

CHAPTER – V

ANALYSIS AND INTERPRETATION

Poverty evaluation in India has been based on the consumption disbursement and not on the income levels due to obscurities in assessing incomes of self employed people, daily wage labourers etc, and hefty instabilities in income because of seasonal factors, additional part incomes as well as data collection difficulties in largely rural and unofficial economy of India. Since families may be able to contact credit markets or household savings and thus smoothing their consumptions to some amount, consumption expenditures may be able to afford a better basis for forming a household's real standard of living. Therefore, most of the Poverty Estimation Committees recommended that per capita consumption expenditure or household expenses were the right arithmetical preference to calculate poverty in India.

FIGHTING EXTREME POVERTY

It is well accepted now globally as well in India that poverty is multi-dimensional and only through a concerted effort on its various dimensions, a real dent on poverty can be made. Global verification indicates that India is on pathway for the fastest velocity of poverty reduction and meeting its poverty eradication goals by 2030. A two branched approach is in place to eradicate poverty, which lies at the heart of India's national development schema. Retaining an average annual GDP growth rate of 8% in actual terms is a critical aspect of the strategy for the generation of remunerative jobs for new participants to the labour market in addition to those facing unemployed in agriculture or in other sectors. Secondly, targeted programmes plan to hit directly different facets of poverty and help the poor. They facilitate income

growth for the economically disadvantaged by developing agriculture infrastructure and support services, creating productive assets, and developing skills and entrepreneurship. Social protection appraises and alleviation of risks from natural and other calamities aim to guarantee that unpredicted exigencies do not interrupt the poverty reduction attempts.

Over the last few years, thrust on the poor and deprived households is reflected across a range of interventions covering food security, nutrition support, housing for all with basic facilities, education to all, widespread health coverage, road connectivity, social security, employment, livelihood diversification, skill development, etc. Pradhan Mantri Jan Dhan Yojana is guaranteeing financial inclusion of poor households by providing that universal admittance to banking services, access to credit and insurance cover. Pradhan Mantri Jan Arogya Yojana (PMJAY) generally celebrated as Ayushman Bharat Yojana Scheme which aims to provide complete health protection to poor and helpless population. Quality houses for the underprivileged under the PMAY scheme with basic amenities like LP Gas, electricity, good drinking water, good toilet, etc. are helping to conduit the deprivation fissure. The power on strong assets that produce incomes through individual beneficiary schemes under the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) for the poor households is a key interference for quicker poverty reduction. With more than 6 crore households mustered into Self Help Groups under the DAY-NRLM, the nation is observing large scale social capital development across the rural India. Use of the SEC Census 2011 statistics for beneficiary selection along with the use of IT/Direct Benefit Transfer (DBT), Aadhaar, geo tagging, and other governance and financial alterations has changed the delivery of benefits to the poor. The expansion of

all weather rural roads under the Pradhan Mantri Gram Sadak Yojana (PMGSY) has strengthened the ability of deprived households to leverage markets to their advantage. The poor in India are experiencing transformational changes in the way they live and access various services through digital means such as Common Service Centers (CSCs).

SELECT BLOCKS IN TIRUCHIRAPPALLI DISTRICT

The total geological area of Tiruchirappalli district is 4403.83 Sq.Km including 4 Revenue Divisions of Tiruchirappalli, Srirangam, Musiri and Lalgudi. The district has 11 Taluks viz. Tiruchirappalli (East), Tiruchirappalli (West), Thiruverumbur, Srirangam, Manapparai, Marungapuri, Lalgudi, Mannachanallur, Musiri, Thottiyam and Thuraiyur.

There are on the whole 14 Developmental Areas existing and 3 Municipalities as following Thuvakudi, Manapparai and Thuraiyur characterizing urban sectors together with 16 Town Panchayats.

SAMPLING TECHNIQUE

Multi Stage Sampling Technique has been followed in this study. In the *first stage* among the 14 total revenue divisions 5 rural divisions are selected. In the *second stage* in every revenue divisions 5 villages were selected in a random manner. In the *third stage* in every village respondents were selected in a random manner. The total number of households in all the selected 20 villages were observed as 20040 and 200 households were randomly selected by the **Simple Random Sampling Technique** i.e., 1.0% of the universe. Detailed survey was undertaken with the help of interview schedule which focuses important parameters like Name of the Schemes, Wages,

Type of Payment, Income and other Economic variables needed for the study purpose in an elaborate manner.

S.No	Block	Villages Selected	Total Households in villages	No. Of Families Surveyed	Percentage
1	Lalgudi	Aangarai, Valadi, Pambaramsuthi, Maanthurai, Poovalur	3687	40	20
2	Manachanallur	Uluthankudi, Ethumalai, Poonampalayam, Thiruvellarai, Kaatukulam	4841	40	20
3	Thuraiyur	Senappanallur, Keerambur, Pagalavadi, Sengaattupatti, Perumalmalai	5954	40	20
4	Musiri	Iyyampalayam, Aamoor, Gunaseelam, Kallur, Sirukambur	3854	40	20
5	Manapparai/ Marungapuri	Kovilpatti, Mundipatti, Seethappatti, Minnathampatti, Kannudayanpatti	1704	40	20
	Total		20040	200	100

N (Universe) = 20040,

Sample (n) = 200 (1.0%)

A sample is not studied for the sake of the individual. The entire unit of population has been given equal chance of being selected as a sample.

Tiruchirappalli (East)	665
Tiruchirappalli (West)	0
Tiruverumbur	13513
Srirangam	103262
Manapparai	322693
Marungapuri	
Lalgudi	195635
Mannachanallur	136608
Musiri	182267
Thottiam	109278
Thuraiyur	200548

SWARNJAYANTI GRAM SWAROZGAR YOJANA (SGSY)

SGSY was put into practice on April 1999 as a chief anti-poverty scheme for the rural poor, by organizing them into Self Help Groups (SHGs), to provide with skill development training and to help them to get credit association with financial institutions and providing infrastructure and marketing support for the manufactured goods by them. Government of India and the State Government share the expenditures in the ratio of 75:25.

The SGSY financial support is used to offer subsidy for the Revolving fund and Economic support to the Self Help Groups. Part of the Scheme component is also utilized for formation of groups and conduct of training for their basic orientation and skill upgradation. Upto 20% of the total allotment can also be spent on putting up of Infrastructure essential for the promotion of SHGs activities. The SHGs, after the first grading, are provided with a revolving fund of `50,000 for first linkages (bank loan of `50,000 and `10,000 as subsidy) `1.00 lakhs for second linkages and `1.5 lakhs for the

third and following linkages. After the second ranking, the successful groups are provided with economic support, the maximum adequate subsidy being 50% of the project cost with a maximum of `1.25 lakhs.

In 2010 and 2011 a total sum of `148.04 crores has been allocated for the implementation of this scheme with a credit target of `243.936 crores. So as to implement the scheme in a more determined approach, the following initiatives have been taken in 2008-09:

- i. A major part of the Scheme constituent will be utilised for the expenditure of the subsidy component of Revolving fund to the qualified SHGs formed under Mahalir Thittam.
- ii. To promote the promotion of products manufactured by SHGs, Calendar of Exhibitions of SHG products for the Districts have been arranged and displayed in the exhibitions will be consequently performed as per the timetable charted out in the Calendar.
- iii. The accomplishment of SGSY scheme was so far observed by Director of Rural Development and Panchayat Raj, while, the Mahalir Thittam and Vazhnthu Kaattuvom Project that also focus on the empowerment of the women, are monitored by the Managing Director, Development of Women of Tamil Nadu Corporation. In order to make sure that there is a junction of activities taken up under the SGSY scheme, Mahalir Thittam and the Vazhnthu Kaattuvom Project, the monitoring of SGSY scheme has now been categorized to be transmitted to the Managing Director, Tamil Nadu Corporation for Development of Women.

Sl.No	Year	Financial Allocation (In Crores)
1	2000-01	62.52
2	2001-02	36.17
3	2002-03	36.17
4	2003-04	49.97
5	2004-05	62.56
6	2005-06	62.56
7	2006-07	69.39
8	2007-08	105.87
9	2008-09	125.16
10	2009-10	128.14
11	2010-11	148.04

Source : Deputy Director of statistics

The Swarnjayanti Gram Swarozgar Yojana (SGSY) commenced in April 1999 following reformation the Integrated Rural Development Programme (IRDP) and associated programmes. It is the only Self Employment Programme presently being implemented for the rural underprivileged. The purpose of the SGSY is to fetch the supported swarozgaris above the poverty line by providing them income generating advantages during bank credit and Government subsidy. The scheme is being implemented on charge sharing foundation of 75:25 connecting the Central and State Governments. Up to December 2007, 27.37 lakh Self Help Groups (SHGs) have been fashioned and 93.21 lakh swarozgaris have been aided.

BHARAT NIRMAN AND PRADHAN MANTRI GRAM SADAK YOJANA

Bharat Nirman programme, which was launched in 2005-06 for building infrastructure and basic facilities in rural regions, has six constituents, viz. rural housing, irrigation prospective, quality drinking water, proper rural roads, electrification and rural communication facility. The Pradhan Mantri Gram Sadak Yojana (PMGSY) was launched on December 25, 2000 as a 100 percent centrally sponsored scheme

with the primary objective of providing all weather connectivity to the qualified unrelated environments in the rural regions. The programme is funded mostly from the accumulations of diesel cess in the Central Road Fund. Additionally, maintain the multilateral funding agencies and the domestic financial institutions are being acquired to convene the financial prerequisites of the programme. Up to December, 2007, about 142750 kilometre long road works have been completed.

INDIRA AWAAS YOJANA

Indira Awaas Yojana (IAY) scheme intends at providing dwelling elements, free of cost, to the poor families of the Scheduled Castes, Scheduled Tribes, untied bonded labourers and as well the other than SC/ST persons below the poverty line in rural regions. The scheme is funded on a cost sharing basis of 75:25 between the Central and the State Governments.

SOME TAMIL NADU INITIATIVES WITH RELEVANCE TO TIRUCHIRAPPALLI DISTRICT

There are number of specialized schemes for poverty reduction in rural areas introduced by the Tamil Nadu government. During the last two years of the Tenth Plan, a new scheme called Guaranteed Employment: Tamil Nadu Rural Employment Guarantee Scheme (TNREGS) for providing guaranteed employment for 100 days in a year to needy households was introduced in six districts of the state. It is now being extended to other districts in Tamil Nadu. Namadhu Gramam was one of the major schemes introduced by the Tamil Nadu government with a aim of community participation, collective decision making, and infrastructural development. Each panchayat is allocated funds under this programme and the panchayats are encouraged

to widen the decision making base by involving all stake holders in the villages apart from elected representatives.

Tamil Nadu Health Systems Project (TNHSP) includes provision of civil works and equipments for upgrading the secondary hospitals, supporting NGO based activities for improving tribal health, expanding the CEmONC network as well as projects for biomedical waste management and control of cervical cancer and cardiac disease. The total outlay proposed for TNHSP during the Plan period is `464.54 crore.

Funds Received at District Level under Various

Poverty Alleviation Schemes in 2017-18

Scheme	Funds Allocated			Spent By				DRDA Administration
	Centre	State	Total	District	Taluk	Village	NGOs	
SGRY	15.27	3.13	18.39	3.68	5.52	9.20	0.00	0.00
SGSY	2.93	0.98	3.91	0.00	0.00	0.00	3.91	0.00
PMGSY	4.16	0.00	4.16	0.00	0.00	0.00	2.51	0.00
PMGSY GH	0.69	0.00	0.69	0.00	0.00	0.69	0.00	0.00
IWDP	0.29	0.05	0.34	0.00	0.00	0.00	0.35	0.00
MPLAD	4.43	0.00	4.43	0.00	3.76	0.00	0.65	0.02
DRDA Admn	0.37	0.12	0.49	0.00	0.00	0.00	0.00	0.49

Source: research and evaluation wing data for Tiruchirappalli District 2019. TN Gov.

TABLE 5.1 (A)
SOME MAJOR CENTRAL AND CENTRALLY SPONSORED POVERTY
REDUCTION SCHEME

Income Generating Schemes	Asset Generating Schemes	Other Schemes
National Rural Employment Guarantee Scheme (NREGS)	Bharat Nirman	Aam Admi Bima Yojana (AABY)
Swarna Jayanti Gram Swarozgar Yojana (SJGSY)	Pradhan Mantri Gram Sadak Yojana (PMGSY)	Rajeev Gandhi Gram Vidyutikaran Yojana (RGGVY)
Sampoorna Grameen Swarozgar Yojana (SGSY)	Indira Awas Yojana (IAY)	
National Old Age Pension Scheme (NOAPS)		

Source : Primary Data

TABLE 5.1 (B)
NUMBER OF FAMILY SURVEYED IN TIRUCHIRAPPALLI DISTRICT

S.No	Block	No. Of Families Surveyed	Percentage
1	Lalgudi	40	20
2	Manachanallur	40	20
3	Thuraiyur	40	20
4	Musiri	40	20
5	Manapparai	40	20
	Total	200	100

Source: Primary Data.

TABLE 5.2
THE NUMBER OF MALE MEMBERS
IN THE SURVEY OF FAMILIES OF TIRUCHIRAPPALLI DISTRICT

No. of Male Workers	No. of Families	Percentage
1	22	11
2	19	9.5
3	21	10.5
4	33	16.5
5	39	19.5
6	25	12.5
7	21	10.5
Total	180	90

Source: Primary Data.

Interpretation:

From the table 5.2 it is found that among 200 respondents 180 (90%) belonged to male headed households and the remaining 20 (10%) belonged to the female headed families. It also shows that there is a single male worker in 22 (11%) families, two in 19 (9.5%) families, 3 workers from 21 (10.5%) families, 4 male from 33 (16.5%) families, 5 from 39 (19.5%) families, 6 workers from 25 (12.5%) families and 7 male workers from 21 (10.5%) families. The graphical representation in terms of percentage is shown below.

CHART 5.1
THE NUMBER OF MALE MEMBERS IN THE SURVEY
OF FAMILIES OF TIRUCHIRAPPALLI DISTRICT

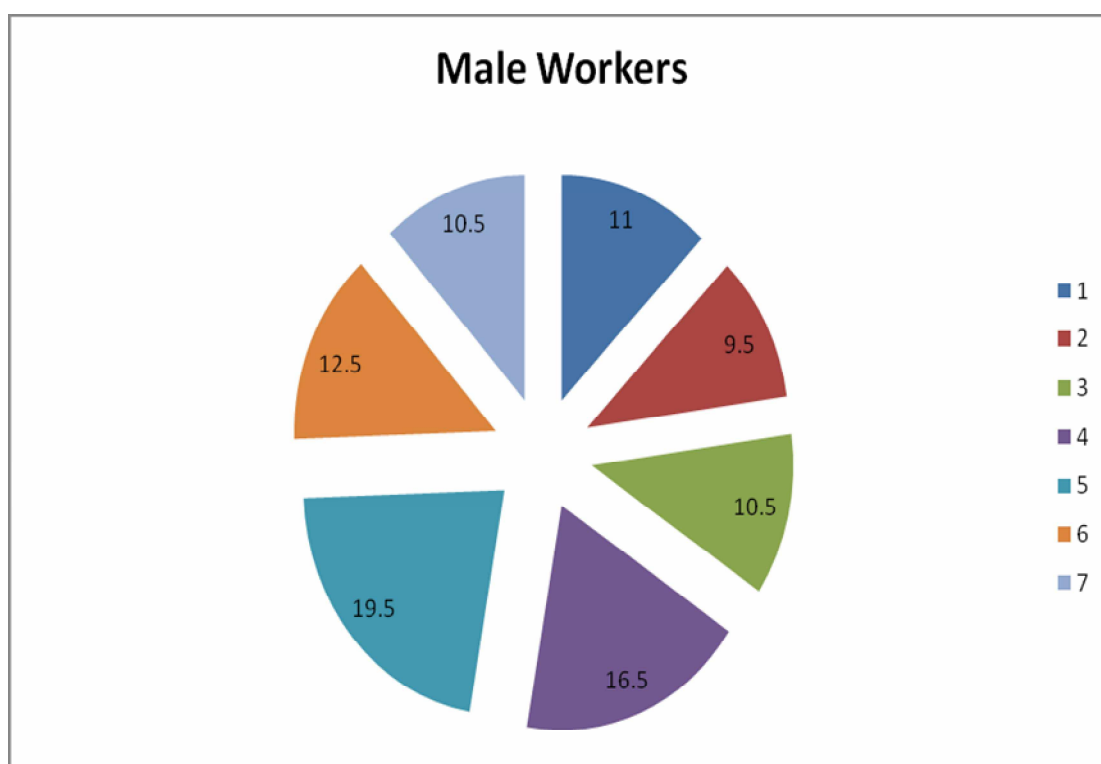


TABLE 5.3
THE NUMBER OF WORKING FEMALES IN THE SURVEY OF FAMILIES
OF TIRUCHIRAPPALLI DISTRICT

Rural women are key agents for development. They play a catalytic role towards attainment of conversional economic, environmental and social changes essential for sustainable development. But imperfect access to credit, health care and education are among the many confronts they appearance.

