

METHODOLOGY

III. METHODOLOGY

The methodology adopted in the present study on, “**Determinants of Remittances and Assessment of Living Conditions of Migrant Workers**” is presented and discussed under the following heads:

1. Selection of the Problem
2. Selection of the Study Area
3. Sampling Technique
4. Collection of Data
5. Tools of Analysis
6. Concepts used in the Study

1. SELECTION OF THE PROBLEM

India is known for its highest availability of human resources. Huge population of India consists of working group of people. It is common to find millions of men, women and children moving from one place to another in buses, trucks and sometimes on foot. They are found to carry their belongings on their head. These people are moving with a dream to find a better living and working condition. Some of these migrant workers migrate alone and some of them are accompanied by their family or friends. Most of the migrant workers are seasonal workers in nature and some are permanent workers. All these workers tend to work for low wages, vulnerable occupations, construction works, domestic servants and garment industrial works. They are treated as intruders and illegitimate citizens. These migrant workers are found to be exploited in terms of wage rate, working hours and unsafe working condition. They are suffering with various problems in their basic citizenship rights like voting, using Public Distribution System and education for their children in the public schools.

The migrant population is increasingly rapidly in the country every year and the contribution made by these populations in the economy is huge. But their role is not maintained or government by any institution (Mander and Sahgal 2010). Most of the migrant populations are found to be enrolled in unorganized sectors where their work is

exploitative and dangerous in nature (Srivastava and Sasikumar, 2003). In spite of such condition these people are willing to work at the same sector because they are feeling that they are receiving wages higher than that of the wage they received at their place of origin. This is closely related to the strategy in which the migrants were willing to maintain their quality of life and surviving close to the poverty line (Deshingkar et al, 2008 and Waddington, 2003).

In the development process of India the role of migrant workers is one of the big issues. Migrant workers are forced to a situation in which they move from their place of origin to the place of destination as they face problems like unemployment, low development, high dependency on agriculture, discrimination in caste, discrimination in gender, and discrimination in race, heavy debt conditions and low economic condition. After their migration at the place of destination again these migrant workers were facing problems like new culture, different tradition, changes in language, variation in climate, different food habits. Most of these workers are finding employment easily in unorganized sector as these sector prefers low skilled labours as they were willing to work for low wage rate than that of skilled labours. In Tirupur district it is easy to trace migrant workers from states like Uttar Pradesh, Assam, Bihar. Orissa, Kerala, Andhra Pradesh are migrating to Tirupur and also from southern districts such as Kanniyakumari, Ramanadhapuram, Salem, Madurai and Trichy.

With this background, the investigator has chosen to the study migrants in Garments sector as part of the research work. The study would focus on the remittance behavior of the workers from different places and the determinants of the amount remitted to the places of origin and also make assessment on the living condition of migrants before and after their migration process.

2. SELECTION OF THE AREA

The study has been related to the Tirupur District of Tamil Nadu since the district is known for its garment production around the world. Tirupur district is been separated from Coimbatore district in the year 2008 and by this separation this district was made as 32nd district of the state Tamil Nadu. This district is known as one among ten most industrialized districts in Tamil Nadu. Tirupur is famous for its manufacture of gramnets, sports wear and hosiery exports. In India, Tirupur is known as one of the important trade centers as it plays major sources of foreign exchange to the country.

PROFILE OF THE STUDY AREA

Location of the study area

Tirupur district is found to be a part of Tamil Nadu state with borders of Western Ghats. This district has a very good climatic condition and it is been surrounded by various other districts like Coimbatore to the West, Erode to the Borth, Karuru to the Northeast and Dindigul to the South East. The area of this district is about 516.12 square kilometers. This district enjoys good rainfall during the rainy seasons as it is been surrounded by the Western Ghats. The temperature of the district is found to be between 35°C to 18 °C. The major rivers flowing through the district are Noyyal and Amaravathi. The Amaravati river is the main source of irrigation in the district.

