Chapter V

CPR AND THE RURAL POOR

The Government has a two pronged approach, viz. Promoting economic growth and direct action towards poverty alleviation. The ultimate aim of economic growth must be the betterment of the living conditions of the poor. Poverty alleviation has been a natural policy agenda for more than 50 years. The latest estimate on poverty, based on NSS data, shows that poverty in India in 2017 was around 28 per cent. It indicates that the social objective has not yet been fulfilled, with 50 years of planned development in India. The concept of poverty is multi-dimensional, viz., income poverty and non-income poverty. It covers not only levels of income and consumption, but also health and education, vulnerability, risk and marginalization and exclusion of the poor from the mainstream of society. The relationship among poverty, environment and development is quite complex and not amenable to easy generalization. In a country like India too there is abig diversity in terms of a single perception of vicious circle (poverty –CPR degradation – poverty).

The poor are more dependent on common property resources such as fuel wood, dung manure, grass rope and thatched, grazing the cattle and so on. Therefore, it is important to understand how the CPR reduces the nature of poverty among the rural households, particularly, the landless labourers, marginal farmers and small farmers. The measurement of poverty can be made on the basis of either income or the minimum calorie intake norm, as suggested by the nutrition Expert committee. Economic studies of poverty have identified an income unit (per capita and household income) as being poor , if its income does not exceed the "Threshed level of income".

No previous study has been made by using CPR as a major source of income to the rural households, particularly tiny landholders in Tamil Nadu so far as to serve as the references. This is the first and major pioneering work involving CPR sources of income to the different occupational holders as well as among the

caste groups in Tamil Nadu State. This section is divided into two sub-sections, viz., (1) the estimation of poverty of sample households, and (ii) The degree of extent of poverty.

Estimation and extent of poverty in sample House holds

An attempt is made to estimate and assess the extent of poverty of rural households in Tamil Nadu in a precise form in this section. This study seeks to gauge the level and intensity of poverty in terms of income, by categorizing those living above the poverty line into three groups in terms of their household income, according to occupational holders as well as the caste groups, by including and excluding CPR sources of income. The groupings adopted by the previous study are followed in the present study. The three rings of poor and non-poor households in group 1 and 2 are in (Table 5.1 & 5.2).

Table 5.1

Three Rings of poor households or poverty spectrum

Sl.No.	Classification of households	Annual household income (Rs.) (Poverty line)
1.	Destitutes and very very poor	Below 7300
2.	Very poor	7300-14,600
3.	Poor	14,600-22,000

Source: Rural Development programmes and externalities: A study of seven villages in Tamil Nadu, Vol. III, primary data analysis, Planning commission, Govt. of India, 2002.

Table 5.2

Group – 2 Three Rings of non-poor households or poverty spectrum

Sl.No.	Classification of households	Annual household income (Rs.) (Poverty line)
1.	Marginally non-poor	22,000-36,000
2.	Better – off	36,000-50,000
3.	Rich	above 50,000

Source: Rural Development programmes and externalities: A study of seven villages in Tamil Nadu, Vol. III, primary data analysis, Planning commission, Govt. of India, 2002.

Measurement of Poverty

Measuring poverty permits an overview of poverty that goes beyond individual experiences. It presents an aggregate view of poverty at a point of time or over a substantial period of time. It enables a government of the individual community, to set itself yardsticks for judging actions. Comparison of the magnitude and severity of poverty can provide direct evidence of an economy's progress in raising levels of living of selected sample populations. The measures of poverty proposed in the economic literature fall broadly into two categories, viz. (i) There are measures that try to catch the extent of inequalities in some objective sense, usually employing some statistical measures of relative variation of income, and (ii) there are evidences that try to measure inequalities in terms of some normative measures, nation of social welfare so the that a high degree of inequality corresponds to a lower level of social welfare for a given total income.

In any study of poverty there are certain choices to be made. They are crucial because the estimate of poverty depends on the set of these choices. There are about half – a dozen such crucial choices. Some of them are poverty – line. Composition of prices and poverty measurement index. Poverty measurement should examine the degree or extent, the intensity and incidence of poverty.

Several criteria advanced as being desirable ones for a poverty measure are focus, symmetry, monotonicity, weak transfer, transfer, transfer-sensitivity, sub-group consistency and decomposability. From the past studies. it is not clear that not all poverty indices satisfy all these properties.

