CHAPTER I

1.1 Introduction

The word ‘entrepreneur’ appeared in the French Language long before the emergence of the concept of entrepreneurial function. In the early sixteenth century, it was applied to those who were engaged in military expeditions. In the Seventeenth century, it was extended to cover civil engineering activities such as construction and fortification. An entrepreneur had to discharge several functions in production as well as distribution. Richard Cantillon an Irish man who lived in France, had defined an entrepreneur as a person who buys factors/services at ‘certain’ prices with a view to selling its product at an uncertain price in the future. He further conceived of an entrepreneur as a bearer of non-insurable risk. J.B, Say opines that an entrepreneur is a representative who unifies the requisite factors into an organized body of production. Adam Smith’s view is that an entrepreneur is a furnisher of capital, operating as a manager between labour and consumer. Prof. Knight describes entrepreneurs to be a specialized group of persons who bear uncertainty, and uncertainty is defined as the risk which cannot be calculated accurately in advance. It is an economic functionary who undertakes such responsibility that, by its nature, cannot be insured. The supply of entrepreneurship involves ability, willingness and power guaranteed in return for the assignment made to entrepreneurs. They are the organizers who deal with uncertainty and bear risk.

In the words of Schumpeter, innovation is the essential function of entrepreneurship and an organizer fulfils a new combination of factors of
production and distribution of commodities and services. According to him, both interest and profit will arise from progress (change) and world not exist in the static society, and innovation is a creative response to situation. He continues that organizers are business leaders and not mere possessors of capital. With their initiative, soundness and action, they fulfill important progress in national production. Individual gain or profit is the essence of impetus to economic activity under private entrepreneurship. But the objectives of the organizers vary from earning profit to creative activity. It is said that organizational duty is operation of innovation characterized by progress, containing variations and not concordant. Organizers find new things and ways and also endure risks. Thus an entrepreneur is a dynamic agent of change or a catalyst who transforms and increasingly physical, natural and human resources into correspondingly production possibilities.

An entrepreneur is one who takes initiative to decide, start and manage an enterprise whereas entrepreneurship is the term used to describe the quality or ability that the entrepreneur demonstrates. To have a clear understanding of the process of entrepreneurial development, in-depth analysis is necessary. This has three-pronged obligations. The basic features are:

i) Initiation: The initiation phase refers to stimulation of entrepreneurship in society. This creates awareness among the people through education and social process. It leads to identification, location and selection of persons.
ii) Development: In the development phase motivation development, economic insight, promoting managerial skills, creating confidence etc., are attempted through training.

iii) Support: In the first phase, support is extended for the establishment and running of the enterprise. Support may be in the form of finance or provision of infrastructure. It may refer to common service facilities. There may be operational and pre-operational, marketing, fiscal and other incentives.

All the three phases are equally important and in a way, they are intertwined complementary to each other. Either omission or negligence of any one of the three may result in the disruption of the total process of entrepreneurial development. Development of entrepreneurship depends upon sound factors pertaining to the individual, socio-cultural traditions, support system and environment. These factors should be interacting and influencing each other. It is training, which is a significant input and, which helps in coordinating the above components for the development of entrepreneurship. The task lies not only in identification and selection of potential entrepreneurs but also in grooming them to start small industries in villages and semi-urban areas.

Mr. Clarance Danhof gives four classes of entrepreneurship:

i) Innovating entrepreneurship

ii) Imitative entrepreneurship marked by the tendency to adopt and try successful innovations. For a developing nation, these two
classes of organizers are abundantly needed to transmit the technique of the developed countries.

iii) ‘Fabian’ entrepreneurship is an imitative type but characterized by great caution and skepticism.

iv) Drone entrepreneurship is characterized by refusal to change even at the cost of severely reduced returns on investment. It is pointed out that different types of hurdles such as unwillingness to devote entrepreneurial abilities for business activities etc obstruct entrepreneurship.