Tiruppur district map

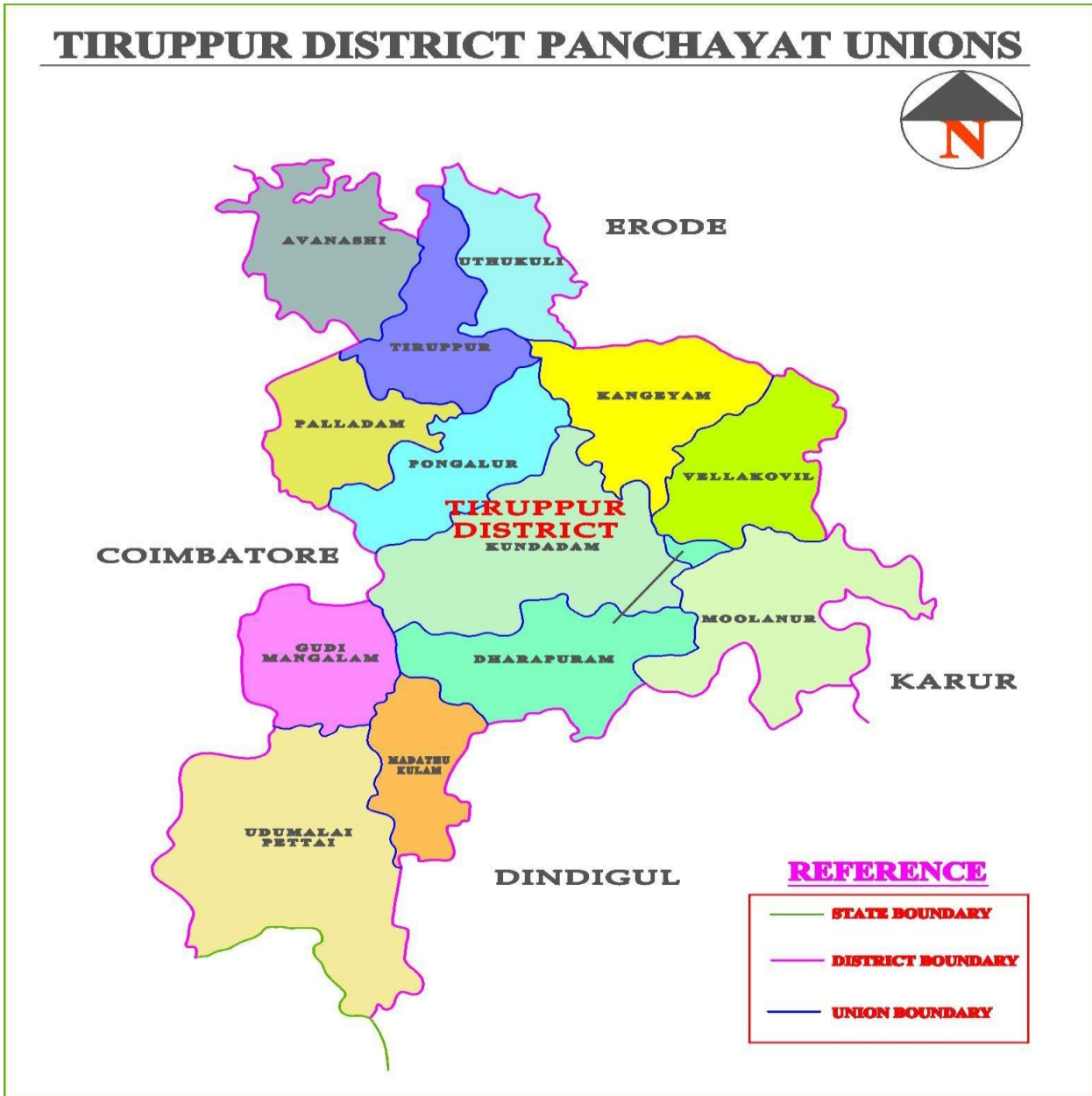


Figure- 2

a. Population

As per 2011 census Tirupur district population is 2,479,052 of which 1,246,159 are male population and 1,232,893 were female population with 712,210 families residing in the district. The sex ratio in the district is 989 and child sex ratio is 952. The 2011 census reports have stated that 61.4 percent of the people in the district were living in Urban areas and the rural population is about 38.6 percent and the literacy rate of the district is 84.5 percent in urban area and 69.6 percent in rural area. In case of population of children between the age group of 0-6 years of age in the district is 241351 this is of 10 percent of the total population of the district. In case of the population of the Schedule Caste it is 16 percent of the total population of the district whereas only 0.2 percent in the district were belonging to the Schedule Tribe community.