Measurement of poverty is thus attended by problems of pluralism – necessitating choice among competing contenders – logical consistency and ambiguity of interpretation. There can be no poor assumptions as to freedom from confusion in the field of enquiry, but the area of confusion can be narrowed down with some clarify of thought regarding purpose and context.

Hence in this study, both traditional and sophisticated poverty indices are employed to estimate the poverty level of rural households in Tamil Nadu State. They are:

Head – Count Ratio (Poverty – index Ratio).

Poverty – Gap Ratio (Povety – intensity Ratio).

Gini –Concentration Ratio.

Sen's Index (Poverty – Deprivation index).

Foster – Greer – Thorbecke index (Poverty – Generalized Deficit Ratio).

Head – Count Ratio(H)

The Head count Ration is the proportion of population in poverty, and is given by

$$H = Q/n$$

Where,

Q   =   number of poor[15] persons

N   =   total population

Head – count ratio clearly measures the incidence of poverty in a population. But it does not satisfy the monotonocity and transfer axiom. According to the monotonocity axiom, given other things, a reduction in income of a person below the poverty line must increase poverty. The head – count ratio measure gives the same incidence of poverty as long as income changes do not cut across the poverty line. The transfer axiom states that given other things, a transfer of income from rich to the poor must reduce poverty, but head-count measures do not consider this change.

Poverty – Gap Ratio (I)

Poverty – gap ratio measures the proportionate short fall of the average income of the poor from the poverty line. The larger the magnitude of the proportionate income-gap. The grater the intensity of poverty.

I   = $1 - \bar{Y}/z$

Y =   average income

Z =   poverty line

A seemingly mild requirement of a poverty index is that it should satisfy the focus axiom which requires the poverty measure to be insensitive (other things equal) to an increase in the income of non – poor persons. A second desirable property is that, other things being equal, a reduction in a poor person's income should not increase the value of the poverty measure. This is called the monotonicity axiom. A theird desirable property is the transfer axiom. This axiom demands that, other things being equal. A transfer of income from a person to a rich person should raise the value of the poverty-index. A weakened version of this axiom, the weak transfer axiom would require that a regressive transfer of the type just described should increase the value of the poverty-index, provided the beneficiary of the transfer continues to remain poor after the transfer. It is easy to see that both head-count ratio and the poverty gap-ratio satisfy the focus axiom, head-count ratio isolates both monotioncity and the weak transfer and that poverty-gap-ratio satisifies monotoncity while violating weak transfer. According to Sen. Both should have some role in the index of poverty. But H and I together are not sufficiently informative either, as neither gives adequate information on the exact income distribution among the poor.[17]

Gini-Concentration Ratio

There are several inequality indices which attempt to measure the divergence between the Lorenz-curve for a given income distribution and the line of perfect equality. The best known and most widely used among these is the Gini co-efficient.[18] The Gini co-efficient ratio quantifies the extent of inequality.[19]

In this study, the Gini-Concentration ratio is calculated based on the formula.

$$G = 1 + 1/n = Z\_N^2$$

Where,

      N   =   population size

      X   =   mean of variable (income)

      X1   =   income of the household

The Gini – coefficient varies between the limits of 0 (perfect equality) and 1 (perfect inequality) and the greater the departure of the Lorenz curve from the diagonal, the larger the value of Gini co-coefficient. This method is used to measure the inequality of various occupational categories and caste groups with respect to income.

Sen's Index(P's)

Sen (1976)[20] through income general tradition, presents a somewhat different formulation of poverty measure (Ps) for a large number of the poor, as given below:

$$Ps = H [R + 1 – R) G]^{21}$$

Where,

H = Head – count Ratio

R = Poverty –gap Ratio

G = Gini ratio of the income distribution of poor

Sen's poverty index lies between 0 to 1. If $\rho=0$ this index reveals that every one has an income greater than 'z' ie poverty – line and if $\rho=1$,every one has income less than 'z' ie poverty line. In practice, ps will never take these two extreme values. But Sen's (1976) measure and its variants rely on rank order weight fail to satisfy the basic condition that an increase in sub-group poverty must increase total poverty.[22]

Foster, Greer and Thorbecke's Index (FGTI)

The advantage of using FGT index class of poverty.[23] measures is that these measures are additively decomposable, i.e. if population is divided into mutually exclusive population groups. Then poverty measures for total population can be written as weighted average of population grouping, poverty measures with population share as weight Foster, et al. Have presented a simple new poverty measure i.e(i) it is additively decomposable with population share-weights (ii) satisfies the basic properties proposed by Sen and (iii) is jusitified by a relative deprivation.