Providing proper environment that entrepreneurship, demands the removal of these hurdles as well as bringing out modern and additional values and institutions for the incoming of entrepreneurs. Innovation and experimentation cannot thrive in a society ridden which traditional barriers such as distrust of new idem. Entrepreneurship can progress with greater individual freedom. Hence, efforts have to be made to encourage organization, motivation and capabilities. A number of social scientists have conceded that entrepreneurship is the key variable which links the socio-cultural milieu with the rate of economic development.

1.2 Women and Entrepreneurship

Commercialization and modernization of the economy has gradually eliminated many of the avenues of employment to women in agriculture and industries and thus enabled them to find new ways of supplementing their family income. As a result of this, a section of urban women have emerged as
potential entrepreneurs. This development is of significant importance in our orthodox society. It is since the fast one decade that the women have started emerging on the business science and some have achieved remarkable success too. Although their task had been full of challenges yet they controlled maintained the prejudices, family opposition, spearing cynical remarks of co-workers and ultimately established themselves as independent entrepreneurs.

With the spread of education and new awareness, women entrepreneurs are spreading their wings to higher levels of the 3-E’s (engineering, electronics and energy). A comprehensive study (Anonymous 1998) of business women in capital and its outskirts showed that 40 per cent of the entrepreneurs have non-technical as far as their own qualification goes business such as electronics, engineering, chemical, auto parts and microphones etc. In other parts of the country, although their number is very less yet, they are growing very fast in almost every kind of specialization i.e., T.V, cosmetic, leather, non-conventional energy sources etc.

Entrepreneurship plays a critical role in the growth of our county which has a lot of natural human resources. Besides being the vehicle of industrial development entrepreneurship, can solve acute problems like unemployment, concentration of wealth in few selected hands, imbalanced regional development, increasing wastage of youth vigor in destructive activities, etc. Nafziger (1971) remarked that entrepreneurship and other high level human skills are key variables which link the socio-cultural milieu of the rate of economic development. Recently, some economists have shifted their emphasis
from the growth of capital to the growth of high level man power such as entrepreneurship as a major determinant of the rate of economic growth of a country. Growth of women entrepreneurship would be supplementary and complimentary for women in particular and country in general. On one hand, their enthusiasm and skill in constructive performance is met and simultaneously they can earn enough for proper maintenance and improvement of their socio-economic status on the other side, this work force in production process will enrich the national economy by way of ensuring optimum utilization of human and material resources of adequate employment opportunities. This calls for promoting congenial environment for fostering entrepreneurship among women.

Many schools have started teaching entrepreneurship at high education and can shape up the most developed decade in the history of mankind. In India also more than 25 institutions have started entrepreneurship as a separate subject. At the same time, substantial amount of research and development efforts have been taking place in this sphere. The studies have focused on emergence and development of entrepreneurship in particular. These studies involving entrepreneurial traits evaluation, effective motivation methods, constraints etc., in relation to women entrepreneurship are the recent needs of national economy. The statement ‘women should be job givers not the seekers’ weights quite high and therefore, the central and state government have started a number of promotional programmes for them. Their main aim apart from identifying the individuals from all communities and region with some
entrepreneurial talents have been to motivate and train them through property
organized programmes for undertaking risk bearing capacity and give them
incentives through different agencies and institution.

Thus, a network of promotional agencies and institutions have been set
up at the national and state levels to promote women entrepreneurship through
support measures in the form of policy, finance, infrastructure, training raw
material supply and marketing facilities etc.

In spite of their best efforts, these agencies are unable to firing about the
decided impact partly due to lack of coordination among different supporting
agencies and with the entrepreneurs. This might have been mainly due to pore
linkage within this set up of entrepreneurship. Moreover, the effectiveness and
efficiency of such system is determined not only through the extent of
achievements but also their time efficiency to reach the goals, since, literature
is almost silent on this aspect, it demanded an enquiry into the field to find out
how for these agencies are able to establish linkages among themselves and
with the entrepreneurs as well.

On and above, variety of personal, social, economical, legal, resources and
support system constraints restrict women entrepreneurs in achieving their
enterprise targets. Effects to identify these needless and carving their remedial
strategies would go a long way, further, effectiveness of the communication in
such a new work in very essential because the women do not have access to
scientific information, latest know-how and supporting agencies etc, in her
field of specialization. The importance of entrepreneurship in the development
of our country’s economy through different agencies and institutions in promoting entrepreneurship among women their communication pattern and linkages.