b. Education

As per the Census 2011 report the Tirupur district total literacy rate is 78.68 percent where the average literacy rate of Tamil Nadu was 80.09 percent. The literacy rate of male population in the district was 959,623 and female population was 800,943 and total number of literates in the district was 1,760,566.

c. Health Infrastructure

In Tirupur district for the provision of good health infrastructure there are about 10 government hospitals with the bed strength of 1238 at various Taluk of the district and there are 51 primary health care center in rural and urban areas of the district.

d. Key Demographic Indicator Details

| | |
|---|--|
| Population: (Total) | 2,479,052 |
| Male population, percentage | 50.4percent |
| Female population, percentage | 49.6percent |
| District's share in State's population, percentage | 3.44percent |
| Urban population as a percentage of total population, percentage | 61.36percent |
| Rural population as a percentage of total population, percentage | 38.64percent |
| SC population, percentage | 31.77percent |
| ST population, percentage | 0.22percent |
| Sex ratio, No. of females per 1000 males | 989 |
| Population density, per sq. km. | 478 |
| No. of households | 712,210 |
| Literacy rate, percentage | (Person)78.68percent Male 85.49percent Female 71.82percent |
| Main workers, No, | 1,168,596 |
| Marginal workers, No. | 97,541 |
| Working age population as a percentage of total population, percent | 67.65percent |
| Work participation rate | 51percent |

Source: Census 2011

e. Economy

As of 2010-11, Tirupur district had the seventh largest Gross District Domestic Product (GDDP) in Tamil Nadu at Rs 18,202 crore (4.5 per cent of the Gross State Domestic Product at constant prices). In terms of per capita income though, it ranked 2nd amongst all the districts at Rs 83,776 when compared with the State average of Rs 59,967. The district economy is pre-dominantly service based with service sector's share in GDDP at 51per cent in 2010-11. This is followed by secondary sector at 42 per cent and primary sector at seven per cent.

f. Agriculture

Of the total area of 518 thousand hectare in the district, over 44 per cent is cultivable area. Agriculture is mainly dominated by cultivation of millets, paddy, pulses and oil seeds. Agriculture is predominantly food and commercial crops and the area

covered under major crops is provided in the table below. Horticulture crops such as onion, mango is also grown in the district (especially in Dharapuram and Kangeyam taluk region)

g. Infrastructure

Infrastructure availability is the key for social and economic progress of the district. The key sub-sections transport, water, education, health, finance and industrial infrastructure. Being one of the prominent industrial centers of the state, the district has a well-developed and connected road transportation system. The district is well connected by means of road through national and state highways to many prominent places in and around the district. Three National highways pass through the district including NH-47(Avinashi), NH-67 (Kangeyam- Palladam) and NH-209 (Udumalpet). The nearest airport is Coimbatore, which is 45 km away from the district headquarters. The nearest port is Kochi port with about 235 km distance and Tuticorin port with about 320 km distance. Rivers found in Tirupur district are Noyyal, Amaravati, Palar, Nallar and Chinnar. There are two major dams in the district namely Thirumoorthy dam (across Palar river) and Amaravathi dam (across Amaravathy river). There are more than 1400 schools in the district. For higher education, there are about 17 arts & science colleges in the district and for technical education, there are 15 institutes (eight polytechnics and seven engineering colleges) in the district. The famous educational institutes in the district include Sainik School in Amaravathi Nagar and NIFT TEA College of knitwear fashion in Tirupur. There are four industrial areas in the district. All the industrial estates are managed by the Tamil Nadu Small Industries Development Corporation Limited (SIDCO).

h. Industrial Scenario of Tirupur District

Tirupur has about 28,939 registered industrial unit in which 11,00,00 daily workers are employed. In case of textile based industries there are about 8000 knitting units, 1000 dyeing and bleaching units, 2820 fabric printing units, 11,268 garment making units.