FGT measure is a combination of inequality measure, the head- count ratio and the income – gap ratio in a fashion similar to Sen's (1976).Hence, FGT measure is defined as follows:

$$1\lambda = 1/N \sum_{I=1}^{n} [Y^*-Yi/Y^*]^{\chi}, Yi < Y^*, \chi \geq 0$$

Where,

N = total population of which 'm' poor

Z = the poverty line

$Y1$ = per capita income

χ = Parameter inequality aversion

Higher value of χ the greater the weight given to the poorer person. When $\chi = 0$, P0 is the head-count ratio, where $\chi = 1$, P1 is the poverty-gap ratio and $\chi 2 = P2$ is the distribution sensitive measure.

Results and Discussion

I A. Analysis on Poor House holds by excluding CPR Income

The percentage of sample households below the poverty line is 50 per cent by excluding the CPR income to the total house hold income (table- 5.3).

Table 5.3

Poverty Spectrum of poor households at current prices by excluding CPR income

Occupational Holders	Destitutes and very very poor (Below 7300)	Very poor (7300-14,600)	Poor (14,600-22,000)	Total Household poor
Landless Labourer	-	25 (35.72%)	17 (64.28%)	42 (60.0%)
Marginal Farmer	5 (8.33%)	9 (15.00%)	11 (76.67%)	25 (41.67%)
Small Farmer	7 (17.5%)	-	15 (37.5%)	22 (55.00%)
Medium/ Large Farmer	4 (13.33%)	-	7 (86.67%)	11 (36.67%)
Overall	16 (8.00%)	34 (17.00%)	50 (25.00%)	100 (50.00%)
Caste groups				
Kattunayakan	2 (2.81%)	19 (26.76%)	17 (23.94%)	38 (53.52%)
Kurumba	5 (6.17%)	22 (27.16%)	15 (18.52%)	42 (51.85%)
Urlikurumba	6 (12.5%)	-	14 (29.17%)	20 (41.67%)

Source: Computed

Note: Figures in parenthesis indicate percentage to the total households

The occupations analysis shows that 60 per cent of landless labourers, 55 percent small farmers, 41.67 percent of marginal farmers, 36.67 per cent of medium farmers/ large farmer below the poverty line. It is inferred from the results that a majority of poverty- ridden households are landless labourers, small and marginal farmers, who are the 'target groups' and they really need assistance from the government sources. The reason is traced to the fact that a majority of the poor are dissevers and this is revealed from the field observation that the people consumed out of borrowing to a sizable extend, Further, there is the problem of heavy seasonal unemployment, which the survey data corroborates. Added to this the characteristic disadvantage of the labourers in the wage bargain evident from the field observation. This group of marginal farmers and small farmers, who have little land continue to live below the poverty line, since the average size of marginal holding of 0.40 hectare of land is too meagre to eke out a living. There is a growing pauperization of the Indian peasantry. Among the different categories poor interms of occupational status, mean 64.28 per cent in poor 35.72 per cent in very poor of land less labourers, 76.67 per cent in poor and 15 per cent very poor in marginal farmer 37.5 per cent and are poor 48 per cent remaining of 17.5 small farmers are destitute category and very very poor in on the whole, it is seen that the percentage poverty ridden households are the highest in the case of landless labour, small farmers and marginal farmer as compared to medium farmer and large farmers.

When the results are compared among the caste groups, by excluding the CPR income, more than 53 per cent of Kattunayakan caste, kurumba caste 41.67 per cent of urlikurumba group are the below poverty line. It means that he poverty households are relatively higher in the case of Kattunayakan caste compared to kurumba caste and urlikuruma caste groups. Among the caste groups, 26.76 per cent and 23.94 per cent of Kattunayakan caste and 27.16 per cent and 18.52 per cent of kurumba caste group very poor and poor , respectively. And the remaining the urlikurumba caste destitute 29.17 recent are poor and 12.5 per cent are and very very poor on the whole, it could be seen that the percentage of poor is relatively higher in the case of Kattunayakan caste group, when compared to others.