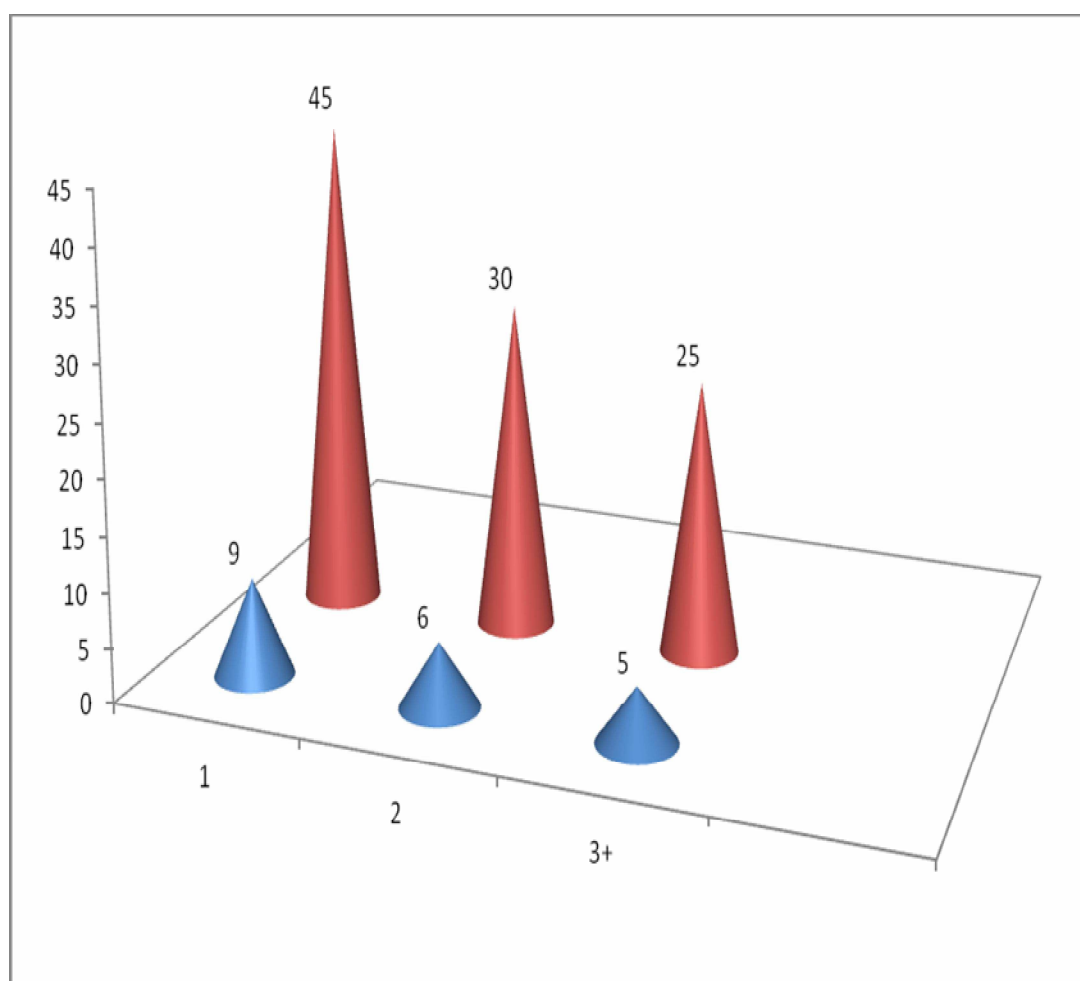
S.No	No. of Working Females	Total Families	Percentage
1	1	9	45
2	2	6	30
3	3 and more	5	25
	Total	20	100

Source: Primary Data.

Interpretation

The table 5.3 depicts that there are 45% belonging to the only one member family group, 30% belonging to 2 members in the family and the remaining 25% was grouped under the category of 3 and more family members in their families.

CHART 5.2
THE NUMBER OF WORKING FEMALES IN THE SURVEY OF FAMILIES
OF TIRUCHIRAPPALLI DISTRICT



The head of family is the person in the household recognized as head by the other associates. The head has principal authority and responsibility for household issues. However, in cases where such authority and responsibility are not vested in one person, special rules may be needed to classify the head of household.

The definitions used to identify the head of the household are subject to a confident uncertainty and in some cases tend to eliminate women. Accurate criteria should be set to evade illogical interpretation on the part of the enumerators and prejudiced perception on the part of the respondents. In those countries where male relocation is appropriate, the absence of the head of the household at the time of the enumeration or within a particular period should also be measured.

TABLE 5.4

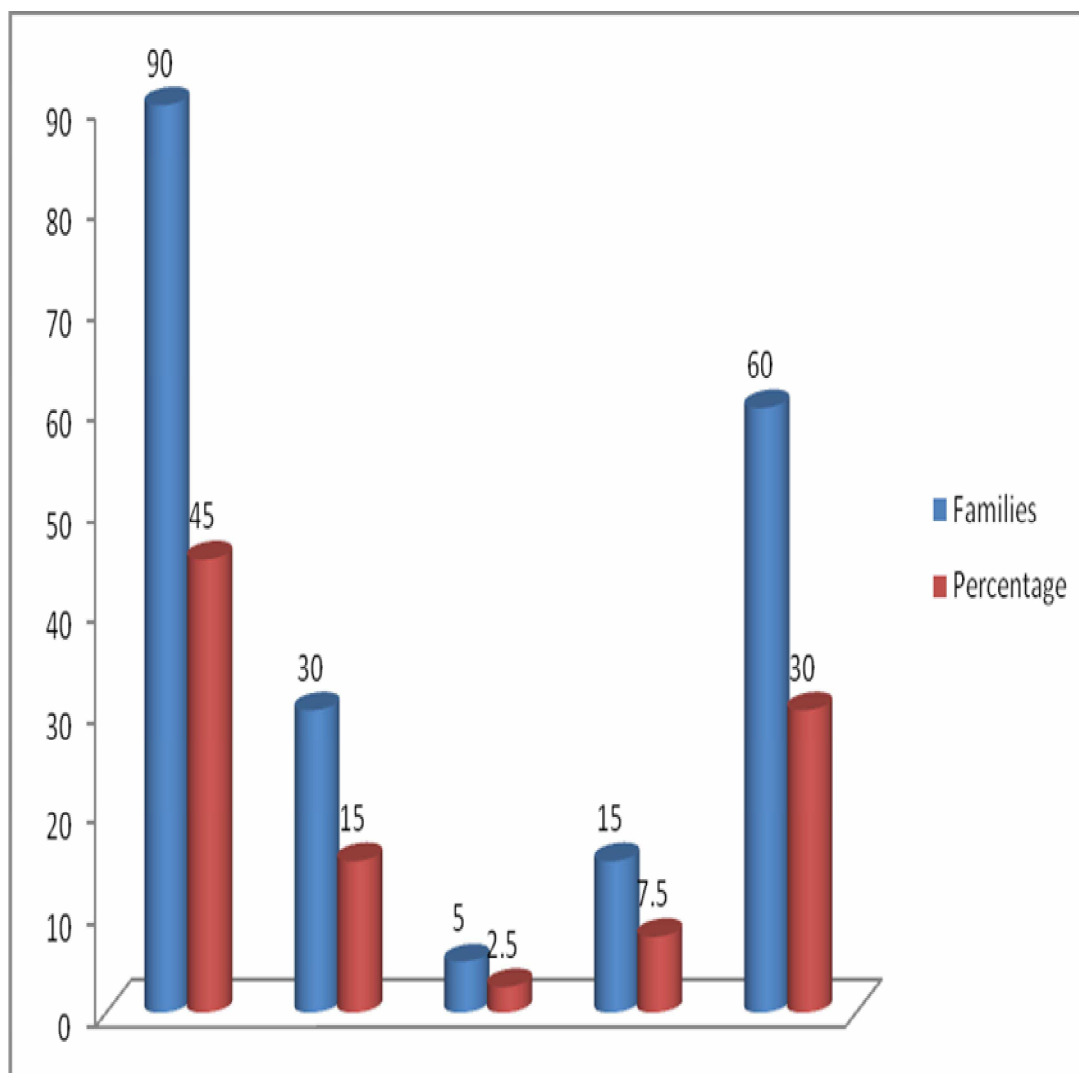
OCCUPATION OF HEAD OF FAMILY IN THE SURVEYED FAMILIES

S.No	Occupation	No. of Families	Percentage
1	Agriculture	90	45
2	Allied Sectors/ Poultry/ Dairy	30	15
3	Industry	5	2.5
4	Service	15	7.5
5	Unemployed	60	30
	Total	200	100

Source: Primary Data

Interpretation

With regard to the nature of the occupation of the respondents the table 5.4 shows that 45% of the respondents depend upon agriculture as a prime occupational source. 15% depend upon Poultry/Dairying. 2.5% depend upon industrial sector. Similarly in the case of service sector the figure was observed as 7.5% and the remaining 30% belong to unemployed category.

CHART 5.3**OCCUPATION OF HEAD OF FAMILY IN THE SURVEYED FAMILIES**

As humanities alter and become more multifaceted, this pattern of comfortable learning about living in families becomes insufficient. The improvement of new knowledge, progresses in technology and changing social and economic conditions create situations where the teachings of preceding generations are no longer suitable or sufficient. In these conditions, societies must discover or create new ways to prepare individuals for their family roles and responsibilities. One of these fresh techniques is family life education.

TABLE 5.5

EDUCATIONAL QUALIFICATION OF THE FAMILIES SURVEYED

S.No	Educational Status	Frequency	Percentage
1	Illiterate	40	20
2	Primary	90	45
3	Secondary	30	15
4	Hr. Sec	35	17.5
5	Graduates	5	2.5
	Total	200	100

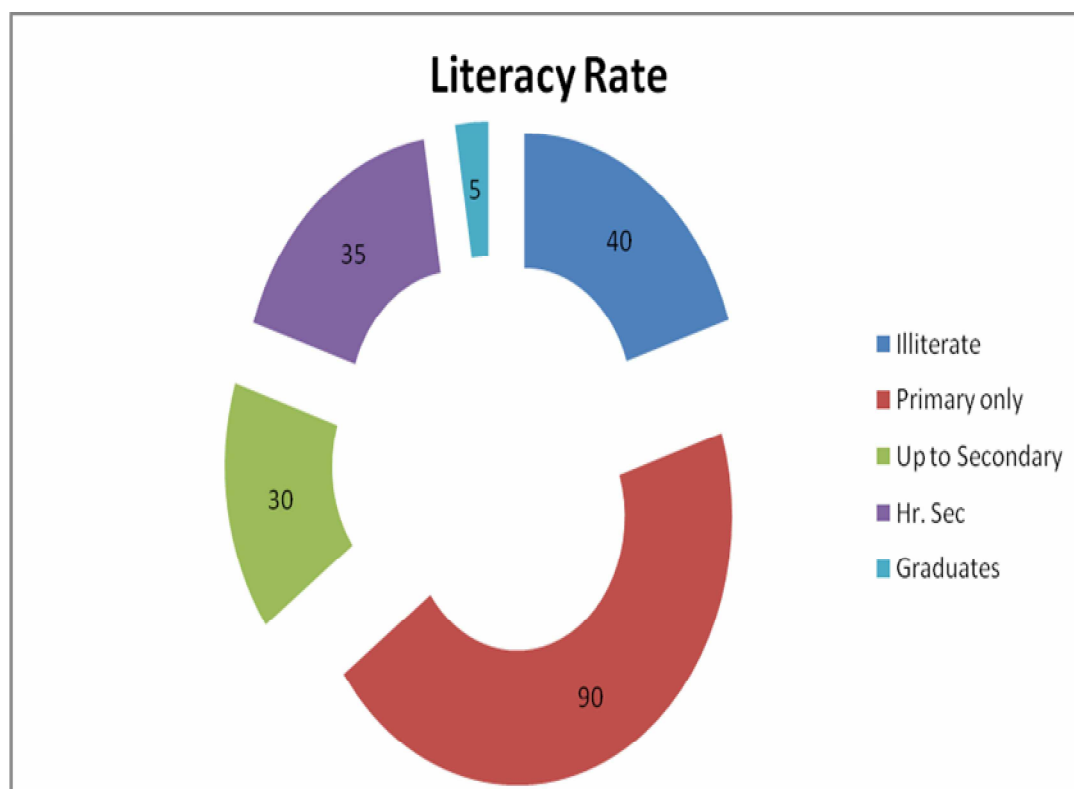
Source: Primary Data.

Interpretation

As far as education is concerned, the level of literacy plays an important role in determining their socio-economic status. The table 5.5 clearly indicates about the educational qualification of the workers in the families. From that it shows that 40 (20%) people were illiterates, 90 (45%) were completed primary only, 30 (15%) people completed up to secondary level, 35 (17.5%) workers completed their higher secondary level and only 5 (2.5%) are graduates.

The chart below shows the graphical view.

CHART 5.4
EDUCATIONAL QUALIFICATION OF THE FAMILIES SURVEYED



Economic development of a nation depends upon the skills of its people and the application of information, succeeded to or obtained by them. Optimum utilisation of human resources definitely lead to substantial degree of economic development of a nation. Unemployed human resources imply that a section of the society is without any resource of income. Hence they experience despair and starvation.

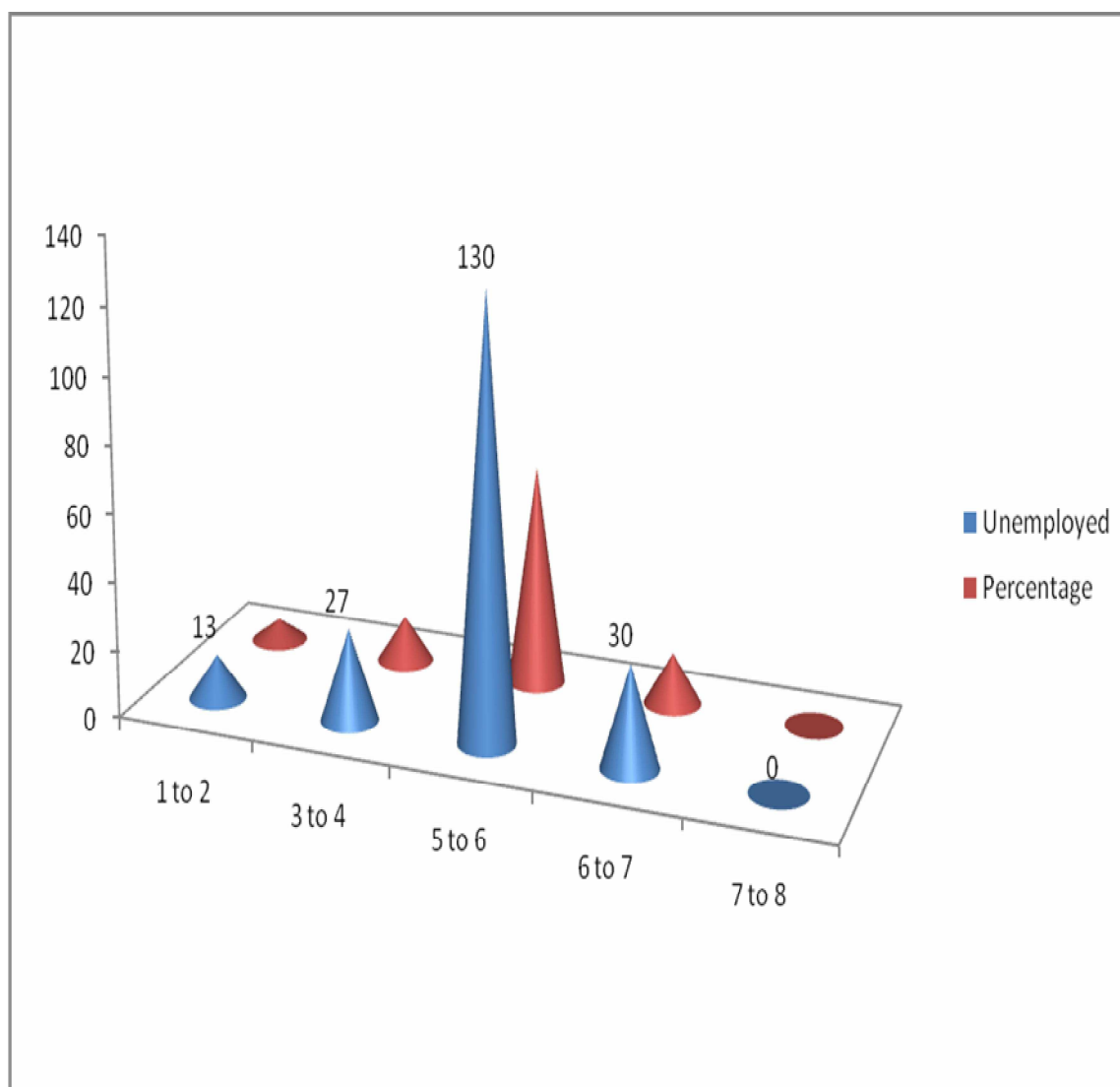
TABLE 5.6**THE NUMBER OF UNEMPLOYED MEMBERS IN THE FAMILIES**

S.No	No. of Members	Unemployed members	Percentage
1	1 – 2	13	6.5
2	3 – 4	27	13.5
3	5 – 6	130	65
4	6 – 7	30	15
5	7 – 8	Nil	0
	Total	200	100

Source: Primary Data.

Interpretation:

The above table is used to represent unemployment status of the respondents in their families. The details about unemployed members were found that there were 1 to 2 members are in 13 families (6.5%), 3 to 4 in 27 families (13.5%), 5 to 6 were in 130 families (65%), between 6 and 7 are in 30 families (15%) and there are no families of more than 7 in their respective families.