1.3 Women Entrepreneurship in India

The development of an economy depends much upon persons who are motivated to achieve something tangible by shouldering responsibilities and are willing to take risk. These persons are known as ‘entrepreneurs’.

According to Joseph A. Schumpeter, ‘the entrepreneur in an advanced economy is an individual who introduces something new in the economy’. Frank Young describes him as a change agent. An entrepreneur is a vital element in the development process. Developed nations are flooded with the success stories of entrepreneurs.

As an academic discipline the subject ‘entrepreneur’ has fascinated many social scientists. Innovation and moderate risk taking are the hall marks of entrepreneurs.

The development of entrepreneurship at any time, in any country, dependent upon a complex and varying mixtures of socio-economic and psychological factors. Often, entrepreneurship involves breaking the traditions and surging into areas unknown. At the time of initiating into entrepreneurial career often entrepreneurs are perceived as unreasonable. Seldom do people recognize that the economic transformation for the better takes places through these unreasonable individuals. Therefore, entrepreneurs are considered an
agent social change, catalyst, prime mover and a cultural hero. The nations which have witnessed entrepreneurial renaissance have experienced a golden age and those that lacked in entrepreneurship retarded economically, socially and politically.

Women constitute half the humanity. Development of any nation depends upon the participation of women along with men. Entrepreneurship is one of the economic activities where women can make significant contribution. Women entrepreneurs, of late are becoming an important part of the business community while in the earlier years the number of women entrepreneurs was very few. The last decade has witnessed the emergence of the pink-collared (women) entrepreneurs on a large scale. Women entrepreneurs can play a positive role in transforming a moribund economy into one that is dynamic and robust.

1.4 Strategies for Promoting Women Entrepreneurship

Keeping the findings of the earlier investigations in view, strategies have been developed by the Government. There can be no straight-jacketed approach to this issue. Therefore, a multidimensional, flexible, integrated, coordinated, area specific approach is recommended for the planners and implementers. An examination of the results contained in chapter four has surfaced the following major issues which need to be thoughtfully tackled for resolving the existing underemployment and unemployment problems and promoting entrepreneurship among women in urban as well as rural area.
The profile of the rural women entrepreneurs was found to be low. Moreover, very few women are coming forward for taking up entrepreneurial career.

For promoting entrepreneurship among women folk, especially among rural ones, rigorous efforts should be made to formulate or launch special entrepreneurial development programmes. These programmes should be developed keeping in view the low profile of women in society. Differential approach should be adopted for rural and urban entrepreneurs as there is vast gap between their profiles. In rural areas, this could be done through craft centers, Manila Mandals, Adult Education Programmes and school education.

The participation in the craft centers and adult education programmes are the most enthusiastic group and susceptible to receive any such kind of motivation. In Mahila Mandals also married and experienced women with certain leadership qualities do participate and hence their talent can be harvested upon. In urban areas, this could be achieved, through school and college education, mass media and through trainings organized by various agencies and social organizations. Further, in educational institutions for developing such entrepreneurial curriculum knowledge on various sub-systems should be included so that the graduated can be exposed to their maximum extent to every pros and cons of the topic.

Growth of women entrepreneurs indicated a positive trend in recent years specially in industrially developed cities due to improvement at system’s level
i.e., personal characteristics, social and psychological situations, access to resources and better support system.

Recent trend of last emergence of women entrepreneurs in areas adjacent to big cities could be maintained and boosted up by taking an integrated approach employing all the sub-systems. It will lead for better acceptance of entrepreneurial career in wider areas. On the other hand, special efforts are needed to develop entrepreneurship among rural women since they cannot reach the supporting institutions due to reasons related to four different spheres.

The study has shown that self actualization, achievement and power motivational forces played significantly high roles and self motivation was more common followed by motivation from husbands and other family members.

Motivational forces are prime movers behind and individual. Self actualization, achievement and power motivation, found to be the main governing forces, should be given priority while planning for the advertisement of any kind of enterprise. Arousal of motivation should be an important component of all entrepreneurial development programmes, trainings etc. These forces should be exploited in accordance with the individuals possessing such desires.