I-B Analysis on poor by including CPR income

The percentage of sample households below the poverty line has declined from 50 per cent to 15 per cent,by including the CPR income to the total household income. (Table 5.4) It means that about 35 per cent of sample households have crossed the poverty line mainly due to CPR income. When the results are compared among the occupational status, the percentages of poor below the poverty line have reduced from 60 per cent to 30 per cent for landless labourers, from 41.67 per cent to 11.67 per cent for marginal farmers, from 55 per cent 5 per cent for small farmer and from 36.67 per cent to nil for medium large by including the CPR income of their households income. It is also an interesting fact to note that the percentage of poor has declined from 17 per cent to 1.5 per cent for very poor group and from 25 per cent to 13.5 per cent for poor group.

Table 5.4

Poverty Spectrum of poor households at current prices by including CPR income

Occupational Holders	Destitutes and very very poor (Below 7300)	Very poor (7300-14,600)	Poor (14,600-22,000)	Total Household poor
Landless Labourer	-	3 (4.28%)	18 (25.71%)	21 (30.00%)
Marginal Farmer	-	-	7 (11.67%)	7 (11.67%)
Small Farmer	-	-	2(5.00%)	2 (5.00%)
Medium/ Large Farmer	-	-	-	-
Overall	-	3(1.5%)	27 (13.5%)	30 (15.00%)
Caste groups				
Kattunayakan	-	3(4.22%)	11 (15.49%)	14 (19.72%)
Kurumba	-	-	13 (16.05%)	13 (16.05%)
Urlikurumba	-	4 (8.33%)	7 (14.58%)	11 (22.92%)

Source: Computed
Note: Figures in parenthesis indicate percentage to the total households

Among the different caste groups the percentages of house holds below the poverty line income have declined from 53.52 per cent to 19.72 Kattunayakan caste from 51.85 per cent to 16.05 per cent kurumba caste group and from 41.67 per cent to 22.92 per cent for urlikuruba caste group, due to the CPR income. It is interesting to observe that the percentages of poor households have reduced to a

greater extent at 36 per cent for kurumba group 34 per cent for Kattunayakan caste group and 29 per cent for urlikurumba caste group, because of the flow of CPR income in their households. It means that the kurumba caste group, who have generally been landless labourer, and tiny land holders are able to reap a major benefits from CPR sources.

IC.Analysis on Non – poor Households by excluding CPR income

The result of the analysis is presented in table 5.5 16.5 per cent of households belong to marginally non-poor, 27 per cent belong to better-off group and 6.5 per cent belong to rich group by excluding CPR income.Among the occupational status, the percentage of non-poor households above the poverty line 4.28 per cent for landless labourers, 50 per cent for marginal farmers. 92.5 per cent for small farmers, and 100 per cent for larger/medium farmers. It is inferred from the results that more than 85 per cent of small farmer and medium/large farmers are non-poor categories. But a small fraction of households with non – poor category could be seen in the case of marginal farmers, and it is the least in the case of landless labourers at 4.28 per cent.

About 49.30 per cent of Kattunayakan group 54.32 per cent of kurumba caste group and 66.67 per cent of urlikurumba caste group of households have crossed the poverty line income. It is clear from the results that more them 55 per cent of non-poor households are dominated by the relatively higher caste groups like kurumba and urlikurumba castes.

ID.Analysis on Non –poor Households by including CPR income

The results are appended in (table 5.5 & 5.6). It could be seen from the results that the percentage of house holds above the poverty-line have shifted from 16.5 per cent to 28 per cent for marginally non-poor group, from 27 per cent to 25 per cent for better-off group and from 6.5 cent to 21 per cent for rich group, due to inclusion of CPR income to their total household income.When the results are compared among the occupational status, the percentage of non-poor households have increased from 4.28 per cent to 60 per cent landless labourers, 50 per cent to

61.67 per cent for marginal farmers, 92.5 cent to 97.5 per cent for small farmer, and there is no change in the case of medium /large farmers.