CHART 5.5**THE NUMBER OF UNEMPLOYED MEMBERS IN THE FAMILIES**

India's per capita Net National Income (NNI) was around 135 thousand rupees in 2020. The per capita income is a simple pointer of the wealth of a nation. In dissimilarity, the Gross National Income (GNI) at steady prices stood at over 128 trillion rupees. The identical year, GNI growth rate at constant prices was approximately 6.6%. Whereas GNI and NNI are both indicators for a nation's economic presentation and welfare, the GNI is associated to the GDP or the gross domestic product in addition the net receipts from overseas, including wages and salaries, property income, net taxes and subsidies receivable from abroad.

TABLE 5.7
MONTHLY INDIVIDUAL INCOME

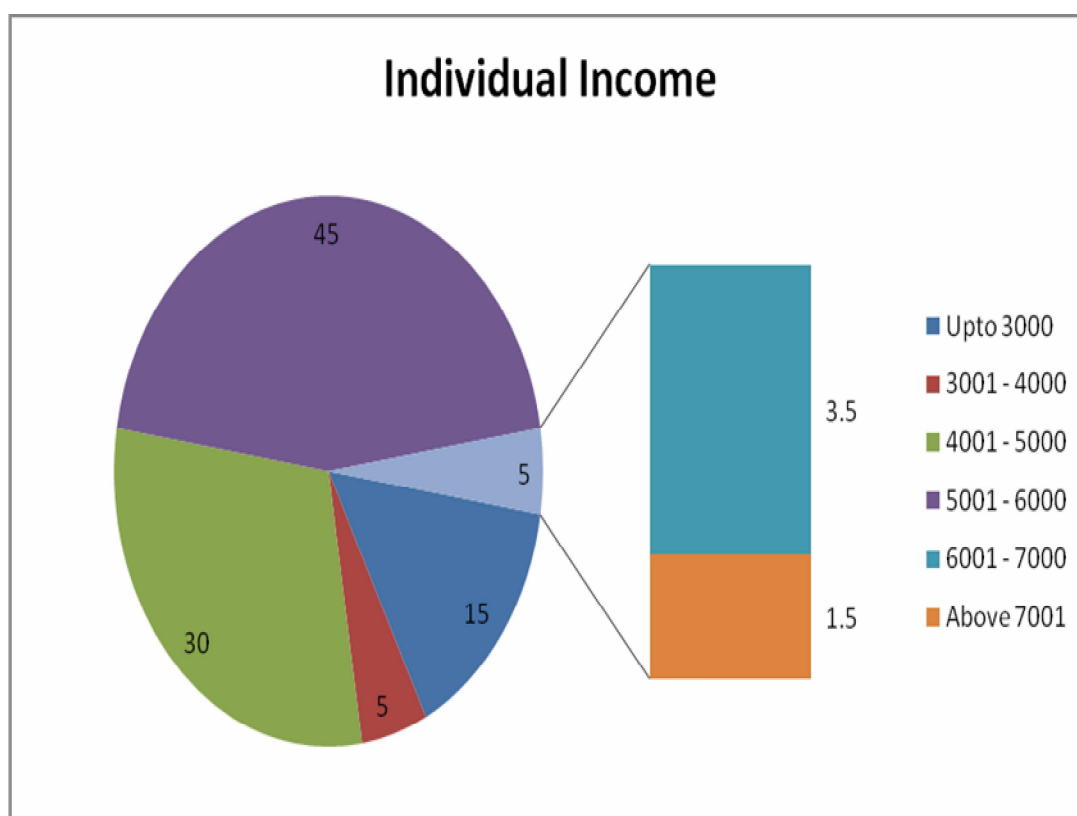
S.No	Monthly Income	No. of Families	Percentage
1	Upto 3000	30	15
2	3001 – 4000	10	5
3	4001 – 5000	60	30
4	5001 – 6000	90	45
5	6001 – 7000	7	3.5
6	7001 – Above	3	1.5
	Total	200	100

Source: Primary Data.

Interpretation

The table 5.7 depicts about the individual's income in the families. It shows that there are 30 (15%) families earn below `3000, 10 families (5%) earn from `3001-4000, 60 families (30%) earn `4001-5000, 90 families (45%) earn `5001-6000, 7 families (3.5%) earn `6001-7000 and only a mere number ie., 3 families (1.5%) earn `7000 and above.

CHART 5.6
MONTHLY INDIVIDUAL INCOME



Below Poverty Line is a yardstick used by the government of India to designate economic drawback and to distinguish personalities and families in want of government support and aid. It is concluded using diverse limitations which differ from state to state and within states. The current criterion are based on a review performed in 2002. Going into a survey owing for a decade, India's central government is unresolved on criteria to classify families below poverty line.

Globally, an income of less than `150 per day per head of purchasing power parity is defined as excessive poverty. By this estimation, about 12.4% of Indians are tremendously poor. Income based poverty lines believe the exposed minimum income to afford basic food requirements; it does not account for other fundamentals such as health care and education.

TABLE 5.8
THE MAIN SOURCE OF INCOME OF THE BPL FAMILIES

S.No	Source of Income	No. of Families	Percentage
1	Farming	90	45
2	Allied Sectors	30	15
3	Industrial Labours	5	2.5
4	Services	15	7.5
5	Unemployed	60	30
	Total	200	100

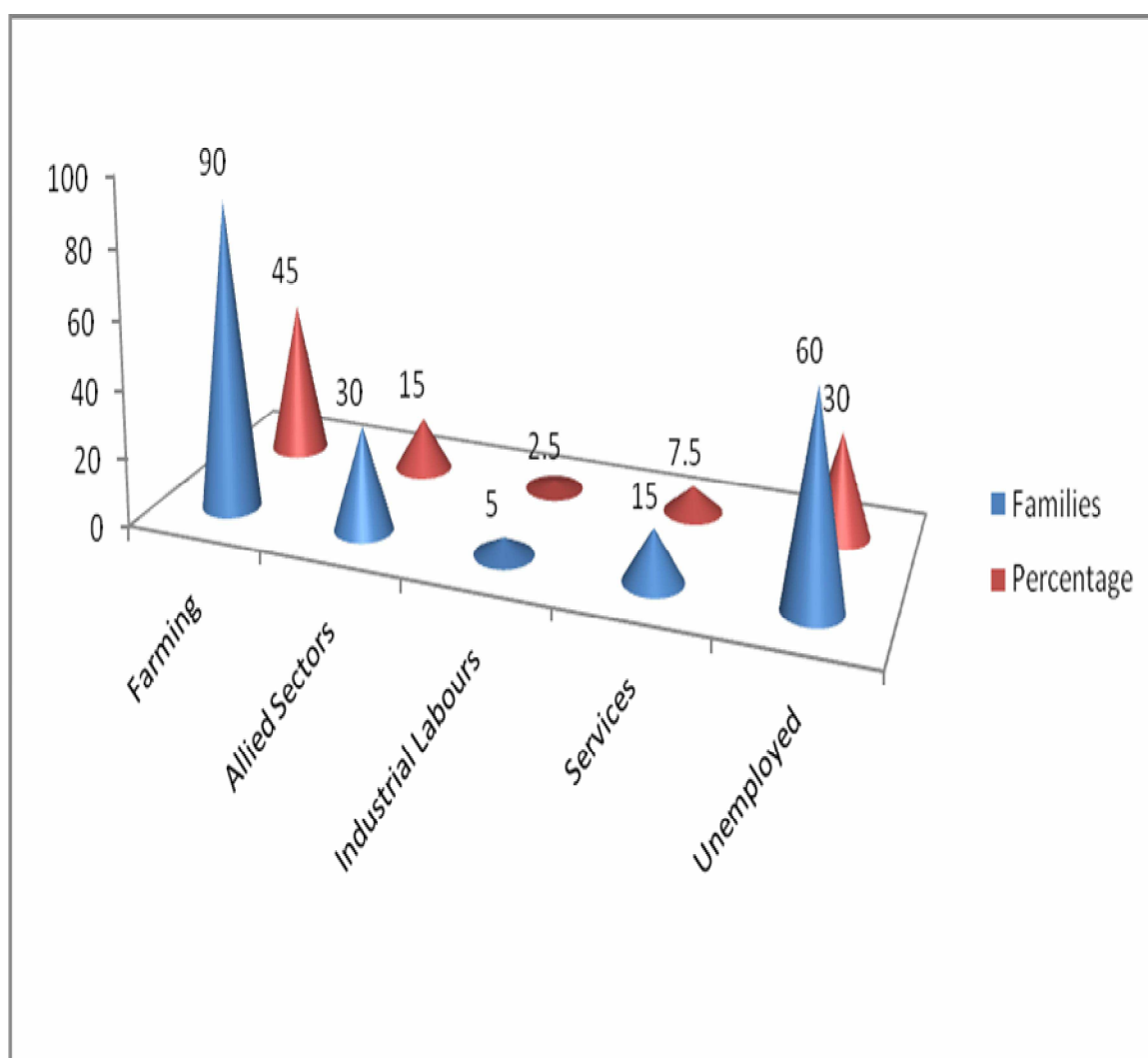
Source: Primary Data.

Interpretation

The main source of income of the Below Poverty Line (BPL) families was shown in the table 5.8. There are 90 families (45%) whose income is from farming, 30 (15%) families' income from allied sectors, 5 (2.5%) families' members were industrial labourers, 15 (7.5%) families' source is from services and 60 families (30%) were unemployed.

CHART 5.7

THE MAIN SOURCE OF INCOME OF THE BPL FAMILIES



The Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) is intended to improve the livelihood of the rural population by promising at least 100 days of employment within 15 days of raising a demand, to every household in which the adult members complete unskillful manual labour.

TABLE 5.9
THE SCHEME OF EMPLOYMENT MOSTLY EMPLOYED

S.No	Employment Schemes	Total Families	Percentage
1	MGNREGP	65	32.5
2	PMRY	20	10
3	EGS	30	15
4	SGSY	40	20
5	FWP	15	7.5
6	Others	30	15
	Total	200	100

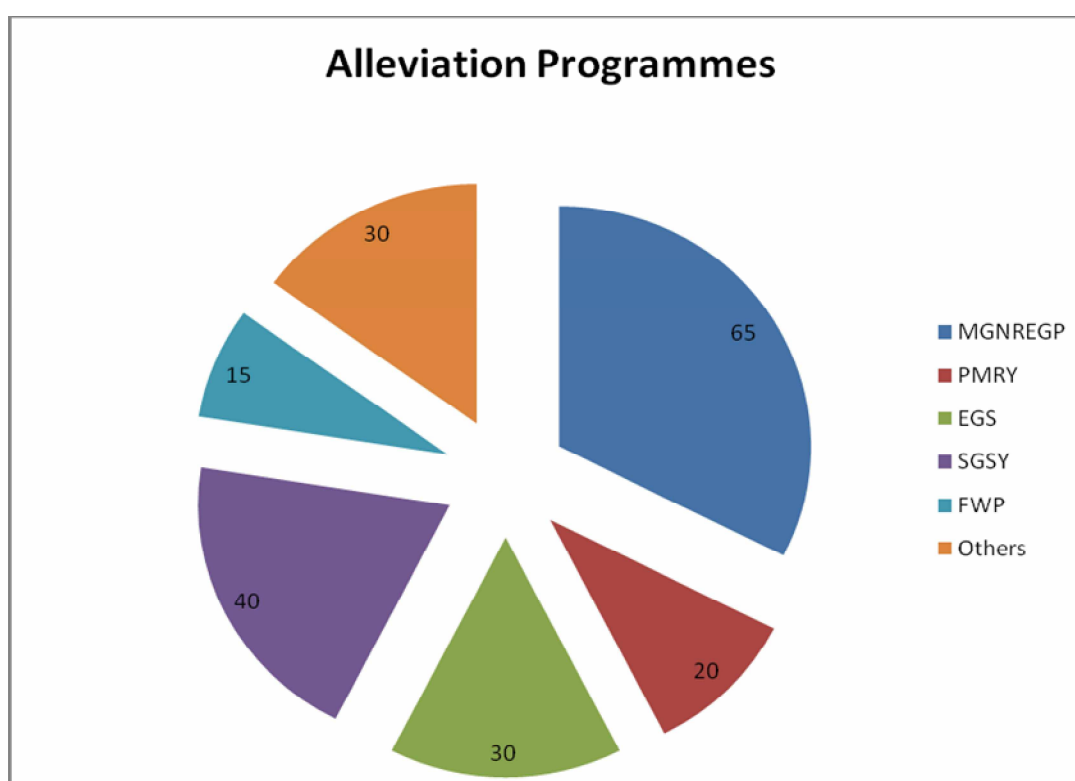
Source: Primary Data.

Interpretation

The table 5.9 illustrates about the poverty alleviation scheme in which the families were employed mostly. 65 (32.5%) families employed in MGNREGP scheme, 20 (10%) families benefitted from PMRY scheme, 30 (15%) families benefitted from EGS scheme, 40 (20%) from SGSY alleviation programme, 15 (7.5%) benefitted by FWP alleviation programme and 30 (15%) families got benefits from other programmes.

TABLE 5.8

THE SCHEME OF EMPLOYMENT MOSTLY EMPLOYED



The research presents a historical perspective of the major programmes under these two categories to present an overview of the coverage of the programmes, performance and observations from evaluation studies, highlighting the shortfalls and experiences in particular. Statistical analysis is challenged from 1980 to 2002, presenting state wise data on chief factors, not together from All India performance plan period wise.

TABLE 5.10
ANNUAL INCOME RECEIVED AS A RESULT
OF THE EMPLOYMENT SCHEMES

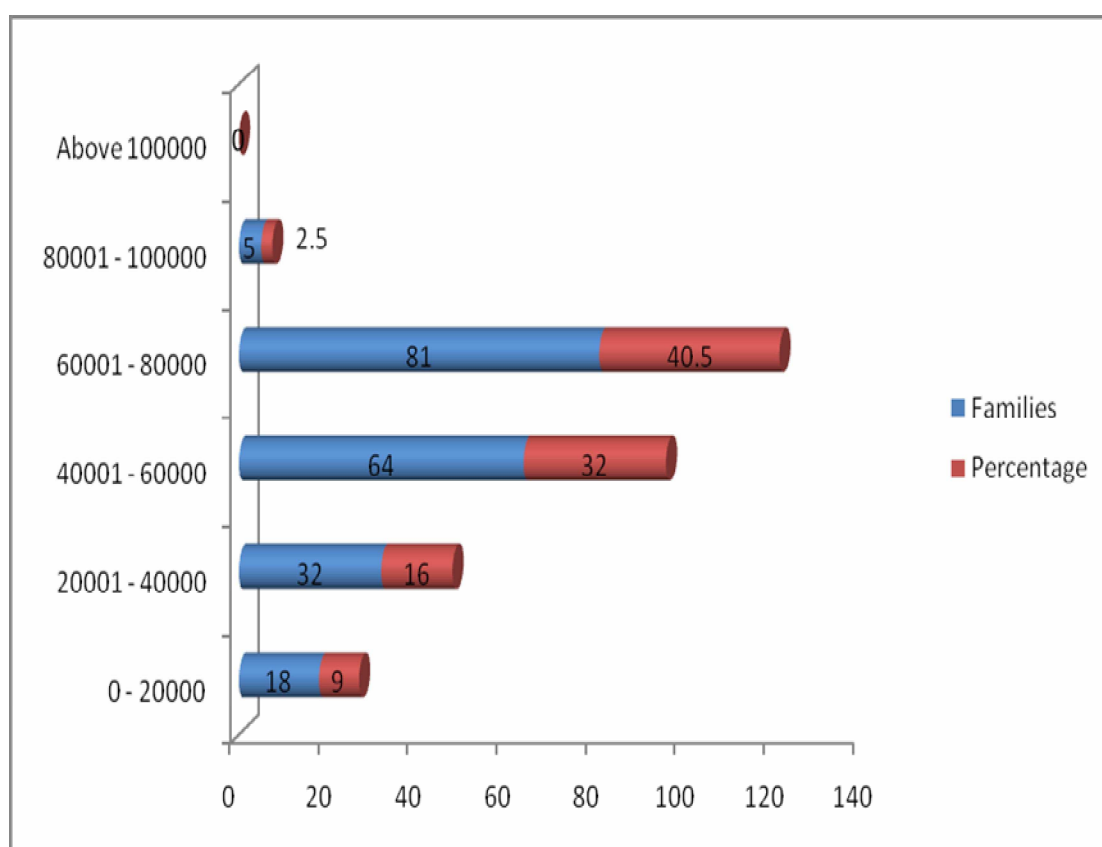
S.No	Annual Income	No. of Families	Percentage
1	0 – 20000	18	9
2	20001 – 40000	32	16
3	40001 – 60000	64	32
4	60001 – 80000	81	40.5
5	80001 – 100000	5	2.5
6	100000 and Above	Nil	0
	Total	200	100

Source: Primary Data.

Interpretation

Annual income received by the families through employment schemes were shown in the table above. Table 5.10 depicts clearly that 18 (9%) families have earned less than `20000 per annum, 32 (16%) families earned between `20001 and `40000, 64 (32%) families received between `40001 and `60000, 81 (40.5%) families received `60001 to `80000, 5 (2.5%) families earned between `80001 and `100000 and there were no families who received more than `100000.