A net work of agencies and institutions are working for entrepreneurs, but there is a lack of linkage between these agencies. Furthermore, women are unaware of these agencies and are unable to make use of their services depicting poor linkages.
The better level of linkage among various agencies and institutions working for the cause of women entrepreneurs can help both the agencies and entrepreneurs to achieve their targets and objectives efficiently. Linkages within agencies also need to be reviewed to avoid clashed and overlapping of objectives and hence would prove economical. Based on the present finding linkages at district, State and National level for information generating, technology developing and research institutions need many improvements for increasing the entrepreneurial performances.

Communication pattern of the agencies and of women entrepreneurs in general as not very effective.

A well coordinate communication strategy could be evolved by an integrated group comprising block level extension workers, bank officer and officers of various agencies working for women entrepreneurs for improving entrepreneurship. The increased use of oral, visual and audio-visual modes of communication can help achieve this target. The use of multimedia might show better result in this filed. The creative use of puppets, storytelling, and songs with new contents, role play and other devices of participatory functioning may prove better for illiterate entrepreneurs.

Since women entrepreneurs are victims of existing social systems, attitude and prejudices; one of the factors which can bring improvement in their status is the creation of the social will through the instrument of education, communication and research. If the society and the women themselves do not become aware and act as watch dogs of their rights, guaranteed in the
constitution and various legislation they cannot legitimately expect the existing system to benefit them. The changes in social aptitude cannot be brought about very rapidly. It is however, necessary to accelerate this process of change by deliberate and planned efforts. Responsibility for this acceleration has to be carved by the State and the community.

Finance is the sine-qua-non for any enterprise. But this was reported to be a main constraint coming in the way of women entrepreneurs. The banking system is not sufficiently responsive to social banking needs and has not been able to deal with barriers that hinder women from using or gaining access to credit. Adequate arrangements must be made for the supply of credit facility for the women folk in the view of their growing needs. Special counters for women in banks may be initiated. Particular emphasis should be placed on institutional credit mechanism at different rates of interest for women in this unorganized sector. Credit societies exclusive for women members need to be organized. Opening of women’s cooperative banks and women development banks at State and Central level should be started.

Crux of production is marketing and it is important that before propagating the project, the provision of marketing should be made. In this area the women entrepreneurs face lot of problems. Agencies like State advisory boards, women’s development corporation, rural marketing service centers and voluntary agencies may be identified which can assist the women in identifying market. Consumer services, consumer federations, cooperative societies, federations, super markets, slate emporia, government departments can provide
raw material and collect finished products from women or help them in making marketing tie ups. Thus a net work of marketing outlets should be provided to women entrepreneurs in rural areas as well as in urban areas. Hence, an integrated approach should be formulated where women beneficiaries are not only provide credit assured of adoption of appropriate technology, supportive services of supply and marketing and appropriate infrastructural facilities.

Support in the form of infrastructure development specially in underdeveloped area assume paramount importance and invites urgent attention of agencies and institutions entrusted with the responsibility of industrial development, infrastructural facilities such as growth centers, innovation centers, incubation centers etc., should be developed.

To promote entrepreneurship among women, access to modern machines, skills and training in the area of potential for economically viable projects should be made easy. Area of training should be suited to their needs. Trainings should be imparted both in formal and informal manners. The ITI’s should diversify their horizons in view of the demand of the day and the entrepreneurs should be taken to other related units for improving their own knowledge. The training type of institutes should have links with other institutions related to various spheres of women entrepreneurs. A specific quota for women entrepreneurs should be kept in all kinds of training schools, while allocating permits of raw material, giving subsidy and organizing the marketing facilities etc. The trainings in specific areas like decision making, moral education,
communication skills, management etc., should be made open to every entrepreneur without much economic liabilities.

Since, reinvestment of profits carves the future of an enterprise, the women entrepreneurs should be made acquainted with most of the successful ways for harvesting good profits and then in its reinvestment in domestic requirements, extending units or investing in better multiplying schemes. A balanced reinvestment of one’s profit certainly will make the entrepreneurs healthier.