Table 5.5

Spectrum of non-poor households at current prices by excluding CPR income

Occupational Holders	Marginally non-poor (Rs.22000-36000)	Better-off-(Rs.36000-50000)	Rich (above 50000)	Total Household non-poor	Grand Total Poor & Non Poor
Landless Labourer	-	2 (2.86%)	1 (1.43%)	3 (4.28%)	70 (100)
Marginal Farmer	17 (28.33%)	13 (21.67%)	-	30 (50.00%)	60 (100)
Small Farmer	12 (30.00%)	25 (62.5%)	-	37 (92.5%)	40 (100)
Medium/ Large Farmer	4 (13.33%)	14 (46.67%)	12 (40.00%)	30 (100)	30 (100)
Overall	33 (16.5%)	54 (27.00%)	13 (6.5%)	100 (50.00%)	200 (100)
Caste groups					
Kattunayakan	10 (14.08%)	11 (15.49%)	14 (19.72%)	35 (49.30%)	71 (100)
Kurumba	17 (20.99%)	12 (14.81%)	15 (18.52%)	44 (54.32%)	81 (100)
Urlikurumba	7 (14.58%)	9 (18.75%)	16 (33.33%)	32 (66.67%)	48 (100)

Source: Computed

Note: Figures in parenthesis indicate percentage to the total households

Table 5.6

Spectrum of non-poor households at current prices by including CPR income

Occupational Holders	Marginally non-poor (Rs.22000-36000)	Better-off-(Rs.36000-50000)	Rich (above 50000)	Total Household non-poor	Grand Total Poor & Non Poor
Landless Labourer	26 (37.14%)	16 (22.86%)	-	42 (60.00%)	70 (100)
Marginal Farmer	19 (31.67%)	15 (25.00%)	3 (5.00%)	37 (61.67%)	60 (100)
Small Farmer	11 (27.5%)	12 (30.00%)	16 (40.00%)	39 (97.5%)	40 (100)
Medium/ Large Farmer	-	7 (23.33%)	23 (76.67%)	30 (100.00%)	30(100)
Overall	56 (28.00%)	50 (25.00%)	42 (21.00%)	150 (75.00%)	200(100)
Caste groups					
Kattunayakan	24(33.80%)	15 (21.13%)	19 (26.76%)	58 (81.69%)	71 (100)
Kurumba	19 (23.46%)	22 (27.16%)	32 (39.51%)	73 (90.12%)	81 (100)
Urlikurumba	17(35.42%)	15 (31.25%)	10 (20.83%)	42 (87.5%)	48(100)

Source: Computed

Note: Figures in parenthesis indicate percentage to the total households

Among the caste group analysis on non-poor indicates that the percentage of non-poor households have increased from 49.30 per cent to 81.89 per cent for Kattunayakan caste group. 54.32 per cent to 90.12 per cent for kurumba caste group and 66.67 per cent to 87.5 per cent for urlikurumba caste group due to CPR income.

The following observations are inferred from the analysis of the households by including CPR Income

On the whole, it is an interesting fact to note that the CPR income has given greater benefit to the standard of living of the rural households, particularly landless labour, marginal farmer and small farmer and similarly for the low caste groups. It is analyzed as follows:

(i) The spectrum of non-poor house holds analysis indicates that about 12 per cent of marginally non-poor 2 per cent of better-off and 15 per cent of rich group, have crossed the poverty line and gained due to CPR income. From the analysis of spectrum of poor households, the percentages of households that have crossed the poverty line due to the extent of 15 per cent in the case of very poor and 11.5 per cent in poor group, due to CPR income alone.

(ii) Among the occupational holders, about 56 per cent of landless labourers, 12 per cent of marginal farmers, and 55 per cent of small farmers have been benefited and crossed the poverty line due to CPR income. It is inferred that the weaker sections like landless labourers, marginal farmers and small farmers have taken major advantages from CPR sources.

(iii) Among the caste groups, nearly 32 per cent of Kattunayakan caste group. 36 per cent of kurumba caste group and 21 per cent urlikurumba caste group have crossed the poverty line since due to CPR income alone. It means that the kurumba caste group takes the major advantages from this source as compared to other caste groups.

II.A Head-count Ratio

As per (table 5.7) the percentages of poor for the entire sample rural households are 62 per cent by excluding CPR to the total households income and it has reduced to 19 per cent by including CPR income. It means that about 43 per cent of poor crossed the poverty line mainly due to CPR income. An occupationwise analysis of poverty by head-count ratio indicates that the percentage of poor have reduced from 87 per cent to 31 per cent for landless labourers, from 66 per cent to 24 per cent for marginal farmers and from 54 per cent 17 per cent for small farmers, from 22 per cent to 2 per cent for medium/large farmers including CPR income to their total households income. It is inferred from the results that the percentage of poor has reduced to the extent of 56 per cent for land less labourers, 42 per cent for marginal farmers and 37 per cent for small farmers 20 per cent for medium/large farmers due to the generation of additional income from the CPR sources, such as collection of fuel wood, dung manure, fodder, fishing thatched and so on.