CHART 5.9
ANNUAL INCOME RECEIVED AS A RESULT
OF THE EMPLOYMENT SCHEMES



Poverty eradication is one of the world's most important confronts, and it is recommended the private sector has a significant role to play in creating the economic development, employment and purchasing preferences needed for important poverty reduction. Poverty is highly interrelated with many negative computable features of standards of living and consequently reducing poverty can have a positive impact on the lives of millions of people routinely the world.

TABLE 5.11
INCOME RECEIVED BY THE FAMILIES
OTHER THAN EMPLOYMENT SCHEMES

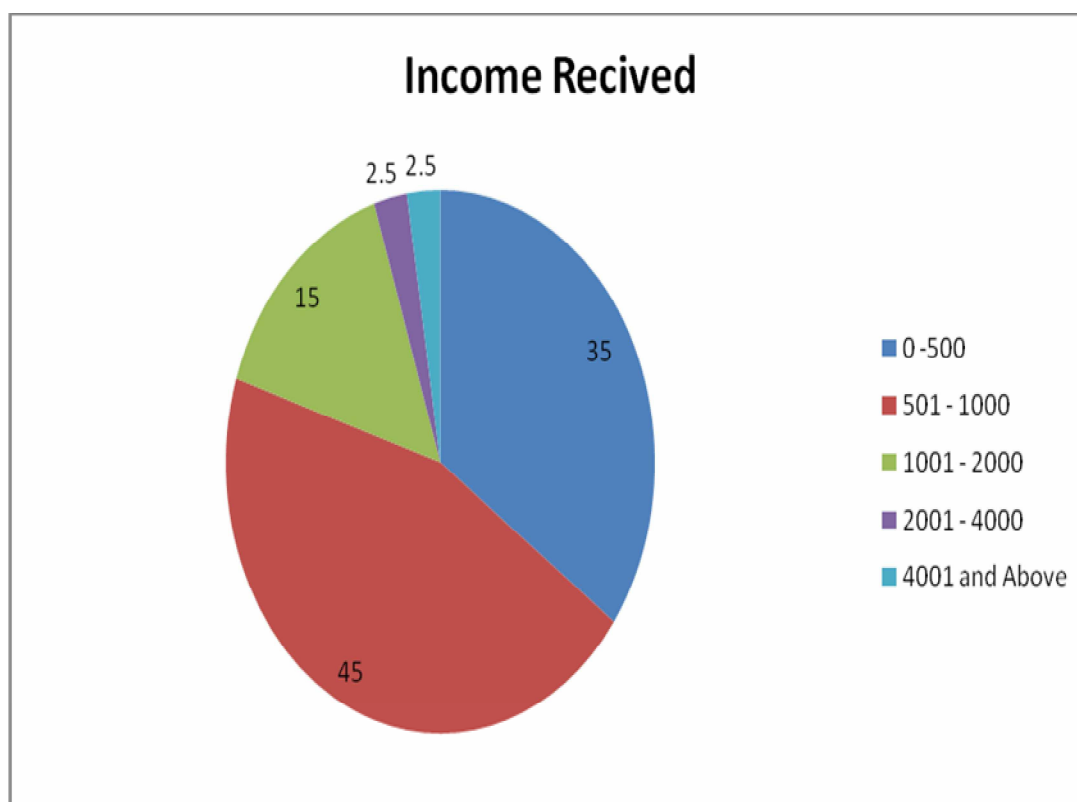
S.No	Income other than employment schemes	No. of Families	Percentage
1	0 – 500	70	35
2	501 – 1000	90	45
3	1001 – 2000	30	15
4	2001 – 4000	5	2.5
5	4001 and Above	5	2.5
	Total	200	100

Source: Primary Data.

Interpretation

Income received by the families other than employment schemes was depicted in the table 5.11. From the table 5.11 there are 70 (35%) families received income below `500, 90 (45%) families received between `501 and `1000, 30 (15%) families received `1001 to `2000, 5 (2.5%) families received between `2001 and `4000 and finally 5 (2.5%) families received income of more than `4001.

CHART 5.10
INCOME RECEIVED BY THE FAMILIES
OTHER THAN EMPLOYMENT SCHEMES



In India, the causes for gender pay gap are a slight more confused and can be connected to explanations ranging from the socioeconomic to the structural. Girl children are at times kept out of schools or made to withdraw from their school education prematurely. Eventhough if they are educated, most of the women are not permitted to work by their families. Women who do not remain the labor force often need to take widened leaves for maternity period and child care, and even the healthcare of other family members. All these aspects lead up to women as a complete falling well behind men when it comes to their salaries over the time period.

TABLE 5.12
DISCRIMINATION OF WAGES BETWEEN MALE AND FEMALE OF BPL
FAMILIES IN THE DISTRICT

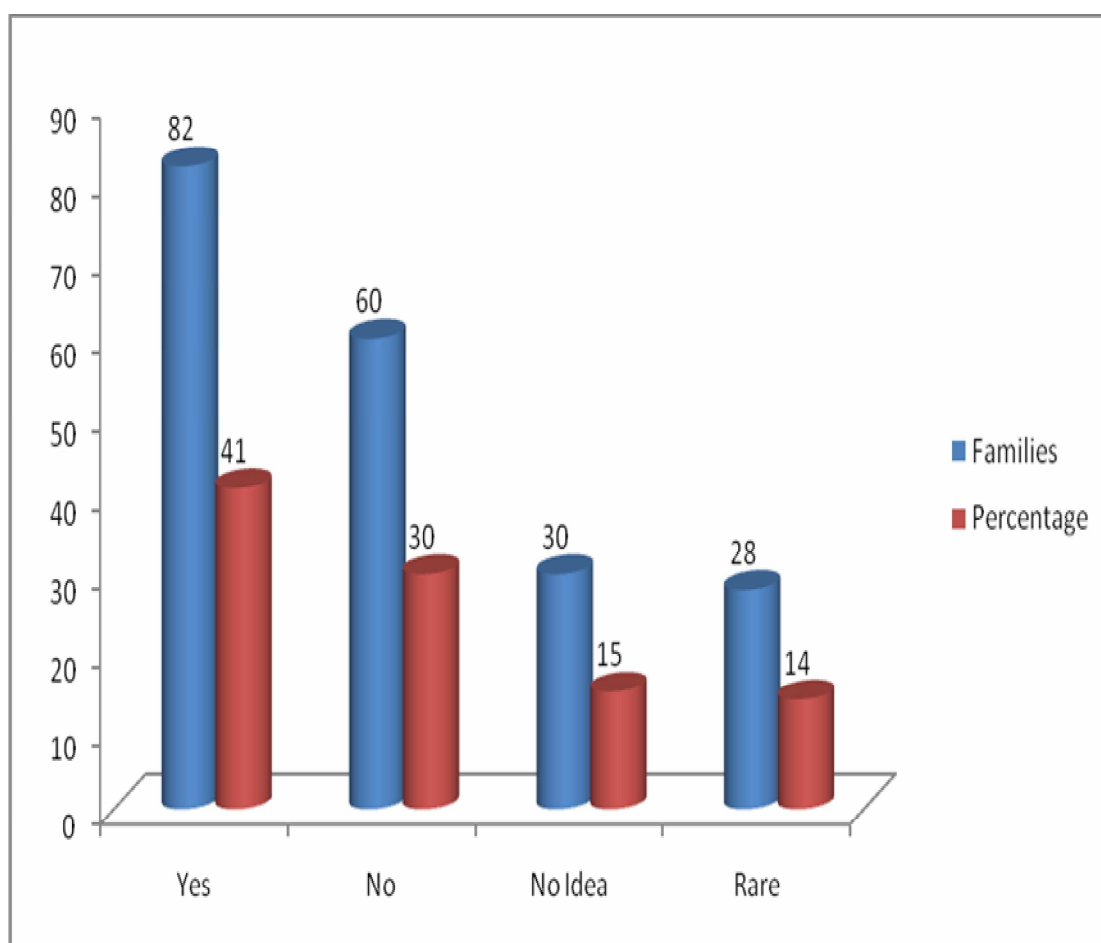
S.No	Wages Discrimination	No. of Families	Percentage
1	Yes	82	41
2	No	60	30
3	No Idea	30	15
4	Some time rare	28	14
	Total	200	100

Source: Primary Data.

Interpretation:

Regarding the wage discrimination the response of the respondents were given in the table 5.12 which depicts the wage discrimination between male and female. It shows that 82 (41%) families say yes, 60 (30%) families say no, 30 (15%) say no idea and 28 (14%) families say rare at some times.

CHART 5.11
DISCRIMINATION OF WAGES BETWEEN MALE AND FEMALE OF BPL
FAMILIES IN THE DISTRICT



According to the 2019 U.N. Human Development Report, 27.9% of the population in India is multidimensionally poor. With suitable achievement of the poverty alleviation programmes, India can reduce poverty by making the rural poor powerful with optimal use and administration of resources. These programmes focuses on aiming the multidimensional deficits the poor face by providing them with food security, employment, housing and salaries. Finally, the driving factor of these schemes is the purpose to generate sustainable instruments leading to rural development.

TABLE 5.13

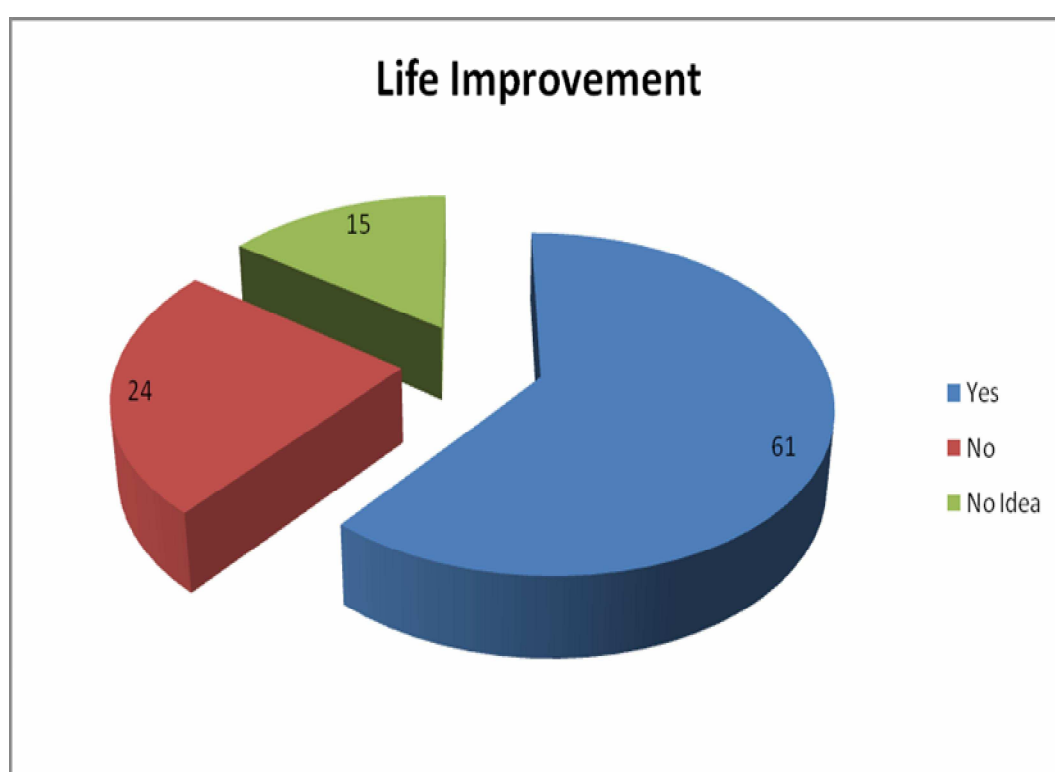
LIFE IMPROVED AS A RESULT OF EMPLOYMENT SCHEMES

S.No	Response	No. of Families	Percentage
1	Yes	122	61
2	No	48	24
3	No Idea	30	15
	Total	200	100

Source: Primary Data.

Interpretation:

In measuring the impact of poverty alleviation schemes and its performance were reported in the table and their responses were recorded. It illustrates clearly that out of 200 families 122 families (61%) say yes that the employment schemes were improved their life very much and 48 families (24%) say there was no improvement in their life because of employment schemes and 30 families (15%) say they have no idea.

CHART 5.12**LIFE IMPROVED AS A RESULT OF EMPLOYMENT SCHEMES**

India has commenced the Minimum Wages Act in 1948, giving mutually the Central government and State government jurisdiction in setting up salaries. The act is legally non-binding, but constitutional. Payment of wages below the minimum wage rate amounts to strengthening labour. Wage boards are set up to evaluate the industry's competence to pay and fix minimum wages such that they at least cover up a family of having four prerequisites of calories, home, clothes, education, medical assistance, and entertainment.

TABLE 5.14
AWARENESS OF THE MINIMUM WAGES ACT

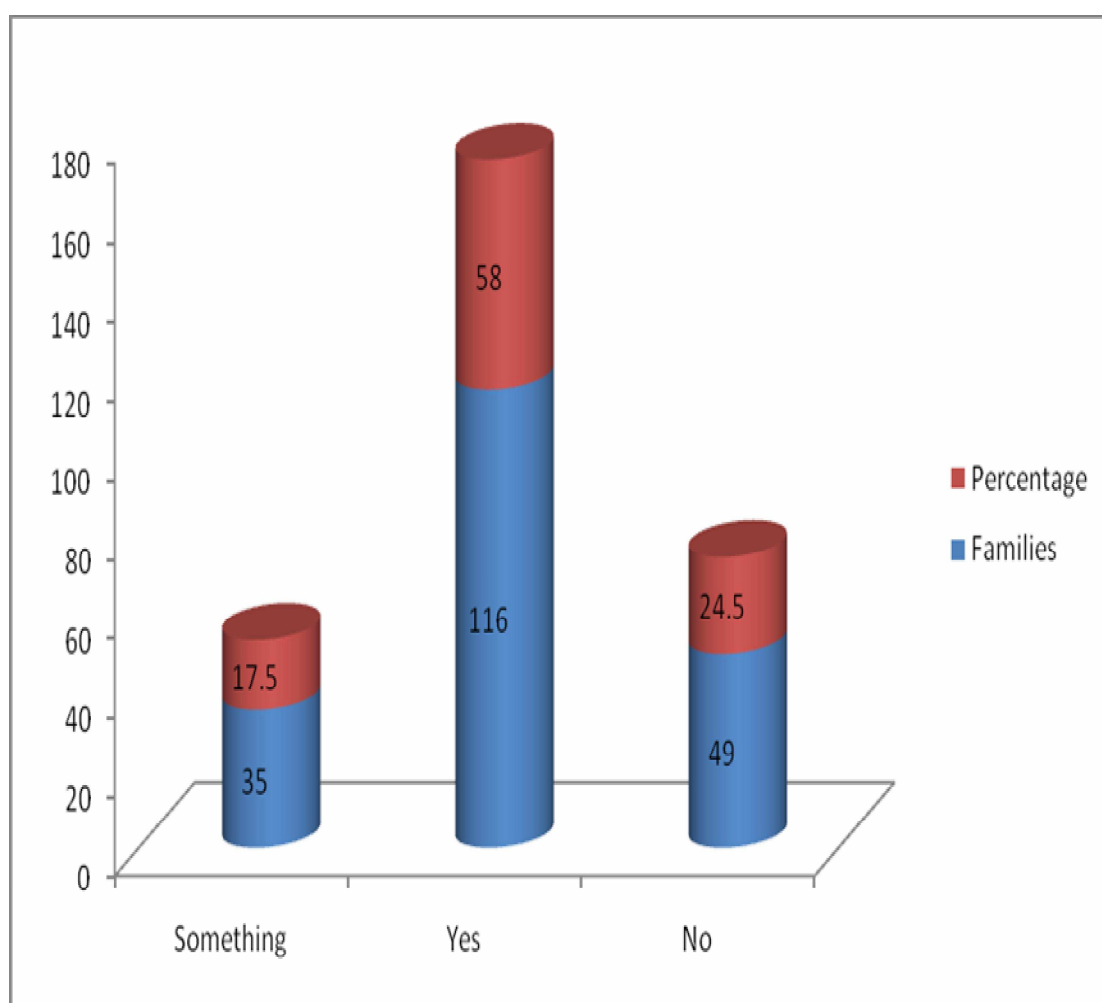
S.No	Awareness	No. of Families	Percentage
1	Something	35	17.5
2	Yes	116	58
3	No	49	24.5
	Total	200	100

Source: Primary Data.

Interpretation:

From the table 5.14 one can easily observe that the families have more awareness about the Minimum Wages Act. It shows that 35 families (17.5%) knew something about the Minimum Wages Act and majority of 116 families (58%) had very well awareness of the Minimum Wages Act and 49 families (24.5) were not aware about the act.

CHART 5.13
AWARENESS OF THE MINIMUM WAGES ACT



The livelihood salary is particular as a level of income for a worker by the Constitution of India that can guarantee a minimum standard of living that comprises good quality health, comfort, education, decorum and can gratify for any disaster. In view of the readiness of the employer to disburse, *the idea of a decent wage has been introduced into the constitution*, which is an average of earnings that is not only capable of keeping a definite work, but can be enhanced depending on the facility of the employer to pay.