1.5 Self Help Group

Development of women has been recognized as a sine-qua-non for national development and social welfare. In order to bring women into the main-streams of economy and society, Government of India has launched several development programmes for women. Various Five Year Plans gave special emphasis to employment and income generating activities for women with the ultimate objective of making women economically independent and self-reliant. In spite of the efforts of the Government, women’s needs are more and more marginalized in their struggle for existence and excellence. The credit requirements of the poor and particularly women are not met by the formal banking.¹ The women on many occasions need emergency credit which the formal credit system and the Government poverty alleviation schemes could not cater to. Denied access to credit, which is one of the most productive of the resources, women are pushed to the status of recipient, beneficiary and consumer, despite their ability as a giver, benefactor and producer.² In these circumstance, evolved the concept of micro-credit.
Micro-credit in the global context is commonly understood to refer to programs meant for providing credit for self-employment and other financial and business services to very poor persons. The task force set up by the National Bank for Agricultural and Rural Development has defined the micro-credit as “provision of thrift, credit and other financial and products of very small amounts to the poor in rural, semi-urban areas for enabling them to raise their income level and improve the living standards”.  

Micro-credit means the extension of small loans to very poor people for self-employment projects that generate income, allowing them to care for themselves and their families. In most cases, micro-credit programmes offer a combination of services and resources to their clients in addition to credit for self-employment. These often include savings facilities, training, networking and peer support. Loans under micro-credit programme are very small, on an average less then $100 by world standards and in hundreds of rupees by Indian standards. Micro-credit targets the rural and urban households, with an emphasis on women borrowers, provisions of finance for creation of assets and their maintenance and bringing in greater quality of services. The beneficiaries are identified by micro-credit providers themselves independently or through Non-Governmental Organizations and Self-help groups.

Self-help group is a voluntary association of a homogenous set of people, either working together or living in the neighborhood, engaged in similar line of activity, working with or without registration, for the common good of the member. The minimum number of members to form a self-help
The role of non-governmental organisations is to prepare the members in order to participate in the group activities through changing their mindset. Training provided by the non-governmental organisations to the members further facilitates enlarging the scope of women in obtaining finance and undertaking economic activities.8

1.6 Statement of Problem

Women in the traditional society confined themselves to three Ks – kitchen, kids and knitting – as there was hardly any opportunity extended to women to cross this boundary. Gradually, women started assuming active role
as employees or entrepreneurs in self employment; Lalitha Devi (1982) has tried to show that employment per se as against age, education, family type, place of residence has a crucial role in raising the status of women. In addition, entrepreneurial activities assumed by women would certainly empower them and at the same time break the traditional chains of gendered entrepreneurship, which has been hitherto referring to the male. Research in the field of women entrepreneurship has yet to be integrated into the field of entrepreneurship research as such or to be recognized as a distinct field a sub-field of research. Whether due to its novelty or other reasons, studies of women entrepreneurs have tended to be of a rather descriptive and explorative character and have often taken the form of studies of a single case or anecdotal descriptions.

There are different options as to how women entrepreneurship should be treated theoretically. One perspective maintains that gender theory is necessary to understand the phenomenon. Another perspective maintains that the entrepreneurship is the impotent matter and that differences and or similarities between men and women should be considered within conventional theories in the field of entrepreneurship. But, for the understanding of entrepreneurship, contributions from both the perspectives are required. Another conclusion suggests that women entrepreneurs should not be treated as a homogenous group. There are differences within the group that make all generalization dangerous. The gendered nature of entrepreneurship is an argument for integrating knowledge of women entrepreneurship into small business and entrepreneurship theory.
Micro-credit programmes have, in the recent past, become one of the more promising ways to use scarce development funds to achieve the objectives of poverty alleviation. World-wide awareness and the importance of micro-credit for the upliftment of the poor has been growing over the years as different countries are attempting to devise ways and means to enhance the access of the poor to credit facilities. Micro-credit scheme is adopted in many countries in the world such as Bangladesh, Indonesia, Sri Lanka, Thailand and Pakistan. Further, the micro-credit experience world-wide has shown that poor borrowers, especially women, make productive use of credit for self-employment in micro-enterprises and are prompt in repayments, with average repayment rates above 90 per cent, much better than recoveries under normal lending.