3. SAMPLING TECHNIQUE

Multistage sampling technique was followed in the selection of the sample respondents for the study. In the first stage, Tirupur district was selected for the study. As per the 2011 Census data on Tamil Nadu, Tirupur District has about 24,79,052 total population among which the Male population is about 12,46,159 and 12,32,893 Female population. This district has about 8000 Knitting Units, 1000 Dyeing and Bleaching units, 2820 Fabric Printing units, 11268 Garment Making units, 2000 Embroidery units, 2600 ancillary units and 1250 compacting and calendaring units to a total of 28938 units are available in the district. These units provide average employment of 11, 00,000 in small scale industries and 7, 00,000 employment in large and medium scale industries. Five main industrial areas of Tirupur district were located as second stage. The selected industrial area was Ganapathipalayam, Gudimangalam, Kangeyam, Avinashi and Tirupur. These industrial area provide employment for about 4,00,000 workers among these workers 1,00,000 population were migrants. Among these 1,00,000 workers 50 percent of them are working in garment industries. (MSME 2015-16) In the next stage it was planned to cover 10 percent of the total migrant population based on few criteria. Those criteria includes that the migrants should be prime earning member and an active member in the household, the migrants should be in the place of destination for at least for a period of one year and the migrant should have been engaged only in garment companies in Tirupur District alone. In the next stage in each industrial area migrants were selected by adopting random sampling method. A total of 626 migrant workers were selected for the study.