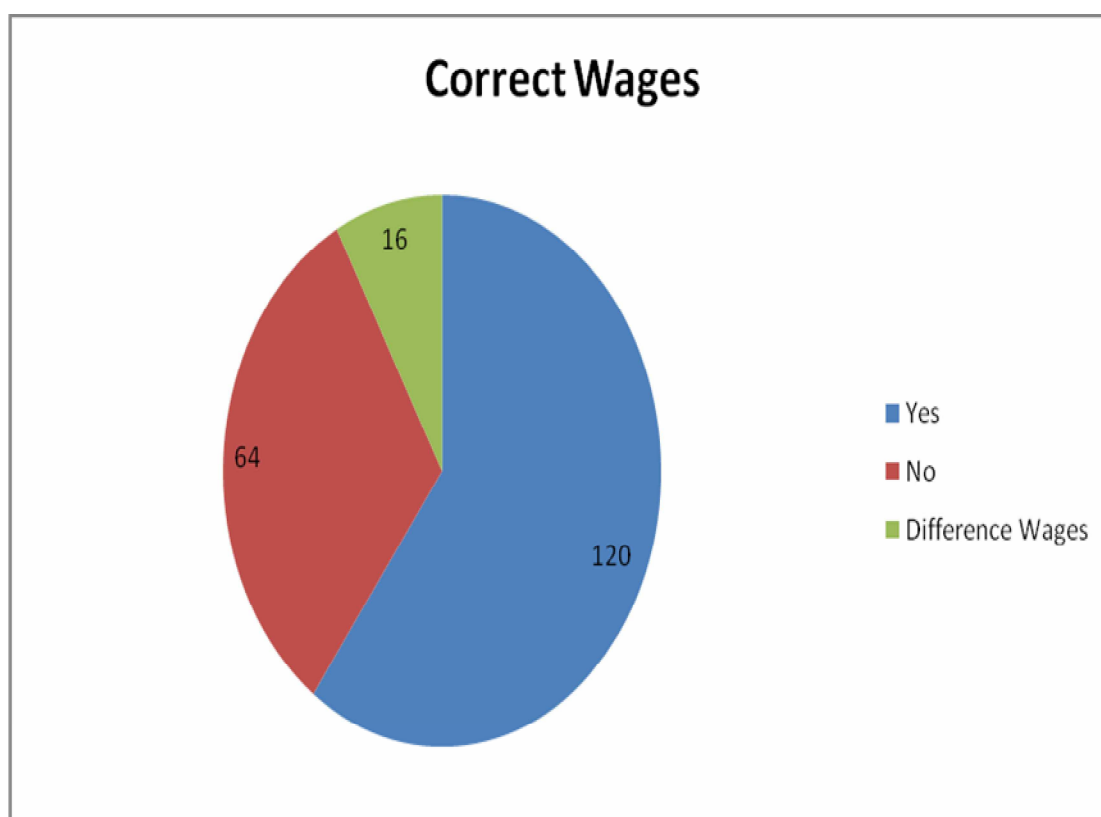
TABLE 5.15
CORRECT DAILY WAGES THROUGH MINIMUM WAGES ACT

S.No	Correct Daily Wages	No. of Families	Percentage
1	Yes	120	60
2	No	64	32
3	Difference Wages	16	8
	Total	200	100

Source: Primary Data.

Interpretation

The response of the attitude towards the daily wages earned by the respondents was reported above in table 5.15 whether the families got correct daily or not. Out of 200 families the majority of 120 families (60%) responded that they got wages for their employment and 64 families (32%) have not got their correct wages and 16 families (8%) responded that they got difference in wages.

CHART 5.14**CORRECT DAILY WAGES THROUGH MINIMUM WAGES ACT**

The authorization of the MGNREGA is to supply at least 100 days of guaranteed wage employment in a financial year to each and every rural household whose mature members volunteer to do unskilled physical work. A supplementary 50 days of pay employment are supplied over and above 100 days in the notified drought exaggerated regions or natural calamity areas in the nation on suggestion of the Ministry of Agriculture and Farmers Welfare.

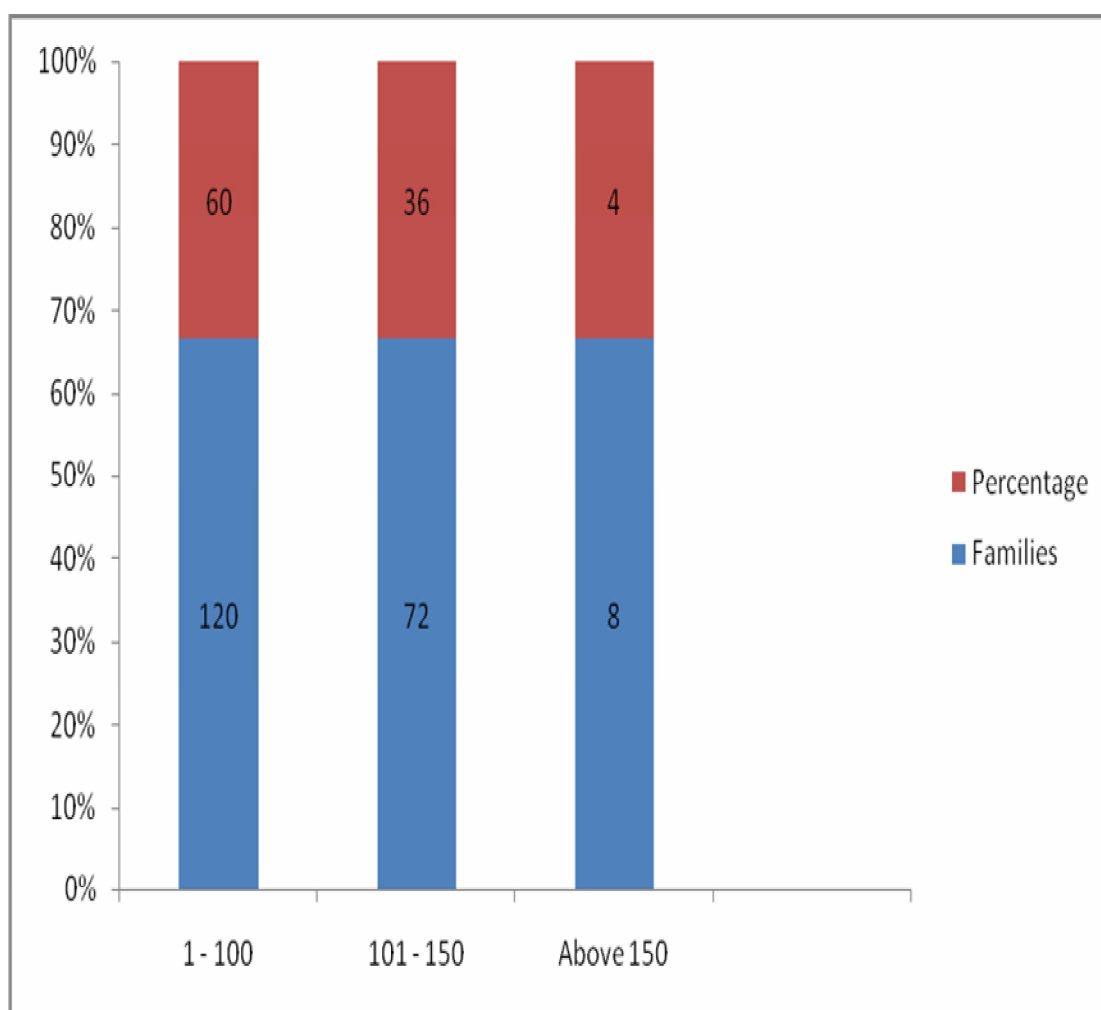
TABLE 5.16
THE NUMBER OF DAYS EMPLOYED UNDER MGNREGP

S.No	Days Employed	No. of Families	Percentage
1	1 – 100	120	60
2	101 – 150	72	36
3	151 – Above	8	4
	Total	200	100

Source: Primary Data.

Interpretation

The number of days employed under, one of the poverty alleviation programmes MGNREGP was illustrated in the table 5.16. It's clear that out of 200 families 120 families (60%) were employed between 1 and 100 days. 72 families (36%) employed within 101 to 150 days and only 8 families (4%) were employed more than 150 days. To compare with all other poverty alleviation schemes MGNREGP scheme is the only scheme which promotes their economic status in the area over the study years.

CHART 5.15**THE NUMBER OF DAYS EMPLOYED UNDER MGNREGP**

There are several practical problems in the implementation of the scheme in Tamil Nadu state. There is a necessity for locating new and suitable types of works and innovative methods of implementing the scheme and need for providing suitable technical help to the gram panchayats. It would be more attractive if the conception of employment under the schemes also guide to creation of durable assets and proficient management of water and other natural resources nearby, therefore, eventually increasing the on the whole productivity of the agricultural sector as a total.

TABLE 5.17
THE KIND OF WORK GOT UNDER EMPLOYMENT
GUARANTEE SCHEME

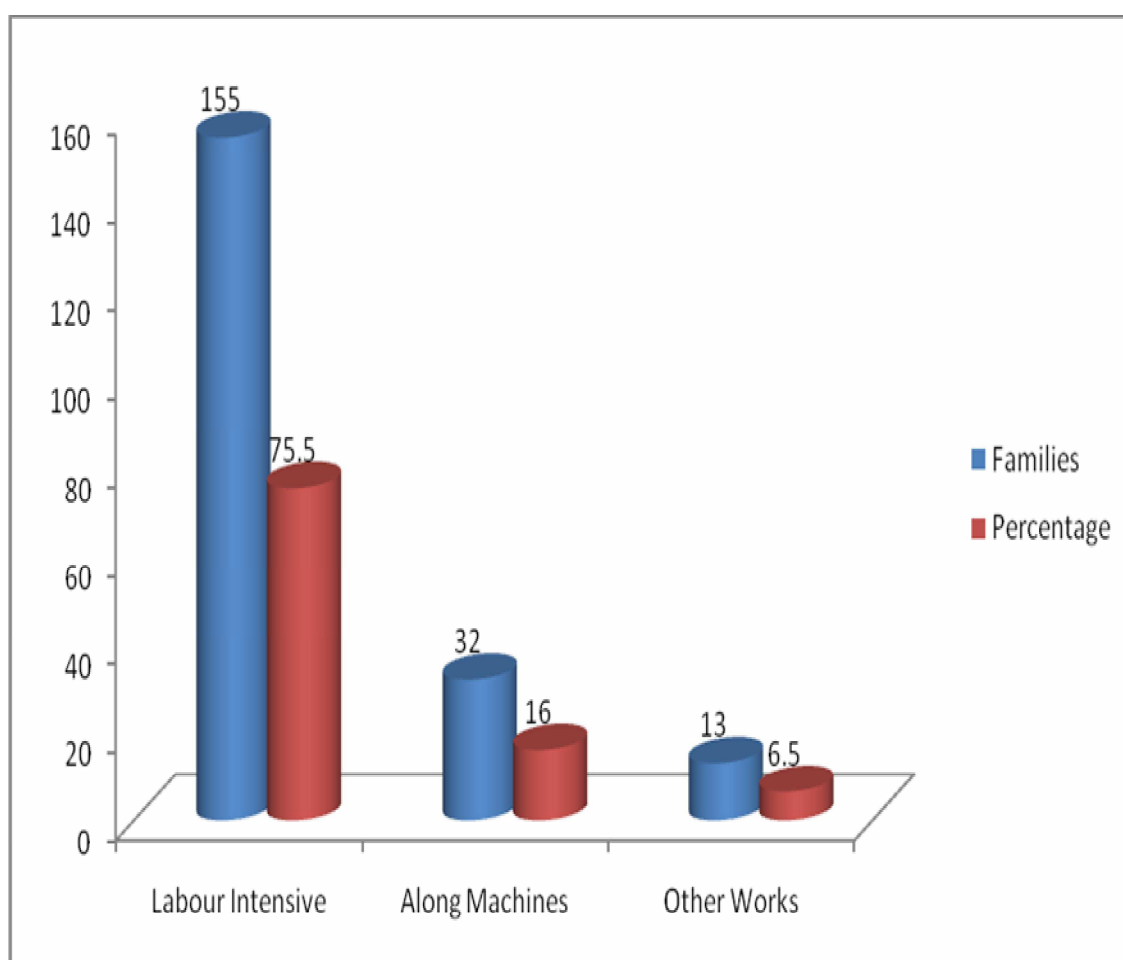
S.No	Work Kind under EGS	No. of Families	Percentage
1	Labour Intensive	155	75.5
2	Along with machines	32	16
3	Other Works	13	6.5
	Total	200	100

Source: Primary Data.

Interpretation:

The table 5.17 depicts about the kind of work got under EGS Poverty alleviation Programme. Most of the families worked in labour intensive 155 families (75.5%) and 32 families (16%) worked along with machines and very few ie., 13 families (6.5%) worked in other sections.

CHART 5.16
THE KIND OF WORK GOT UNDER EGS



The income boundary for families for succeeding as a beneficiary under the BPL (Below Poverty Line) list has been attached at about ` 27,000 per annum, according to the methodology endorsed by the Union Cabinet on Thursday. A household with an annual earning of more than `27,000 will stand excluded from the BPL list. This is what the automatic segregation and automatic insertion criteria and the seven dispossession indicators are believed to aim at.

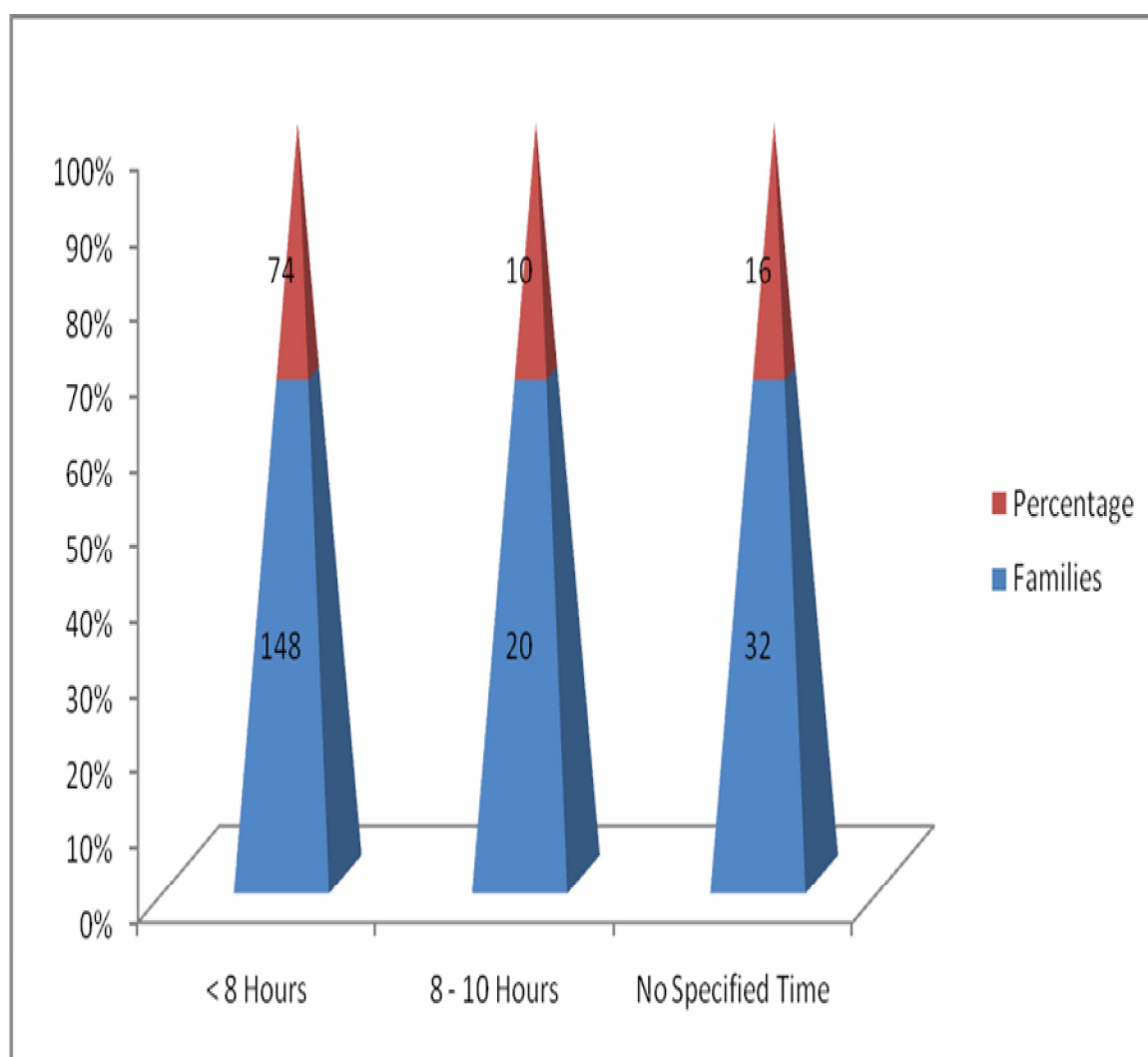
TABLE 5.18
THE NUMBER OF HOURS A DAY THE BPL FAMILIES ARE WORKING

S.No	Hours Worked	No. of Families	Percentage
1	< 8 Hours	148	74
2	8 – 10 Hours	20	10
3	No Specified Time	32	16
	Total	200	100

Source: Primary Data.

Interpretation:

With regard to the total working hours per day by the families of BPL category was shown in the table 5.18. Majority of the respondents ie., 148 families (74%) were working below 8 hours and 20 families (10%) worked between 8 and 10 hours a day and 32 families (16%) have no specified working time.

