is used for comparing the k population, where n is greater than 2. The Kruskal Wallis test hypothesis is

H_o: All k populations have the same distribution

H_1: Not all k populations have the same distribution

The assumption required for Kruskal Wallis test is that k samples are random and are independently drawn from the respective population.

All population in the entire set is ranked from the smallest to largest, n_1 is the sample size from population 1: n_2 is the sample size from population 2 and so on up to n_k which is the sample size from population k. n is defined as the total sample size.

$n = n_1+n_2+\ldots\ldots+n_k$

R_1 is the sum of the ranks of sample 1, R_2 is the sum of the ranks of sample 2 and R_k is the sum of the ranks of sample k.

The Kruskal Wallis test statistic is

$$H = \frac{12}{n(n+1)} \left[\sum_{j=1}^{k} \frac{Rj2}{nj} \right] - 3\,(n+1)$$

The null hypothesis is rejected if the computed value exceeds the critical point of x^2 (k-1) for a given level of significance.

In the current study Kruskal Wallis test was used to find out whether there is significant difference in the rank assigned for problems faced by registered dalit women entrepreneurs and self help groups dalit women entrepreneurs.

3.11 Tabulation and analysis of data:

The data collected were tabulated and analyzed in the following Chapter on 'Results and Discussion'.