SELECTION OF SAMPLE

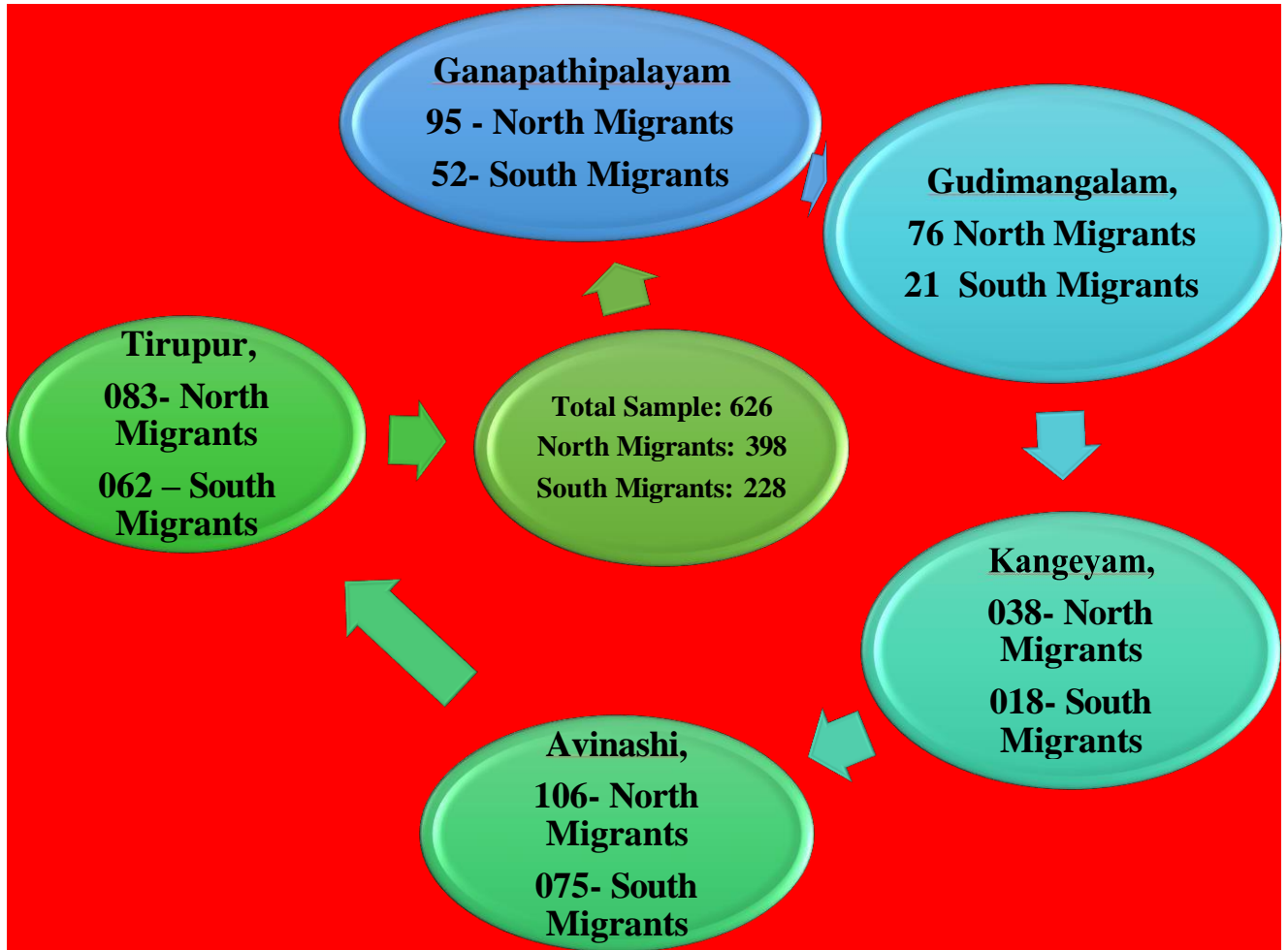


Figure 3

4. COLLECTION OF DATA

A well-structured interview schedule was prepared covering the socioeconomic background of the migrant garment workers, working conditions, skills and training, work history, housing details, mobility and aspirations and reasons for migration and remittance mode, remittance use of migrants. The interview schedule was administered to 30 migrants in the Tirupur city. Based on their responses, the drawbacks in the interview schedule were noticed and modified. The study was related to 2017. The pilot study was conducted in January 2017 to check the reliability and accuracy of data. Final data collection was done during February 2017-May 2017.

5. TOOLS OF ANALYSIS

A. Factor Analysis

To identify the factors which influence the migration of the respondents from their place of origin to place of destination is studied in this section. For this purpose the researcher has used Factor Analysis Approach. The general purpose of factor analysis is to find a way in condensing the information contained in a number of original variables into a smaller set of new, composite dimensions (factors) with a minimum loss of information. The suitability of the data for factor analysis can be tested on the basis of following criterion:

- (i) A visual inspection of the correlation data matrix can reveal whether there are sufficient correlations to justify factor analysis.
- (ii) Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) is another measure to quantify the degree of inter-correlation among the variables and appropriateness of factor analysis. The index ranges from 0 to 1. Small values of KMO measure indicate that a factor analysis of variables may not be a good idea, since correlation between pairs of variables cannot be explained by the other variables. A high value between 0.5 and 1.0 indicates that factor analysis is appropriate technique to be used.

To obtain factor solutions two basic models: common factor and principal component analysis are needed to be used. Principal Component Analysis is used to summarize most of the original information in a minimum number of factors for prediction purposes. Common Factor Analysis is used to identify underlying factors or dimensions reflecting what the variables shares in common. In this study, principal component method of factoring was used. It is a statistical technique that linearly transforms an original set of variables into a substantially smaller set of uncorrelated variables that represents most of the information in the original set of variables. The linear combinations of variables are used to account for variation of each dimension in a multivariate space. The variance of factors is called Eigen Values, Characteristic Roots or Latent Root. Communality is the amount of variance an original variable shares with others. Factor loadings are the correlation between the original variable and the factor. Squared factor loadings indicate what percentage of the variance in an original variable is explained by a factor. There are four criteria to determine the number of factors to be extracted.