When the results are compared according to caste groups, it is observed that the percentage of poor has declined from 47 per cent to 15 per cent for the Kattunayakan caste group, from 39 per cent to 11 per cent for the kurumba caste groups and from 62 per cent to 11 per cent for the urlikurumba caste groups. It is inferred from the results that the percentage of poor has declined by 32 per cent, 28 per cent and 51 per cent for the Kattunayakan caste, kurumba caste and urlikurumba caste groups respectively, due to the CPR income.

The most affected group is the bottom layer of the population especially the agricultural labourers, marginal farmers and small farmers. Lucrative non-farm employment opportunity may not be adequately available for these group of population. In addition, low wage and illiteracy are likely to accentuate the level of poverty. The prevalence of poverty among the marginal farmers and small farmers makes us to infer that the land ownership of land alone need not raise a farmer above poverty line. It is true that the majority of the poor lack land. It is not true to the same extent that the land ownership necessarily precludes one from poverty.

Table 5.7

Concentration of Poverty

Category	Head count Ratio		Poverty – Gap Ratio		Gini-Concentration Ratio		Sen's Index	
	Excluding CPR	Including CPR	Excluding CPR	Including CPR	Excluding CPR	Including CPR	Excluding CPR	Including CPR
Landless Labourer	0.87	0.31	0.29	0.15	0.44	0.27	0.36	0.15
Marginal Farmer	0.66	0.24	0.35	0.19	0.44	0.27	0.32	0.25
Small Farmer	0.54	0.17	0.22	0.09	0.37	0.15	0.22	0.03
Medium/ Large Farmer	0.22	0.02	0.24	0.00	0.17	0.00	0.05	0.00
Overall	0.62	0.19	0.34	0.11	0.35	0.17	0.29	0.04
Caste groups								
Kattunayakan	0.47	0.15	0.29	0.07	0.27	0.07	0.16	0.03
Kurumba	0.39	0.11	0.35	0.14	0.33	0.11	0.25	0.02
Urlikurumba	0.62	0.11	0.29	0.17	0.42	0.33	0.42	0.09

Source : Computed

Although poverty is seen among all the religious groups and castes, many studies have indicated that poverty is 'caste specific' and is mainly prevalent among the scheduled caste and other backward castes.[24] in a way for all practical purposes, the poor are the scheduled castes.

As the percentage of scheduled caste and most backward households is predominant among the poor sample households, it can be safely concluded that the bulk of the poor consists of these low caste people. The majority of backward caste people are comparatively 'well-off' and enjoy a better standard of living than a most backward caste and schedule caste groups.

One may observe that despite various concessions from the government since 1970s, these under privileged sections have not been able to come out of their economic and social misery. The concentration of wealth and percapita status at different levels is associated with the hierarchical placements of the caste groups. Also it could be seen that occupationally also, the landless labourers, marginal farmers and small farmers are at a disadvantage as compared to others. Thus, one can witness the fact the economic and social disabilities of the poorer segments merge in the sense that the most of the scheduled caste people are the agricultural labourers.

The head-count ratio has some demerits as the measure of poverty should increase when income of the poor household decreases (monotonicity axiom or when income of a poor household in transferred to a less poor household(the transfer axiom), But one wishes the measure to take into account the distribution of income among the poor, and not simply to indicate how many people are poor.

II B.Poverty-gap Ratio

The poverty-gap ratio considers both intensity and incidence. The aggregate and average gaps have something to do with the measurement of the extent of poverty. But the poverty-gap ratio measures the proportionate gap between the average income of the poor and the poverty line income.

The poverty-gap ratio shows that the intensity of poverty is moderate. (table. 5.7) the occupations with the highest head count indices also have the largest poverty gap, in both including and excluding CPR income. The level of poverty in terms of this measure for the sample households is 0.34 by excluding CPR income and it has declined 0.11 by including the CPR income. It is inferred that the average poor person is below the poverty – line to the extent of more than 34 per cent of the poverty – level income by excluding CPR income and 11 per cent by including the CPR income. It is high in two occupational groups. These ratios are 0.29 and 0.35 by excluding the CPR income and 0.15 and 0.19 by including CPR income for the landless labourers and marginal farmers respectively. It is less than 0.22 and 0.24 by excluding the CPR income and less than 0.09 and nil by including the CPR income for the small farmers and medium/large farmers respectively. But in general the level of poverty in the measure of poverty-gap ratio for all the occupational groups has declined.