CHART 5.17**THE NUMBER OF HOURS A DAY THE BPL FAMILIES ARE WORKING**

A government analysis shows that the Other Backward Classes (OBCs) acquire the most number of Below Poverty Line (BPL) ration cards in India. Scheduled Castes in rural areas are no better. About 22% of the households aim BPL card facilities, which is about 5% positions more than their share in the country's population. However, they are much better in urban areas with only 16% of SCs owning a BPL card.

TABLE 5.19
THE CATEGORY OF SURVEYED BPL FAMILIES

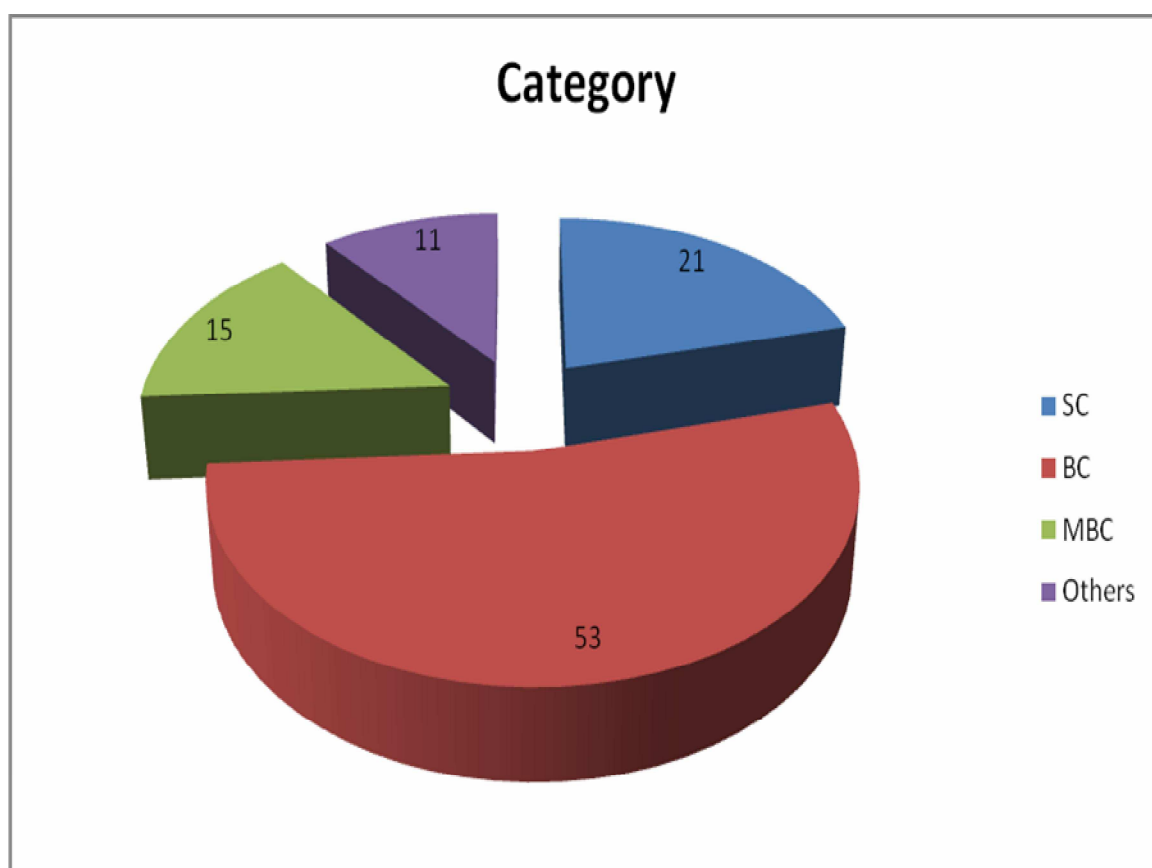
S.No	Category	No. of Families	Percentage
1	SC	42	21
2	BC	106	53
3	MBC	30	15
4	Others	22	11
	Total	200	100

Source: Primary Data.

Interpretation:

Category of surveyed families under BPL was shown in the table 5.19. Majority of the families come BC category ie., 106 families (53%) and next comes SC category. It contains 42 families (21%) and MBC category contains 30 families (15%) and 22 families (11%) came under other category.

CHART 5.18
THE CATEGORY OF SURVEYED BPL FAMILIES



In spite of the large number of skills training and employment agendas operating in India, and the significant resources disbursed on such schemes, methodical evaluations of their impact on creating employment in addition to assessing whether such schemes attain the proposed population, are restricted.

TABLE 5.20
THE EXPECTATIONS OF BPL FAMILIES TO DO SPECIFIC KIND OF JOB

S.No	Job Category	No. of Families	Percentage
1	Contract Farming Works	35	17.5
2	Brick Works	22	11
3	Agriculture/ Allied	108	54
4	Others	35	17.5
	Total	200	100

Source: Primary Data.

Interpretation:

With reference to the above table 5.20 it is clear that 108 families (54%) were employed under agriculture and allied sectors. Contract farming works and other works were done by 35 families (17.5%) and the remaining 22 families (11%) employed under brick works. Remaining 35 families (17.5) comes under the category.

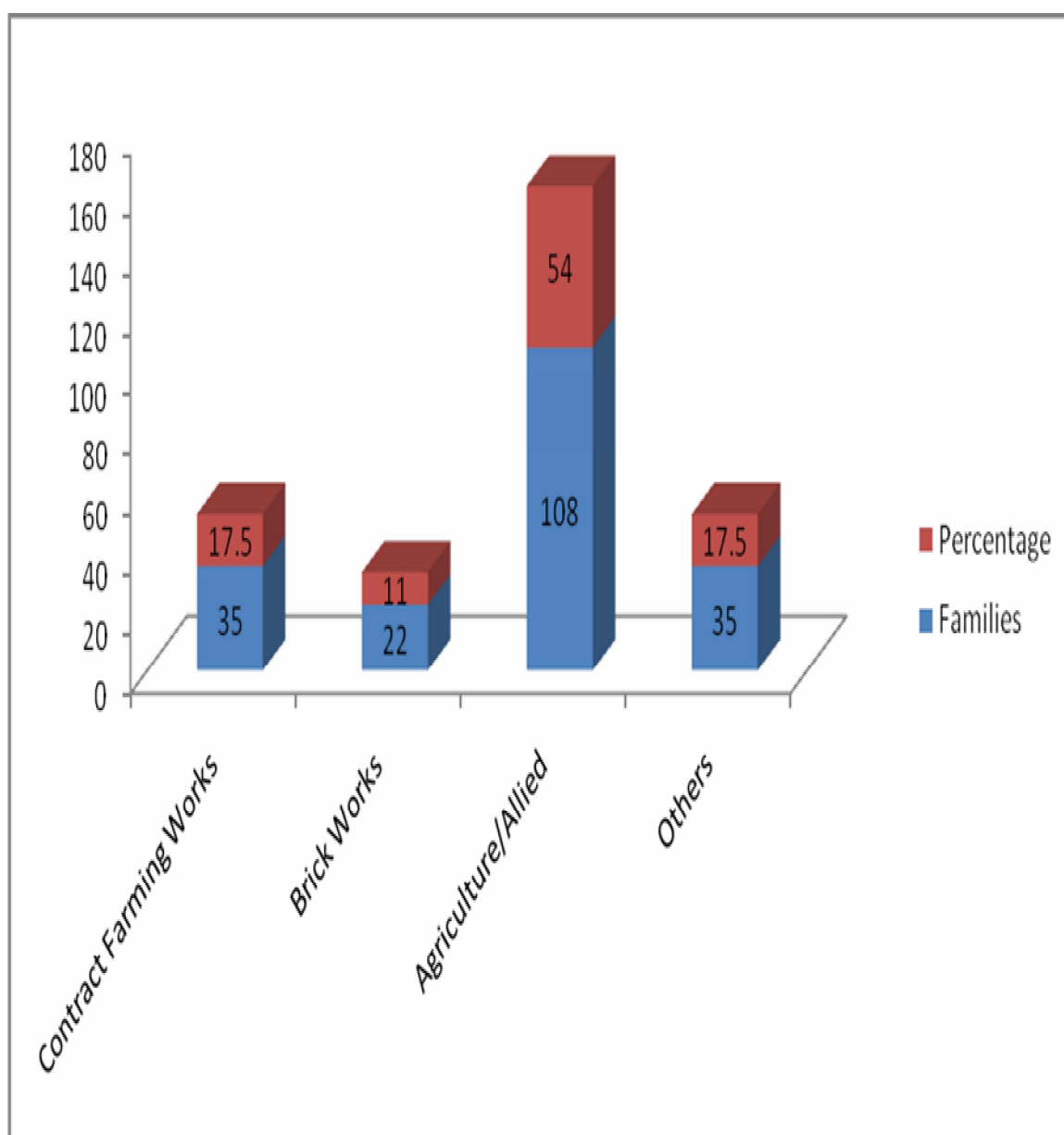
CHART 5.19**THE EXPECTATIONS OF BPL FAMILIES TO DO SPECIFIC KIND OF JOB**

TABLE 5.21**BORROWING MONEY FROM VARIOUS SOURCES**

Companies always seek sources of funding to grow the business. Funding, also called financing, represents an act of contributing resources to finance a program, project, or a need. Funding can be initiated for either short-term or long-term purposes. The different sources of funding includes, Retained earnings, Debt capital and Equity capital.

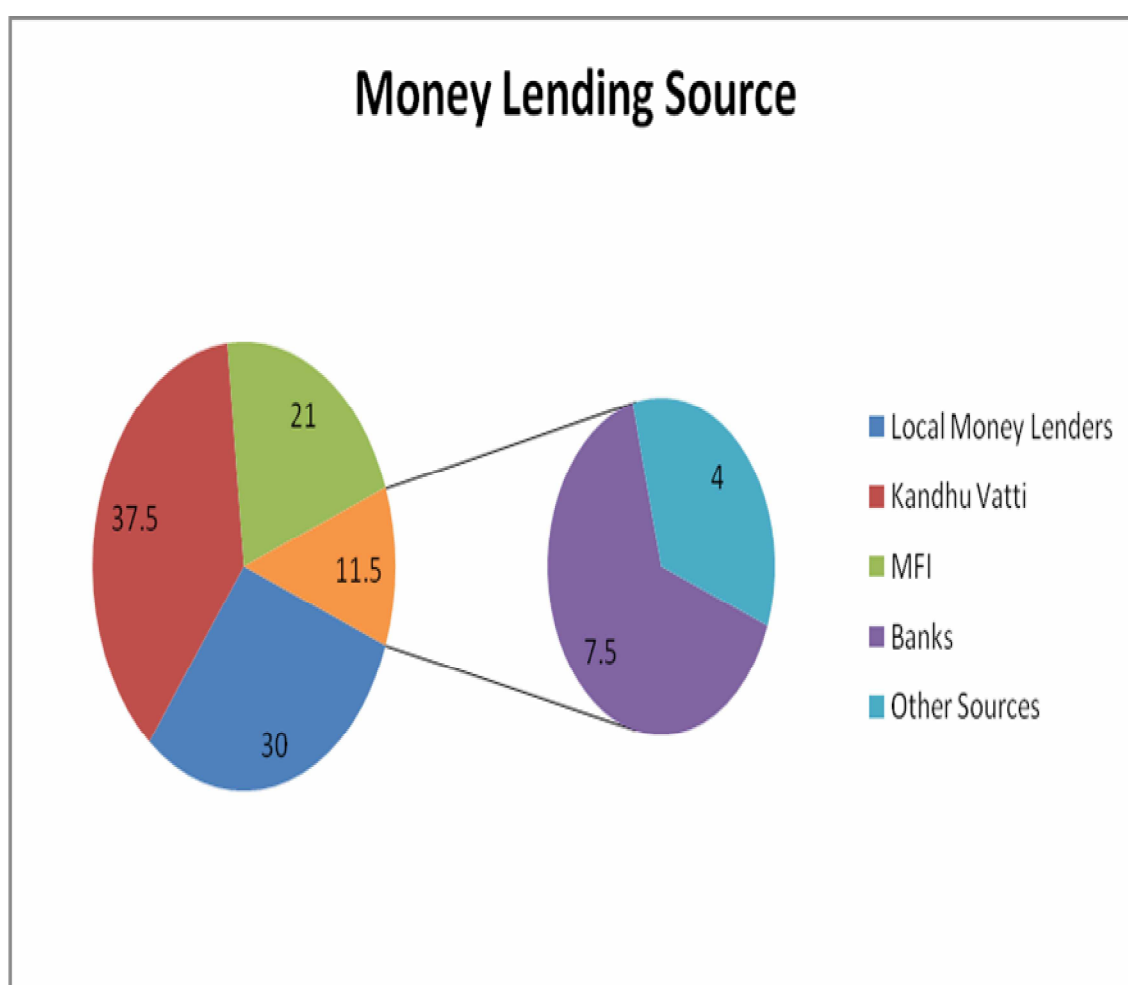
S.No	Money Lending Sources	No. of Families	Percentage
1	Local Money Lenders	60	30
2	Usury (Kandhu Vatti)	75	37.5
3	MFI	42	21
4	Banks	15	7.5
5	Other Sources	8	4
	Total	200	100

Source: Primary Data.

Interpretation:

Money borrowing by the families is shown in the table above 5.21. From that it is clear that 76 families (37.5%) got money from usury a dangerous one. 60 families (30%) got money from local money lenders. 42 families (21%) get money from Micro Finance Institutions (MFI) and only 15 families (7.5%) got money from banks and 8 families (4%) get money from other sources.

CHART 5.20
BORROWING MONEY FROM VARIOUS SOURCES



Priority Household (PHH)

The state governments recognize precedence household families under the Targeted Public Distribution System (TPDS) according to their exclusive and inclusive instructions. The PHH ration card holders obtain 5kgs of food grains per person for a month. Food grains are given at the subsidized price of `3 for rice, `2 for wheat and `1 for coarse grains for these ration card holders.

Priority Household Antodaya Anna Yojana (PHH-AAY)

Recognition of households under the National Food Security Act, 2013 (NFSA) and issuance of Antodaya Anna Yojana (AAY) and Priority Household (PHH) ration cards is treated by the respective State Government / Union Territories Administration.

Non Priority Household-Sugar (NPHH-S)

The Non Priority HouseHold - Sugar (NPHH - S) type ration cards which are also called ‘sugar cards’ are qualified for all the commodities except rice. About 500 grams of sugar per person is given to all card holders expose to a maximum of 2 kg per month.

TABLE 5.22

THE KIND OF CARD AVAILED BY THE BPL FAMILIES

S.No	Ration Card Type	No. of Families	Percentage
1	Rice (PHH - RICE)	135	67.5
2	Rice (PHH - AAY)	30	15
3	NPHH Rice	20	10
4	NPHH - S (Only Sugar)	10	5
5	NPHH - NC (No Commodity)	5	2.5
	Total	200	100

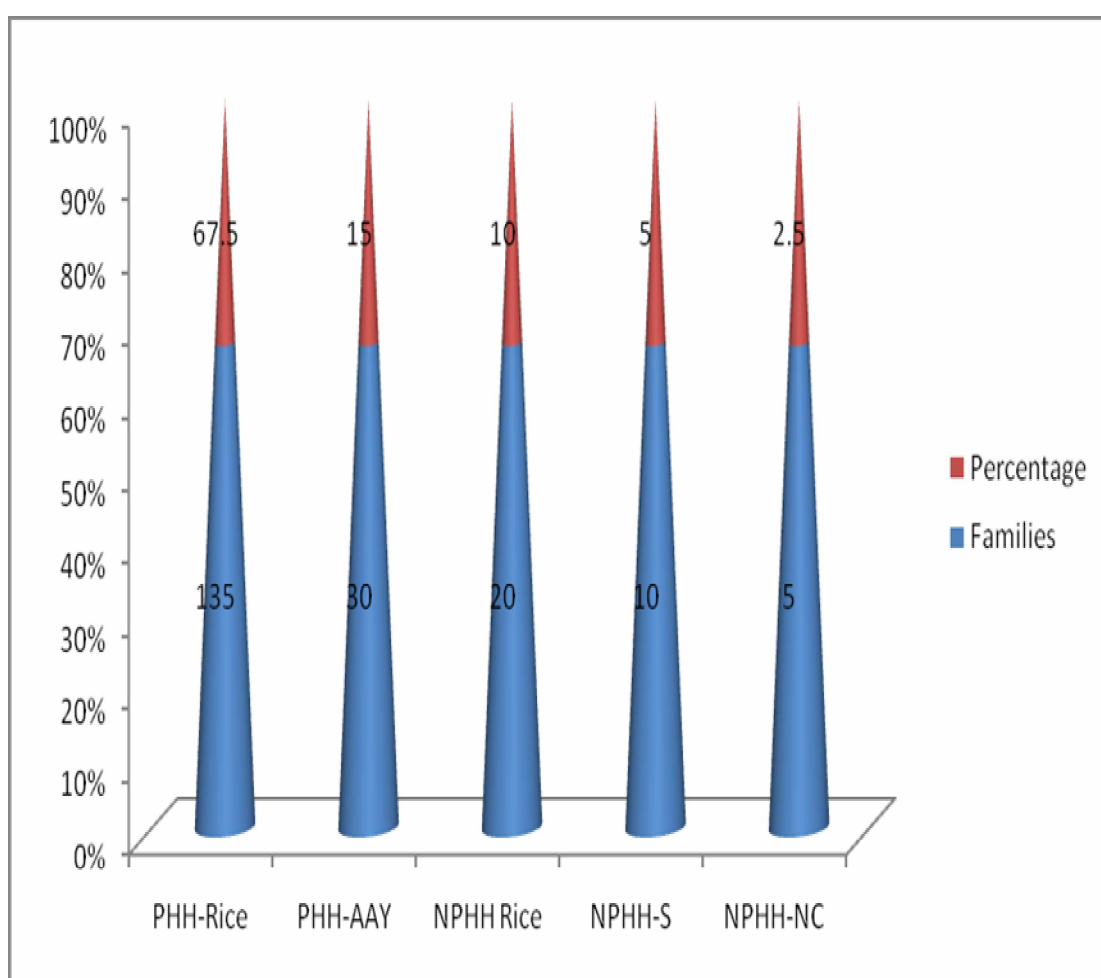
Source: Primary Data.