- (i) Prior criteria,
- (ii) Latent root criteria
- (iii) Percentage of variance criteria and
- (iv) Screen test criteria.

In latent root criteria, only those factors which have latent roots greater than one are considered. In percentage of variance criteria, that the cumulative percentage of variance extracted by successive factors must be greater than 60 is good enough in social science. At least one factor more than latent root criterion is usually extracted. In this study, firstly latent roots were examined and then the Screen test was used. Percentage of explained variance was also considered. And then loading is rotated to make them more interpretable by making the loading for each factor either large or small, not in between. For rotation, Orthogonal or Oblique method can be applied. In orthogonal rotation method, the axes are maintained at 90 degree so that the resulting factors are uncorrelated. In Oblique Rotation method, the axes are rotated, without maintaining the 90 degrees angle between them. Within orthogonal method, either

Varimax or Quatrimax method can be employed. Varimax method simplifies the columns in a matrix whereas Quatrimax method stresses on simplifying the rows. In this study, Orthogonal Rotation along with the Varimax method of rotation was used in order to have more clearly in factor solution. The Varimax criteria maximize the sum of the variance of the square loadings within each column of the loading matrix.

In the current study factor analysis has been used for analyzing the push and pull factors of migration. The study has classified push factors and pull factors of migration. The first session deals with the pull factors of migration and it is been followed by the push factors of migration. As a first step there were two tests framed for this analysis namely, Kaiser-Meyer-Olkin measures of sampling adequacy (KMO) and Bartlett's Test of Sphericity have been applied to test whether the relationship among the variables has been significant or not.

B. Garret Ranking

Garrett's ranking technique was used to analyze the problems faced by the selected respondents. As per this method, respondents have been asked to assign the rank for problems and the outcomes of such ranking have been converted into score value with the help of the following formula:

$$\textit{Percentposition} = \frac{100 (R_{ij} - 0.5)}{N_j}$$

where,

R_{ij} = Rank given for the i^{th} variable by j^{th} respondent and

N_j = Number of variables ranked by j^{th} respondents.

The percent position of rank obtained is converted into scores by referring to the table given by Henry. E. Garrett and Woods worth R.S. (1968). The scores of each individual were added and then total value of scores and mean values of score were

calculated. The mean scores were arranged in descending order and the corresponding ranks were allotted.

C. Logit Model

The logistic regression is one that specifies a functional relationship between a basically dichotomous dependent variable and categorical independent variables. In fact it is a method of multivariate analysis of the multiple regression model designed to deal with the situation when one has the measurement of presence or absence, occurrence or non-occurrence of some factors. Logistic regression is concerned with modeling the odds of dependent variable and the parameters for logistic are most easily interpreted as they are expressed as odd ratios. The basic form of logistic function is:

$$P = \frac{1}{1 + e^{-z}}$$

When numerator and denominator of the right side of the above equation are multiplied by e^z , the logistic function can be expressed in the following manner:

$$P = \frac{\exp(z)}{1 + \exp(z)}$$

Where z is the predictor variable and e is the base of natural logarithm, equal to 2.7182. If z is a linear function of a set of predictor variables then:

$$Z = b_0 + b_1 X_1 + b_2 X_2 + \dots + b_k X_k$$

This expression is substituted in the formula for logistic function. Thus, the function becomes

$$P = \frac{1}{1 + e^{-(b_0 + b_1 x_1 + b_2 x_2 + \dots + b_k x_k)}}$$

Odd ratio is the ratio of the probability of the event occurring to the probability of the event not occurring and is denoted as:

$$\ln\left(\frac{P_i}{1 - P_i}\right) = b_0 + b_1 X_1 + b_2 X_2 + \dots + b_k X_k + e$$

Where,

P_i = Probability of the event occurring;

b_0 = Constant term;

X_1 to X_k = Independent variables;

b_1 to b_k = Unknown regression coefficients associated with the independent

variables X_1 to X_k and

e =Error term representing unobserved variables that influence dependent variable.