The idea of micro-credit centers around the philosophy of Professor Muhammad Yunus of Bangladesh, who initiated the organizing of the poorest of the poor into self-help groups and made them realize the very basic ‘theory of survival’. Micro-credit Summit held in February 1997 in Washington was considered to be the first step that seeks to ensure delivery of credit for self-employment by 2005 to 100 million of the world’s poorest families, especially to the women of those families.

Development organisation and policy makers in India also felt that access to credit for poor people is a major aspect of many poverty alleviation programmes. The basic idea of micro-credit is simple: if poor people are provided access to financial services, including credit, they may very well be
able to start or expand a micro-enterprise that will allow them to break out of poverty.\textsuperscript{13} An estimate in India envisaged that approximately 75 million households would need micro-credit, of whom 60 million families are in rural areas while the remaining 1.5 crore families are in urban areas.\textsuperscript{14}

Considering the historical perspective of the involvement of Indian women in the thrift and credit activity, the micro-credit scheme has particular relevance to women and their empowerment. Over the years and through generations women have always found an answer to cater to their economic needs and escape from the clutches of the local moneylenders. They had set up informal credit structures, like ‘Chit Funds’, ‘Committees’ and ‘Bisis’.\textsuperscript{15} But, there were inherent lacunae both in their ideology and management.

For overall development and upliftment of women, it is important to initiate income generating economic activities through the provision of credit. Micro-credit aims at making the women beneficiaries self-reliant. It also focuses on women upliftment and empowerment. In India, the synergy among banks, non-governmental organisations and Government working in the field of micro-credit enabled the banking system to provide micro-credit to 4.5 million very poor households as on March 2001, as compared to 1.9 million households as on March 2000.\textsuperscript{16} In this context, the effectiveness of micro-credit in improving the economic and the social conditions of the beneficiaries has to be analysed.

The impact of micro-credit has to be studied in depth. Hence, there is a need for probing into the nature of women enterprises by carefully inquiring
the factors determining their entry into business through self help group in Chennai. This study is an attempt in this respect.

1.7 Scope of the Study

This study is mainly confined to analyse the impact of micro-credit on the sample women beneficiaries in Chennai. The impact is measured in terms of changes in the level of income, employment, expenditure, savings and borrowings. After availing of the micro-credit the empowerment through micro-credit is measured in terms of social, economical, political and capacity building and the loan repayment aspect of the target group is also analysed.

1.8 Objectives of the Study

1. To study the evolution of Women Entrepreneurs in Tamil Nadu.
2. To study the socio-economic status of Women Entrepreneurs.
3. To study the growth and functioning of SHGs
4. To identify various problems of Women Entrepreneurs of SHGs.
5. To analyze the different factors that influenced the success of Women Entrepreneurs with reference to SHGs in Chennai.
6. To offer suggestions for improvement of women entrepreneurs in Tamilnadu.

1.9 Hypotheses of the Study

The following hypotheses are framed for the study.

i) There is no association between the socio-economic factors and the level of borrowings under micro-credit scheme.
ii) The amount of micro-credit availed of by the sample women beneficiary has no impact on their income, employment, expenditure, savings and indebtedness.

1.10 Methodology

1.10.1 Sample

The study adopted the analytical method and its covers Chennai city. The Chennai is divided into five areas namely Egmore-Nungambakkam, Mylapore-Triplicane, Mambalam-Guindy, Fort-Tondiarpet and Perambur-Purasawakkam. The major NGO’s functioning Chennai area namely CRED, ICCW, SHEPHERD, SEWA and ASSEFA from among the NGO’s non-probability sampling method was adopted. In each NGO’s ten SHG’s were selected. A selection of 600 respondents was adopted simple random method at the rate of 12 from each selected SHG of NGOs. Both primary and secondary data were used in this study. In Chennai out of five areas, micro-credit scheme has been implemented in all areas.