Interpretation

The ration card kind availed by the BPL families is shown in table 5.22. Majority of families ie., 135 families (67.5%) hold PHH-Rice card. 30 families (15%) hold PHH-AAY card. 20 families (10%) hold NPHH Rice card. 10 families (5%) hold NPHH-S card and out of 200 only 5 families (2.5%) hold No Commodity card in the study area.

CHART 5.21

THE KIND OF CARD AVAILED BY THE BPL FAMILIES



HYPOTHESIS 1

H0: There is a significant difference between the level of literacy of the rural households and extent of poverty in this area. (Null Hypothesis)

H1: There is no significant difference between the level of literacy of the rural households and extent of poverty in this area. (Alternate Hypothesis)

		Illiterate	Primary	Secondary	Hr. Sec	Graduates	Total
	Yes	40	90	30	35	5	200
	Prevalence of Poverty	20%	45%	15%	17.5%	2.5%	100.0%
	No	80	90	20	5	5	200
	Prevalence of Poverty	40%	45%	10%	2.5%	2.5%	100.0%
Total		120	180	50	40	10	400
		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	Df	Test Statistic
Pearson Chi-Square	3.124	4	0.40

The calculated value Chi Square test for 4 degrees of freedom at 5% level is 3.124. Since the table value for 4 degrees of freedom at 5% level is 3.891. So that the calculated value is less than the table value. Hence we accept the null hypothesis.

INFERENCE

ACCEPTANCE OF NULL HYPOTHESIS

There is a significant difference between the level of literacy of the rural households and extent of poverty in this area. There is a significant difference between the level of literacy of the rural households and extent of poverty in this area.
(Null Hypothesis)

HYPOTHESIS 2

H0: There is a significant difference between the educational qualification and monetary benefits obtained from the poverty alleviation programmes in this area. (Null Hypothesis)

H1: There is no any significant difference between the educational qualification and monetary benefits obtained from the poverty alleviation programmes in this area. (Alternate Hypothesis)

Response	Illiterate	Primary	Secondary	Hr. Sec	Graduates	Total
Yes	40 (20%)	90 (45%)	30 (15%)	35 (17.5%)	5 (2.5%)	200 (100%)
No	60 (30%)	65 (32.5)	45 (22.5%)	25 (12.5)	5 (2.5)	200 (100%)
Total	100	155	75	60	10	400

Chi-Square Tests

	Value	Df	Test Statistic
Pearson Chi-Square	2.587	3	0.11

INFERENCE

ACCEPTANCE OF NULL HYPOTHESIS

From the above table one can come to conclude that the role of poverty alleviation programmes and its performance in improving the economic status of the respondents in this area is highly appreciable. *Hence it is inferred that there is a significant difference between the educational qualification and monetary benefits obtained from the poverty alleviation programmes in this area is accepted because the calculated value of Chi square is less than the table value ie., 0.11 for 3 degrees of freedom at 5% level for the table value for 2.814. (Null Hypothesis)*

HYPOTHESIS 3

H0: There is a significant association between the economic impact of the poverty alleviation programmes before and after in this area. (Null Hypothesis)

H1: There is no any significant association between the economic impact of the poverty alleviation programmes before and after in this area. (Alternate Hypothesis)

Response	Illiterate	Primary	Secondary	Hr. Sec	Graduates	Total
Yes	60 (30%)	30 (15%)	40 (20%)	65 (32.5)	5 (2.5%)	200 (100%)
No	110 (55%)	20 (10%)	30 (15%)	35 (17.5)	5 (2.5)	200 (100%)
Total	170	50	70	100	10	400

From the above table by using ‘t’ statistic with correlation co-efficient value we calculate the test of significance of the given statement about their economic impact before and after the implementation of poverty alleviation programmes. Hence, the calculated value of ‘t’ for 8 degrees of freedom at 5% level 4.414. Since the table value of ‘t’ for 8 degrees of freedom at 5% level is 3.916.

Therefore, the calculated value is more than the table value. So we reject the null hypothesis and accepted alternate hypothesis.

There is no any significant association between the economic impact of the poverty alleviation programmes before and after in this area. (Alternate Hypothesis)

Occurrence of poverty is projected by the Planning Commission on the source of the large sample surveys on domestic consumer expenditure conducted by the National Sample Survey Organisation (NSSO) on a quinquennial basis. The NSSO frequently performs survey on household consumer disbursement, in which households

are asked about their consumption of last 30 days and is taken as the representative of general consumption. This was believed a much better facts to approximate the occurrence of poverty at national and sub-national points by altering for inter-state and inter-region differences in price changes over a time period. Disbursement estimations seen in the National Accounts Statistics and as supposed from the sample surveys of the National Sample Survey Organisation illustrate a large and growing inconsistency. Therefore gradually more, confidence was placed on the NSSO's sample surveys on consumption expenditure by households, a much better technique to change for inter-state and inter-region differences in price changes over the time period, and the usage of the better recall period established in the NSSO's surveys.

LIMITATIONS OF “BELOW POVERTY LINE (BPL)” APPROACH

It is clear that the process for establishing poverty line estimation has been in constant flux. The usage of a minimum sufficient standard of nutrition as an important criteria for describing the poverty line has come in for criticism, both for the level at which it has been fixed and for the insufficiency of the disbursement level of families at which these norms are probably to be met in providing a minimum standard of living. By itself, theoretical and experimental approaches to the depth of poverty and the interpretation of data are not universally admitted.

Debate on establishing the nutritional or calorie standard wherein the poverty line is entrenched has been long and complex. Common sense recommends that poverty line should differ over regions generally because of the differences of the tastes and fondnesses and the price compositions over the regions. Therefore, the concluding constituents of Poverty Line Basket (PLB) have been one of the main confronts of poverty line estimation in India due to price variations which differ from

state to state and period to period. Additionally, consumption outlines, nutritional wants and prices of elements keep on changing as per dynamics of macro economy and demography. Huge inconsistencies unlocked up amongst the poverty rates considered by “direct” technique on the basis of real calorie eatings vis-a-vis the minimum requirements, and the “indirect” method based on per capital expenditures vis-a-vis the occasionally modernized poverty lines. A considerable amount of households above the expenditure based poverty line were unable to meet the minimum calorie requirements. This is called into question the practice of defining a “poor household” solely on the basis of its per capital monthly expenditure vis-a-vis a poverty line expenditure cut off without thinking the household’s admittance to a broad set of dimensions.

As inadequacies of poverty dimensions by various Committees became obvious, an additional question arose whether paucity is only about consumption? Poverty includes other aspects such as poor health or undernourishment, lack of clean water or electricity, poor quality of work and limited education access. The multi-dimensional character of poverty was recognized. Though, the deprivations experiences by poor in different fields such as education, health, sanitation etc are not reported in Below Poverty Line move toward. Additional, public disbursement on social services similar to education, health and food security had raised considerably in modern years, which was not detained, by design, in the NSSO’s Consumer Expenditure Surveys and the poverty line obtained from these is thus lower than the services really consumed. The actual ‘well being’ of the household will be privileged than what is designated by the poverty line. Nevertheless, even the Rangarajan Committee set up in 2012 neglected the opportunity to go further than the expenditure

based poverty rates and investigate the opportunity of a wider multi-dimensional examination of poverty.

In the above perspective, Standing Committee on Finance has pointed out:

“The accessible poverty line approach has its inherent limitations and may not capture important aspects of the real living conditions of the people. This is also abundantly evident from the fact that though States like Assam, Andhra Pradesh and J&K have a high malnourishment ratio, the poverty estimates of these States, as per the Planning Commission’s figures are much lower. This guides us to the key question of suitable criterion to estimate poverty and its different facets. The Committee cannot help conveying regret over the actuality that the criterion / approach suggested by different expert clusters set up from time to time for defining and formatively “poverty” or “poverty line” thus distant have only left question marks and have failed in capturing the actual occurrence of poverty in India. Important features such as ill healthiness, low educational accomplishments, geographical segregation, powerlessness or dis-empowerment in civil culture, caste or gender based intrinsic drawbacks etc. stay to be decisively captured in identifying and itemizing the deprived. The extensive distinction in determining the population of the poor is demonstrated by the reality that as per one of the expert groups employed newly, the BPL population in the nation would be as much as 80% as per the accessible calorie norm of 2,400, while as per an additional norm it is only 37.2%.

It was also disclosed that “The Committee are confident that the poverty ratio needs to be estimated autonomously and persuasively and the criteria therefore should widen beyond the current norm which lays distinction on calorific value and reflect realistically the changing nutritional outline and living status of the bunches.

Government programmes can be more efficiently distributed if the numerous dimensions of poverty are recognized and the criteria touched accordingly”.

CRITERIA FOR POVERTY AND SOCIAL WELFARE ORDERINGS

Distributional outcomes with regards to equity measurement can be studied in terms of their outcomes for complete poverty and social welfare. The logical results in recent literature that indicate the operational criteria for ranking the entire size distributions with reference to directional changes in absolute poverty and social welfare was stated.

The judgements concerning the transformations in poverty are known to be perceptive to (a) the specific value of the normal poverty line and (b) the poverty index based on that poverty line. Recent contributions on poverty orderings provide results that are robust with respect to both (a) and (b) Atkinson (1987) shows that the first order governance holds for a wider class of poverty measures. Foster and Shorrocks (1988a, 1988b) have launched the similarity between social welfare orderings and poverty orderings in an unhindered province based on three special cases belonging to the class of Foster-Greer-Thorebecke poverty index. For this reason, they were considered. The α -parametric Foster-Thorbecke index is described by

$$P_{\alpha}(X, Z) = \frac{\sum_{i=1}^M (Z - X_i)^{\alpha-1}}{(NZ)^{\alpha-1}}$$

where $\alpha \geq 1$, X_i is the income of the i^{th} individual and $X_1 \leq X_2 \leq X_3 \dots \leq X_N$, Z is the pre-specified poverty line, and M is the no of individuals having income less than or equal to z .

when $\alpha = 1$, we get the well known headcount ratio measure of poverty given by $HCR = M/N$.

when $\alpha = 2$, we get the poverty gap index (PGI) given by

$$PGI = \frac{\sum_{i=1}^M (Z - X_i)}{NZ}$$

This is described by Atkinson (1987) as normalized poverty gap.

When $\alpha = 3$, we get

$$\begin{aligned} FGT^* &= \frac{\sum_{i=1}^M (Z - X_i)^2}{NZ^2} \\ &= HCR [R^2 + (1 - R)^2 CVP^2] \end{aligned}$$

Where $R = 1 - X_p / Z$ is the poverty gap ratio with X_p being the mean income for the poor and CVP^2 the squared coefficient of variation for the poor.

Notice that headcount ratio is insensitive to both the poverty gap and the relative inequality among the poor. Poverty gap index is the ratio of the aggregate poverty gap to the normative minimum comprehensive income for the whole population. It is interpreted to capture the “depth” of poverty. FGT^* in addition to incorporating headcount ratio and average poverty gap, also takes account of the relative inequality among the poor and hence is a distributionally sensitive measures. For this basis, it is taken to imitate the ‘severity’ of poverty.

Now note the analytical dominance criteria relating to poverty and social welfare orderings, drawing on Atkinson (1987) and Foster and Shorrocks (1988a, 1988b).

POVERTY AND SOCIAL WELFARE ORDERINGS BASED ON HCR

Given the two income distributions defined by vectors x_1 and x_2 , x_1 is defined to dominate over x_2 in terms of headcount ratio (HCR) in an unrestricted domain, if for every $z \in [0, \alpha)$, HCR or equivalently, cumulative distribution function, under x_1 is nowhere higher than that under x_2 and at least at one point strictly lower than that under x_2 . This is the unhampered First Order Dominance (FOD) condition for poverty regulating and called this Headcount Ratio dominance (HCRD) criterion.

If the dominance holds for a finite range $z \in [Z^-, Z^+]$, it is taken to hold in a restricted domain and defines the restricted first order dominance.

Poverty ordering based on the headcount ratio in an unrestricted domain has been shown to be similar to a first degree welfare supremacy which requires agreement over all symmetric social welfare functions that are monotonically increasing in the income.

Atkinson (1987) proves a more general result that the poverty orderings based on FOD condition are valid not just with respect to headcount ratio but for a more general *class of poverty measures* that satisfy mild conditions, namely, the measures are continuous, separable, symmetric and weakly monotonic.

These results enable us to make directional statements about the movement in poverty without getting tied down to the specific value of the poverty line and the specific choice of poverty measure. When the cumulative distribution functions for the two income distributions being compared intersect, the unambiguous poverty ordering based on this first order dominance criterion does not hold. The ambiguity may get resolved by applying the second order dominance, i.e. poverty gap index criterion, to which we now turn.

POVERTY AND SOCIAL WELFARE ORDERINGS BASED ON PGI

Given the two income distributions x_1 and x_2 , x_1 is defined to dominate over x_2 in terms of poverty gap index (PGI) in an unrestricted domain if for every $z \in [0, \infty]$, PGI is lower or equivalently, area under the cumulative distribution function for x_1 is smaller than that for x_2 . This is the unrestricted *second* order dominance condition for poverty ordering. We call this PGI dominance (PGID) criterion.

If this dominance holds for $z \in [Z^-, Z^+]$, it is taken to be restricted dominance.

Poverty ordering based on Poverty Gap Index has been shown to be equivalent to second order welfare governance attained by agreement among all symmetric social welfare functions demonstrating both monotonicity and equality preferences.

This unrestricted second order dominance condition has been shown by Foster and Shorrocks to be equivalent to generalized Lorenz dominance (GLD) criterion [Shorrocks (1983)].

It should be obvious that the second order dominance condition requires more restrictions on the class of poverty measures as well as the class of social welfare functions than the first order condition for an unambiguous ranking over the unrestricted domain.

POVERTY AND SOCIAL WELFARE ORDERINGS BASED ON FGT*

Given the two income distributions x_1 and x_2 , x_1 is defined to dominate over x_2 in terms of FGT* in an unrestricted domain, if for every $z \in [0, \infty]$, FGT* under x_1 is nowhere greater than that under x_2 and at least at one point strictly lower than that under x_2 . This is the unrestricted third order dominance condition for poverty ordering [Foster and Shorrocks (1988a)]. We call this FGT* dominance (FGT*D) criterion.

If this dominance holds for $z \in [Z^-, Z^+]$, it is taken to be restricted dominance.

Unambiguous poverty ordering based on FGT* has been shown to be equivalent to a third order welfare dominance for the class of social welfare functions that are symmetric, monotonic, equality preferring and also transfer sensitive in the sense of emphasizing transfers at lower levels. Clearly, the third order dominance condition requires further restrictions on the admissible class of social welfare functions compared to the second order condition.

It has also been shown that the unrestricted first order dominance implies but is not implied by the unrestricted second order dominance. Also, the unrestricted second order dominance implies but is not implied by the unrestricted third order dominance. An ambiguous case indicated by first order dominance test may be usually resolved if the unrestricted second order dominance test indicates unambiguous ordering. Similarly, an ambiguous case indicated by the second order dominance test may turn out to be unambiguous ordering based on the application of the third order dominance test.

The foregoing analytical results enable us to draw equivalent inferences regarding unambiguous directional changes in the poverty situation and those in social welfare. Notice that the first, the second and the third order dominance criteria require progressively more stringent conditions with reference to the admissible class of poverty measures as well as the admissible class of social welfare functions. These conditions, in turn, may involve the occurrence of a trade-off between mean level of income and relative inequality. Inferring from the discussion in Shorrocks (1983), it can be shown that in the presence of non-intersecting generalized Lorenz curves, unambiguous social welfare improvement is consistent with a rise in mean income combined with either an outward shift in the Lorenz curve (indicating unambiguous accentuation in relative inequality) or combined with intersecting Lorenz curves along

with increase in Gini coefficient. Equivalently, with reference to poverty situation, the case of non-intersecting PGI-curves can be consistent with a rise in mean income combined with intersecting headcount ratio curves, i.e., headcount ratio going up for some parametric value(s) of the poverty line and for the corresponding segment(s) of the population. Similarly, unrestricted dominance in terms of FGT* can be consistent with intersecting generalizing Lorenz curves or (equivalently) intersecting PGI-curves. Unnecessary to append, a rise in the mean income is a necessary although not a sufficient prerequisite for an unambiguous improvement in the poverty or the social welfare situation.

How a trade-off between the mean income and the relative inequality in the underlying size distribution gets resolved so as to result in an improvement in social welfare and/or poverty is an interesting question. One clear-cut situation is analogous to the Pareto-improving case. Monotonicity situation on symmetric social welfare function assures that social welfare situation would develop with an increase in some income(s) while other incomes remaining unchanged. More generally, implicitly and intuitively, some potential compensation principle must be at work whereby, in moving from one static situation to another, the gainers can compensate the losers so as to restore the losers' *status quo* position *before* the change and the gainers can still be better-off *after* the compensation.