The quantity $P/1 - P$ is called the odds.

In the current study the binary logistic analysis was used to identify the migrant's remittance behavior. The form of the logistic regression equation estimated in the study was,

$$Y_i = \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \beta_9 X_9 + \beta_{10} X_{10} + U_i.$$

where,

$Y_i = Y=1$; If the migrants are remitting to the family;

$Y=0$; If the migrants are not remitting to the family;

X_1 = Amount of remittance

X_2 = Age of the respondent

X_3 = Age of household head

X_4 = Educational level of the respondent;

X_5 = Children age group ;

X_6 = Household size;

X_7 = Dependency ratio;

X_8 = Gender;

X_9 = Distance of migrant's place of origin

X_{10} = Marital status and

X_{11} = Type of family.

X_{12} = Number of children in the family

U_i =Error term.

The binary logistic equation was estimated by using IBM 20.00 version.

D. Multiple Regression

Multiple regressions were applied in the current study to identify the relationship between the select variables and the amount remitted by the respondents. The form of the multiple regression equation estimated in the study was,

$$Y = b_0 + b_1 X_1 + b_2 X_2 + b_3 X_3 + b_4 X_4 + b_5 X_5 + b_6 X_6 + E$$

Where,

Y = Amount of remittance

X1 = Age

X2 = Family size

X3 = School going children

X4 = Dependency Ratio

X5 = Amount of debt

X6 = Type of family

E = Error term

$b_0, b_1, b_2, b_3, b_4, b_5,$ and b_6 = Estimated multiple regression coefficient

The multiple regression analysis was estimated using SPSS 16.0 version.

E. Quality of Life Index

Quality of life covers diverse and innumerable human need. Human needs at the elementary level may include essentials of survival like drinking water, perpetuation needs, shelter and warmth. (Beck P & Mishra B.K. 2010). Quality of life index (QLI) represents the well-being of an average person. QLI reflects the current situation, and does not attempt any predictions of the future. As such, it does not take into account dynamic factors such as growth, and only represents their visible results. QLI also does not consider factors of debatable relevance, in particular factors which are only deemed relevant to the quality of life by certain ideologies, and does not use self-reported data. Finally, QLI does not take into account unquantifiable elements which can subjectively affect the quality of life, such as culture or climate (<http://nationranking.wordpress.Com / 2011/03/06/2011-qli/>).

To construct the quality of life index table; the actual values of the six indicator variables are converted into a seven point scale of 0 to 6. The minimum score that an indicator could get is 'zero, and the maximum is 'six'. Range and points for each subdivision are fixed arbitrarily. The chief criterion is to include the full range of data in the survey. In some cases the points represent the data proportionately. In others the interval between the adjacent two points may not be proportionate to any other two points in that division.

This study has made an attempt to compare the QLI of migrants before and after migration process so that it will help the researcher to understand if migration has brought up any change in improving their quality of life.

In the current work, an attempt is made to measure the QLI of the selected migrant garment workers using six indicators. The six indicators used are grouped under five headings as shown below.

- I. Social status -
 - i) Literacy level of the head of the household
- II. Income status -
 - ii) Occupation of the female members in the household
 - ii) Annual per capita income of the household
- III. Clothing -
 - iv) Per capita annual expenditure on clothing
- IV. Housing -
 - v) Type of house and
 - vi) Number of rooms per person

The QLI is constructed with the set of the above six quantitative and qualitative indicators.