1.10.2 Data

Primary data were collected from the members of those self-help groups with the help of the structured interview schedule. The schedule was presented before drafting the final format. The Secondary data were collected from books, journals, RBI Bulletins, NABARD Annual Reports and reports of the Project Implementation Unit, Mahalir Thittam in Chennai.
1.10.3 Tools

For analysing the primary data, the following statistical tools have been used.

The descriptive statistical tools like arithmetic mean and standard deviation were used to describe the data along with simple percentage analysis.

‘Z’ test: ‘Z’ test and ‘t’ test were used to test the significant difference between the means of quantitative variables like income, employment, expenditure, savings and indebtedness before and after availing of micro-credit.

The formula for the computation of ‘Z’ test\(^{19}\) is as follows:

\[
Z = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{S^2_1}{n_1} + \frac{S^2_2}{n_2}}}
\]

Where

- \(\bar{X}_1\) = Mean household income of the beneficiaries before assistance
- \(\bar{X}_2\) = Mean household income of the beneficiaries after assistance
- \(S^2_1\) = Variance for first sample
- \(S^2_2\) = Variance for second sample
- \(n_1\) = Number of observations in the first sample
- \(n_2\) = Number of observations in the second sample
If the computed value of ‘Z’ is greater than the table value of 1.96 at 5 per cent level of significance, exists a significant difference between the two means.

‘t’ test: The ‘t’ test based on paired observations is defined by the following formula.

\[ t = \frac{\bar{d} \sqrt{n}}{S} \]

Where

\( d = \) the mean of the differences

\( S = \) the standard deviation of the difference

\( N = \) the number of sample women beneficiaries

The value of \( S \) is calculated as follows

\[ S = \sqrt{\frac{\sum d^2 - n(\bar{d})^2}{n-1}} \]

Degrees of freedom = \( n - 1 \)

Sen’s Index of Poverty: To find out the intensity of poverty among the beneficiaries before and after getting assistance under micro-credit scheme, Sen’s Index of poverty was calculated. The formula for Sen’s Index is given below:

\[ P = H \left( \frac{1+(1+1) G}{G} \right) \]

where

\( P = \) Sen’s Index of Poverty

\( H = \) \( q/n = \) Head Count ratio
q = The number of sample women beneficiaries below the poverty line

n = The total number of all sample women beneficiaries in the households

\[ \text{I} = \frac{\bar{y}}{Z} = \text{Income Gap Ratio} \]

\[ Z = \text{Poverty cut-off line – income below which poverty begins} \]

\[ \bar{y} = \text{Average income of the people below the poverty line} \]

\[ G = \text{Gini Co-efficient of the income distribution of the individuals} \]

\[ \text{below the poverty line} \]

**Gini Ratio:** Gini co-efficient\(^{22}\) of concentration ratio was calculated using the following formula.

\[
L = 1 - \frac{\sum_{k=1}^{N} (P_k - P_{k-1})(Q_k + Q_{k-1})}{10000}
\]

were

\[ L = \text{Gini Co-efficient of Concentration Ratio} \]

\[ P_k = \text{Cumulative percentage of frequency of women beneficiaries.} \]

\[ Q_k = \text{Cumulative percentage of income} \]

\[ N = \text{Number of classes used in the analysis} \]
**Garrett’s ranking:** The reasons for getting micro-credit and repayment of micro-credit were ranked with help of Garrett’s ranking technique\(^{23}\) using the following formula.

\[
\text{Per cent position} = \frac{100(Rij-0.5)}{Nj}
\]

\(Rij\) = Rank given for the item by the jth individual

\(Nj\) = Total rank given by the jth individual

**Chi-square test:** The Chi-square test\(^{24}\) \((\chi^2)\) was applied to test the association between the socio-economic factors of the sample women beneficiaries and the extent of borrowing. The formula for Chi-square is

\[
\chi^2 = \sum \frac{(O-E)^2}{E}
\]

with \((r-1)(c-1)\) degrees of freedom

where

\(E = \frac{\text{Row Total} \times \text{Column Total}}{\text{Grand Total}}\)

\(O = \text{Observed frequency}\)

\(E = \text{Expected frequency}\)

\(r = \text{Number of rows in a contingency table}\)

\(c = \text{Number of columns in a contingency table}\)

The computed \(\chi^2\) value was compared with the table value at 5 per cent level of significance to draw inferences. The null hypothesis was rejected when
the computed $\chi^2$ value was higher than the table value for a given degree of freedom and vice versa.