EMPIRICAL RESULTS

We have generated the required size distributions of monthly per capita total expenditure at consent 1970-71 prices for each of the eight time points as described in section 4. We undertake pair wise comparison of these size distributions with reference to the poverty and social welfare ordering. These binary comparisons in

irreversible time (i.e. any given later time-point being compared with *each* of the earlier time-points) give rise to 28 cases each for the rural, the urban and the rural-plus-urban population. For pertaining the dominance results of section 2 to these comparisons, we have used an identical numerical approximation method by treating the absolute difference of 0.0004 or less as negligible in the value of Headcount Ratio (HCR), Poverty Gap Index (PGI) and FGT* at any given level of MPCTE at constant 1970-71 prices at two time points.

In organizing our empirical findings, we use the analytical result that the unrestricted first order dominance implies but is not implied by the unrestricted second order dominance which, sequentially, involves but is not implied by the unrestricted third order governance. On this basis, we devise mutually exclusive and exhaustive categories of dominance possibilities with a clear-cut interpretation with reference to the directional change in the poverty and social welfare situation.

Table 5.23 provides the listing of binary comparisons where conditions of *unrestricted* first order (or Headcount Ratio) dominance have been satisfied. Out of the total number of 28 cases each for the rural, the urban and the entire (rural-plus-urban) population, unambiguous improvement in *both* the poverty and social welfare situation emerges in as many as 20 cases for the rural, 21 cases for the urban and 22 cases for the entire population. These cases of development, it may be remembered, are based on the weakest constraints *both* on the class of poverty measures *and* on the class of admissible social welfare functions. It is interesting to note that among these conclusive cases, where the generalized Lorenz dominance [Shorrocks (1983)] or equivalently the unrestricted Poverty-Gap-Index dominance is also satisfied, the conventional Lorenz curves at constant prices interconnect in 7 cases for the rural, 9 cases for the urban and 12 cases for the whole population so that the predictable Lorenz dominance [Atkinson (1970)] is not attained.

TABLE 5.23

POVERTY ORDERING RESULTS BASED ON THREE POVERTY MEASURES OF FGT-CLASS FOR CASES INVOLVING RESTRICTED HEADCOUNT RATIO DOMINANCE RELATING TO THE SELECT BLOCKS IN TIRUCHIRAPPALLI DISTRICT

Sl.No	Comparison	HCR			PGI			FGT*		
		Restricted domain in terms of		Directional Poverty difference	Restricted domain in terms of		Directional Poverty difference	Restricted domain in terms of		Directional Poverty difference
		%age of OPL	Popin. Fractile (%)		%age of OPL	Popin. Fractile (%)		%age of OPL	Popin. Fractile (%)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1	Lalgudi	0-128 >128	Bottom 75 Top 25	+ve	0-200 >200	Bottom 93 Top 7	+ve & neg. -ve	0-400 >400	Bottom 99 Top 1	+ve & neg. -ve
2	Manachanallur	0-155 >155	Bottom 83 Top 17	-ve +ve	UR	UR	-ve & neg.	UR	UR	-ve & neg.
3	Thuraiyur	0-45 >45	Bottom 4 Top 96	+ve -ve	0-55 >55	Bottom 12 Top 88	+ve -ve	0-65 >65	Bottom 21 Top 79	+ve -ve
4	Musiri	0-30 >30	Bottom 1 Top 99	+ve -ve	0-40 >40	Bottom 3 Top 97	+ve -ve	0-45 >45	Bottom 6 Top 94	+ve -ve
5	Manapparai	0-200 >200	Bottom 90 Top 10	-ve +ve	UR	UR	-ve	UR	UR	Neg.& -ve

Inference

- 1) HCR, PGI and FGT* refer to Headcount ratio, Poverty gap Index and Foster-Greer-Thorbecke Index with Alpha=3, respectively.
- 2) UR stands for unrestricted domain for the entire population and –ve, +ve and neg. refer to negative, positive and negligible difference of the former poverty index value from the latter one respectively.
- 3) OPL refers to Official poverty line in 2011-12 which corresponds to monthly per capita total expenditure (MPCTE) of `149.09 (All-India Rural) at 2011-12 prices.

- 4) Domains in columns (3), (6) and (9) are of poverty line expressed as percentage of official poverty line in 2011-12, whereas the corresponding fractile group of population in the domain is indicated in columns (4), (7) and (10) respectively.

LANGEVIN FOKKER-PLANCK MODEL

The cereal CD as the deficiency function of Atkinson to express that cereal CD index provides as a poverty index. The C and D function $CD(y_i, t)$ calculates the amount of income missing in an income class i that is required to achieve the saturation level of consumption of the essential product. This was fine clarified and guessed in some earlier works. But there is an elementary information gap in all such earlier measures of the CD function in that they relied only on the main expenditure changeable, cereals, as the exclusive descriptor of CD. The implicit postulation was that the other expenditure categories, although contributing to consumption and wellbeing, will all be subsumed within the inequality outliers defined by the leading cereal expenditure. As clearly demonstrated, this was a weak foundation to base any model on, since intrinsically each of the three expenditure modes, cereals, other foods, and non-foods, abide completely different distribution functions. In other words, any self reliable measure of poverty needs to investigate the multivariation of all contributing expenditure methods. Using tools from the machine learning literature, we have combined all three contributing expense modes into a one dimensional reduced variable that combines information about their individual and correlated dynamics. As shown below, the choice of methods (Neuroscale, LLE, IsoMap, CCA, PCA) barely affects the qualitative distribution.

Following on from the ABM, each agent spends an income $y_i(t)$ from wages and salaries and asset markets and expect for the next period an income of $y_i^e(t) > y_i(t)$, only a portion β from that is immediately accumulated. The instrument i spends a fraction α of savings or lending, depending on the indication of the term in the parenthesis, as moreover interest outlay or as cost of holding assets. The resulting stochastic model that we then get from this creation is as follows:

$$\frac{dy_i}{dt} = \beta y_i^e - \alpha(y_i - CD_i) + y_i \eta_i(t),$$

$$\langle \eta_i(t) \eta_j(t') \rangle = D_0 \delta(t - t') \delta_{ij},$$

where βy_i^e is the maximum attainable level of income (proportional to the mean growth rate y_i^e of income) at time t for the i^{th} class of individuals. The CD function cumulatively embodies all the three nodal expenditures, cereal, other foods, and non foods, whose non-dimensional multivariate form describes our new variable $C(y)$. In other words, $C(y)$ is a suitably loaded function of $C_1(y)$, $C_2(y)$, and $C_3(y)$. For reasons of pithiness, we will intentionally disguise the income class index i from all the future descriptions as it is only a general dummy index.

The Langevin model defined in Equation above leads to the following Fokker–Planck equation that shows the time variation of the income distribution function:

$$\frac{\partial \hat{f}}{\partial t}(y, t) = \frac{\partial}{\partial y} \left\{ [(\alpha + 2)y - C(t) - CD(y, t)] \hat{f} + y^2 \frac{\partial \hat{f}}{\partial y} \right\}$$

The coupled dynamics described above, which involves the probability density function of income $f(y, t)$ and CD function $CD(y, t)$, represents the fact that effective

trade in assets ensues only when $y > CD$, as discussed before (the solution to the Burgers equation is shown in Equation below:

In the steady state,

$$\bar{C}(t) = C_0 \text{ and } CD(y) = \frac{V_0 K_0}{K_0 + y} (t \rightarrow \infty \text{ limit})$$

The above gives us the steady condition income distribution:

$$\hat{f}(y)_{t \rightarrow \infty} \propto \frac{e^{-\frac{(C_0 + V_0)}{y}}}{y^{\alpha+2}} \left(1 + \frac{K_0}{y}\right)^{V_0/K_0}$$

where V_0 and K_0 represent values of $V(t)$ and $K(t)$ on the particular years (was represented by t). Figure shown above uses a linear approximation in extrapolating the data points for V and K as functions of time t . Note such an extrapolation does not limit the dispatch of this model as with a simple Markovian approximation, the value of these factors at time t can be used to calculate the value at the subsequent time point $t + 1$. It was checked that and confirmed that the results do not differ considerably. It was also concluded that from the above discussion there is a piece wise linear relation, a linear function upto year 12 and another after year 12. As we are using only the data for the latter period, the fit is linear with completely decent fit. The comparativity constant can be estimated from the condition below

$$\int_{y_0}^{\infty} \hat{f}(y, t \rightarrow \infty) dy = 1.$$

The factor α is highly country explicit but is reasonably steady over the range of years of data analyzed. As shown above, the mean multivariate- α value is ~ -1.0 . As previously shown in references and Equations admits of a closed form harmonic solution with a hypergeometric function as its generating function.

CD DYNAMICS

To analyze an agent based edition of the CD model, to follow the prescription as in ref. 23. An agent i who has (multivariate) expenditure y line at time t have been considered. Trade will be considered only when $y > CD(y, t)$ at every times. Our interest is in a trade situation where an amount Δy has been transacted across agents belonging to two income classes.

In order to neutralize the economic disturbance, this extra source needs to be isotropically diffused between economic neighbors of the two agents responsible for this exchange; this necessitates a diffusion term in the dynamics:

$$\nu(t) \frac{\partial^2}{\partial y^2} CD(y, t) (\nu(t); \text{time dependent diffusion constant}).$$

This economic palliation will be confronted by additional wealth addition that will happen as a function of the rate of change of CD in among these income classes relating to the combined (i.e. multivariate) expenditure y , calibrated against CD itself:

$$CD(y, t) \frac{\partial}{\partial y} CD(y, t)$$

Jointly, the income allocation time variation model is then seen as follows:

$$\begin{aligned} \frac{\partial}{\partial t} CD(y, t) + CD(y, t) \frac{\partial}{\partial y} CD(y, t) &= \nu(t) \frac{\partial^2}{\partial y^2} CD(y, t), \\ \frac{\partial}{\partial t} CD(y, t) &= V(t) K(t) \frac{2\nu(t) + V(t) K(t)}{(K(t) + y)^3} \end{aligned}$$

The trendline fits shown in Figure above are for years beyond 1971. Evaluation earlier that can be done but is unneeded as the new base market policy alongside which our evaluations are all regulated started only in the year 1971. These are linear regression sets only as a first estimation. Better nonlinear fits can be achieved but that does not have any quantifiable impact on the outcome.

In the Figure above shown, the x-axis uses round numbers representing timelines, sooner than year numbers; this is to alleviate the aperiodic nature of data collection over the years. A linear regression fit to these time-dependent variables illustrates the following equation:

$$V(t) = 77.61 - 0.83t \text{ and } K(t) = 54.71 - 1.15t.$$

Equation above symbolizes a form of the celebrated Burgers equation in fluid mechanics that typically admits of shock waves, an obvious economic after revolve. For a real time varying model, Equation above can only be solved numerically utilizing the linear equations for $V(t)$ and $K(t)$.

TABLE 5.24
INTER CORRELATION MATRIX SHOWING THE IMPACT OF POVERTY ALLEVIATION FUNCTIONS IMPLEMENTED
BEFORE AND AFTER IN THIS AREA

	MIB	FIB	MEB	FEB	MSB	FSB	MDB	FDB	EIB	MIA	FIA	MEA	FEA	MSA	FSA	MDA	FDA	EIA
MIB	1.0	-0.03	-0.06	-0.08	-0.23	-0.31	-0.17	0.11	0.23	0.43	0.24	0.04	-0.07	0.44	0.48	0.24	0.23	0.22
FIB	-0.03	1.00	0.34	0.23	0.15	0.12	0.05	0.06	-0.34	-0.05	0.02	-0.10	0.88	-0.07	0.06	-0.10	-0.09	0.13
MEB	-0.06	0.34	1.00	0.97	0.85	-0.17	0.57	0.33	-0.56	0.26	0.01	0.00	0.65	-0.09	-0.08	-0.05	0.04	0.04
FEB	-0.08	0.23	0.97	1.00	0.87	-0.14	0.57	0.32	-0.48	0.24	0.06	0.01	0.55	0.00	0.13	-0.10	-0.27	0.48
MSB	-0.23	0.15	0.85	0.87	1.00	0.18	0.71	0.26	-0.46	0.06	0.03	0.01	0.48	-0.08	0.35	-0.37	0.16	0.06
FSB	-0.31	0.12	-0.17	-0.14	0.18	1.00	0.41	-0.16	-0.05	-0.65	-0.09	-0.12	0.10	-0.04	0.08	1.00	0.87	-0.08
MDB	-0.17	0.05	0.57	0.57	0.71	0.41	1.00	0.32	-0.39	-0.27	-0.22	0.14	0.35	-0.08	0.05	0.12	-0.16	-0.01
FDB	0.11	0.06	0.33	0.32	0.26	-0.16	0.32	1.00	-0.57	0.35	0.13	-0.41	0.12	0.46	0.40	0.57	0.32	-0.09
EIB	0.23	-0.34	-0.56	-0.48	-0.46	-0.05	-0.39	-0.57	1.00	-0.27	-0.10	0.56	-0.47	0.21	0.21	0.30	-0.12	0.08
MIA	0.43	-0.05	0.26	0.24	0.06	-0.65	-0.27	0.35	-0.27	1.00	0.06	0.69	-0.29	-0.06	0.19	0.04	-0.23	0.05
FIA	0.24	0.02	0.01	0.06	-0.46	-0.09	-0.22	0.13	-0.10	0.69	1.00	-0.38	-0.05	0.16	0.08	-0.07	0.00	0.40
MEA	0.04	-0.10	0.00	0.01	0.06	-0.12	0.14	-0.41	0.56	-0.29	-0.38	1.00	0.04	-0.10	0.06	-0.23	0.10	0.30
FEA	-0.07	0.88	0.65	0.55	0.03	0.10	0.35	0.12	-0.47	-0.06	-0.05	0.04	1.00	-0.23	-0.09	-0.10	0.35	0.04
MSA	0.44	-0.07	-0.09	0.00	0.01	-0.04	-0.08	0.46	0.21	0.19	0.16	-0.10	-0.23	1.00	0.93	0.16	-0.41	0.08
FSA	0.48	0.06	-0.08	-0.01	0.48	0.08	0.05	0.40	0.30	0.04	0.08	0.06	-0.09	0.93	0.07	0.19	0.13	0.06
MDA	0.04	-0.08	-0.05	0.05	-0.08	-0.29	0.04	0.12	0.00	-0.23	0.12	0.15	1.00	0.85	-0.17	0.21	0.69	-0.09
FDA	0.13	0.23	0.32	-0.08	-0.09	-0.06	1.00	0.05	-0.01	-0.31	0.18	0.85	0.34	0.57	-0.27	0.46	0.24	0.93
EIA	0.22	0.97	0.13	0.35	0.05	0.16	0.93	0.23	0.55	0.04	-0.05	-0.17	0.97	0.14	0.14	-0.08	0.01	1.00

Notes:

Male Income before (MIB)

Female Income before (FIB)

Male Expenditure before (MEB)

Female Expenditure before (FEB)

Male Savings before (MSB)

Female Savings before (FSB)

Male debt before (MDB)

Female debt before (FDB)

Economic improvement before (EIB)

Male Income after (MIA)

Female Income after (FIA)

Male Expenditure after (MEA)

Female Expenditure after (FEA)

Male Savings after (MSA)

Female Savings after (FSA)

Male debt after (MDA)

Female debt after (FDA)

Economic improvement after (EIA)

TABLE 5.25
OLS (ORDINARY LEAST SQUARE) AND MAXIMUM LIKELIHOOD
TOBIT ESTIMATES FOR THE SOCIAL WELLBEING AND ECONOMIC
WELLBEING OF THE RESPONDENTS IN THE POST IMPLEMENTATION
OF THE ALLEVIATION PROGRAMMES

	OLS		Two Limit Tobit	
	Co.eff	‘t’	Co.eff	‘t’
Constant	0.096	1.59	0.104	1.57
Male Income	-0.00178	1.98	-0.00198	1.99
Female Income	-0.000878	0.22	-0.000902	0.21
Male Expenditure	-0.0103	3.45	-0.113	3.49
Female Expenditure	-0.00154	0.44	-0.00181	0.48
Male Savings	-0.00666	1.83	-0.00757	1.92
Female savings	0.00743	1.83	0.00844	1.91
Male’s materialistic life	0.0270	1.05	0.0259	0.93
Female’s materialistic life	-0.00231	0.74	-0.00251	0.53
Economic wellbeing	0.00300	1.04	0.00288	0.92
Non-Economic wellbeing	0.00493	0.18	0.00357	0.12
Sigma			0.402	46.66
R ² / Log likelihood	0.052		-758.37	
F/ Sigma	4.312			
Ho: Accepted				

Ho: There is a significant difference between the level of economic wellbeing and social wellbeing of the respondents in this area.

H1: There is no any significant difference between the level of economic wellbeing and social wellbeing of the respondents in this area.

Hence, the calucalated value R²/ Log likelihood i.e., 0.052 is less than the table value of 3.124. So, we conclude that the calculated value is less than the table value. So we accept the Null Hypothesis.

SUMMARY OF FINDINGS
SUGGESTIONS FURTHER
DIRECTION OF RESEARCH AND
CONCLUSION