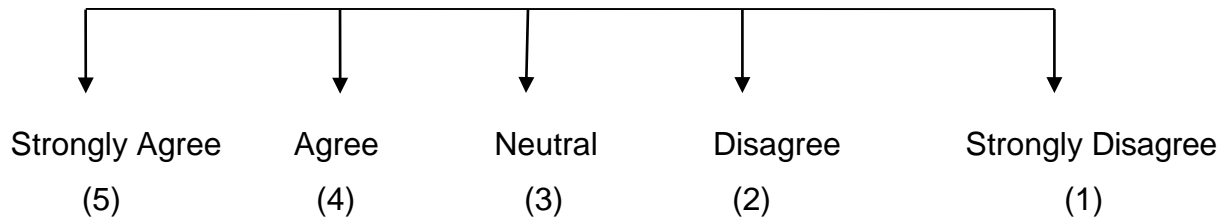
TABLE
QUALITY OF LIFE INDEX TABLE

| Scale | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
|--|--------------------------------|----------------------------|------------------------------|---|---|--|--------------------------------|
| Indicator | | | | | | | |
| Education | Illiterate | Primary (Class I- V) | Middle (Class VI-VIII) | High School (Class IX-X) | Higher Secondary (Class XI- XII) | Undergraduate, Diploma | Post Graduate And Others |
| Occupation of the female | House Wife | Casual Laboures | Servant | Agricultural/Non- Agricultural Laboures(Regular Workers In Unorganized Sector) | Self- Employed | Employed In organized sectors of public or private | Government service |
| Annual percapita income(₹) | 4050 | 4051- 5000 | 5001- 5400 | 5401-6750 | 6751- 10800 | 10801-21600 | Above 21,600 |
| Percentage expenditure on food | 80 And Above | 75-79 | 70-74 | 65-73 | 60-64 | 45-59 | <45 |
| Type of house Roof Wall Floor | Rubber Sheet Leaf Mud | Leaf Leaf Mud | Leaf Mud Mud | Asbestos Leaf Cement | Tiles Leaf Cement | Tiles Bricks Cement | Concrete Bricks Cement |
| No. of rooms per person | 0 | .25 | .5 | 1 | 1.25 | 1.5 | >1.5 |

Source: Table Constructed

F. Likert's Summated Scale

The Likert's Summated Scale was used to scale factors of migration among the migrant respondents. In the Likert's scale, the respondent was asked to respond to each of the statements in terms of five degrees of agreement or disagreement.



Each point on the scale carries a score. Response indicating the least favourable degree of satisfaction is given the least score (say 1) and the most favourable is given the highest score (say 5). This way the instrument yields a total score for the respondents which would then measure the respondents' favourableness or unfavourableness towards the given point of view.

G. Averages and percentages

Average and percentages were the other tools used in the study.

H. Graphs

To represent the findings through graphs, bar and pie diagrams were drawn.

6. CONCEPTS USED IN THE STUDY

Migration

Human migration is the movement by people from one place to another with the intentions of settling, permanently or temporarily in a new location.

Migrant

According to Indian Census (2001 & 2011), a person is considered as a migrant, if birth place or place of last residence is different from place of enumeration. The National Sample Survey Organization of the Government of India defines a migrant as a member of the sample household who had stayed continuously for at least six months or more in a place other than the place of enumeration. In short, a migrant is defined as a person who has changed his usual place or residence politically defined area to another similar area.

Migration by Birth Place

When a person is enumerated in Census at a place, i.e., village or town, different from her/his place of birth, she/he would be considered a migrant by place of birth.

Migration by Place of Last Residence

A person would be considered a migrant by place of last residence, if she/he had last resided at a place other than her/his place of enumeration.

Push Factors

Push factors are those that compel a person, due to different reasons, to leave that place and go to some other place.

Pull Factors

Pull factors refer to those factors which attract the migrants to an area.

Remittance

Remittances are cross border transfers of money from workers in one country back to their country of origin – often through payments to family members.

Quality of Life Index

Quality of Life Index (QLI) represents the well-being of an average person.

Household

A household member is defined as a person who eats and sleeps in the household for at least 3 months of the past 12 months, with the exception of babies born in the past 3 months and persons who have moved to live permanently with the household in the past 3 months, with the principle that each person belongs to one household only.

Dependency Ratio

The sum of household members under the age of 15 years and over the age of 65 years expressed as a percentage of the total household size.

Household Head

Considered by the household to be the primary decision maker.