**Likert’s scale:** To study the empowerment of sample women beneficiaries, 16 statements were framed and for each statement Likert’s\(^5\) five point scale has been used. The scores for the statements are strongly agree – 5, agree – 4, undecided – 3, disagree – 2 and strongly disagree – 1. By using this scale, the score intensity value has been calculated for each statement.

**Kolmogorov-Smirnov test (KS-test).** The general plan of analysis of ranges from simple descriptive statistics of

The formula for Ks-test is $D = O - E$

$D$ refers to calculated value,

$O$ refers to cumulative observed proportion and $E$ refers to cumulative expected proportion.

$O$ is calculated on the basis of observed frequency i.e., the actual importance ratings given by the respondents. The total number of respondents is 600. The calculation part of this test is explained with the following example.

Suppose, 480 respondents have given their opinion for gradation “Strongly Agree” in a statement the observed proportion is calculated by dividing 480 by total respondents i.e., 600. The resultant value (0.80) is the observed proportion. For all gradations, the same method of calculation is followed. On the basis of observed proportion, cumulative observed proportion is calculated.
Cumulative expected proportion is calculated on the basis of expected proportion. Since there are five gradations, for each gradation i.e (0.20) is assigned as expected proportion. On the basis of expected proportion cumulative expected proportion is calculated.

For each gradation, the difference between cumulative observed proportion and cumulative expected proportion is calculated. The highest difference will be taken as calculated value. The calculated value is compared with the table value.

If the calculated value is more than the table value, the null hypothesis is rejected. On the other hand if the calculated value is less than the table value, the null hypothesis is accepted.

Kendall's Co-efficient of Concordance test is used to compare the rankings given by the investors’ on the basis of their personal factors and object of investment on various factors.⁹ The formula used is

\[
W = \frac{S}{\frac{1}{12} k^2 (n^3 - n)}
\]

Where

\[
S = \sum (R_j - \bar{R})^2, \quad R_j = \text{Sum of ranks, } \bar{R} = \text{Average of ranks;}
\]

\[
K = \text{Number of sets of rankings. (the number of judges)}
\]

\[
N = \text{Number of objects ranked,}
\]
To see whether the value of $W$ is significant or not, table value of $S$ is referred. If the calculated value of $S$ is less than the table value, it is interpreted that the ranking by different categories do not differ significantly and the null hypothesis is accepted.

When there is a tie ranking, the formula used to calculate $W$ is:

$$W = \frac{S}{\frac{1}{2} (\frac{r^2}{T(T-1)} - \sum t)}$$

Where $\sum t = \frac{T^3 - T}{12}$

$T = \text{Number of observations in a group tied for a given rank.}$

1.1 Limitations of the Study

1. The time period of the study was limited but the data collected may not be fully pertinent and sufficient to the study.

2. The sample study selected was 600 which may not be represented the real picture of the women entrepreneurs.

3. The study was limited to the Chennai city and simple random sampling was used. True population may not have been represented.

1.12 Scheme of the Report

The report has been organized and presented in eight chapters.

The first chapter presents introduction and design of the study.

Reviews of the related studies are provided in the second chapter.
An overview of Women Entrepreneurship and micro-credit scheme is given in the third chapter.

The Socio-economic conditions of the women beneficiaries are examined in the fourth chapter.

The micro-credit availed by the women beneficiaries and the repayment are analysed in the fifty chapter.

The impact of micro-credit scheme on the level of income, employment, expenditure, savings and indebtedness of the sample women beneficiaries is given in the sixth chapter.

The opinions of women beneficiaries about empowerment through micro-credit scheme are discussed in the seventh chapter.

The eighth chapter contains summary, suggestions and conclusion arrived at by the researcher in the course of this study.
References:


14) Ibid., p.96