When the poverty-gap is analysed among the caste groups, it is highest for two caste groups, as compared to the entire sample household measure of 0.34 the ratios are 0.35 by excluding the CPR income. However, the measure is less than 0.30 for Kattunayakan caste and urlikurumba caste each respectively by excluding the CPR income and 0.07 and 0.17 for Kattunayakan caste and urlikurumba caste respectively by including the CPR income. It is inferred from the results that the level of poverty in the measure of poverty-gap ratio for all the caste groups have declined drastically by adding CPR income. In other words, the average poor person is below the poverty line to the poverty level income to the extent of 17 per cent in the case of urlikurumba caste group, 14 per cent kurumba caste group and 7 per cent for Kattunayakan caste group by including the CPR income.

That the poverty indices require aggregation of individual deprivation usually expressed as equivalent to poverty-gaps. The poverty-gap ratio is in sensitive to the transfer of income between the persons who are poor and continue to be poor, even after the transfer. It is also insensitive to the number of people sharing the gap. It does not take into account the inequality among the poor.[25]

IIC.Gini – concentration Ratio

One of the objectives of the present study is to measure the inequality in the distribution of income by including and excluding CPR income among the occupational holders as well as the caste groups. In terms of Gini-Concentration Ratio. The results are presented in table-5.7 comparing the above measure interms of occupational holders, for the entire sample households is 0.35 by excluding CPR income which has declined to 0.17 by including the CPR income.

The landless labourers marginal farmers and small farmers have more than 0.30 concentration ratio by excluding the CPR income and more than 0.13 by including the CPR income. However, this ratio is 0.17 by excluding CPR income and nil by including CPR income for the medium/large farmers.

The inequality has reduced from 0.44 to 0.27 for landless labourers, from 0.44 to 0.22 for marginal farmers from 0.32 to 0.15 for small farmers and from 0.17 to nil for medium/large farmers between the excluding and including CPR income.

When the Gini-Concentration Ratio is analysed in terms of caste groups, it is an interesting observation to note that the ratio has declined from 0.42 to 0.33 for urlikurumba caste group, from 0.33 to 0.11 for kurumba caste group from 0.27 to 0.07 for Kattunayakan caste group by excluding and including CPR income. The above analysis (G.C.Ratio) indicates that the inequality is relatively higher for kurumba caste and Kattunayakan caste groups. But in general, there is reduction of inequality by including CPR income to the total house hold income, irrespective of occupational and caste groups. It is clear from the results that the existence of inequality is due to movement between the sector, income, than due to more increased inter-sectoral stratification.

IID. Sen's Index

Sen's poverty measure is made up of the head count ratio (H) multiplied by poverty gap ratio(R) and augmented by the Gini Ratio(G) of distribution of income among the poor weighed by (1-R),i.e. weighed by the ratio of mean income of the poor to the poverty line income level. Sen has employed two

approaches to axiomatise on income / poverty-gap distribution. In the first approach, he has used personal welfare conceived ordinal terms. In the second approach.[26] the author has used a more direct approach by employing income-gaps and weighing them by ordinal ranks. The second approach is used for the present study.

The value of Sen's index lies between zero and unity. It means that every one has an income greater than 'Z' (poverty line) $\rho=0$; and every one has zero income if, $\rho=1$. But in practice, the value will be between 0 and 1. Table 5.7. shows that the percentage of poor for the entire sample rural households is worked out as 29 per cent by excluding the CPR income and 4 per cent by including the CPR income. An occupation wise analysis indicates that 36 per cent of rural households among landless labourers is below the poverty line, which is the highest among the different occupational holders and it is followed by 32 per cent by the marginal farmers. However, the percentage of poor in small farmers (22 per cent and 5 per cent for medium /large farmers is below the pooled poverty line 29 per cent by excluding the CPR income.

It is interesting to note that the percentage of poor household has declined from 29 per cent to 4 per cent by including the CPR income for the entire sample households. An occuptionalwise analysis indicates that the percentage of poor has reduce from 36 per cent to 15 per cent for landless labourers,from 32 per cent to 25 per cent for marginal farmers. 22 per cent 3 per cent for small farmers. And from 5 per cent to nil per cent for medium/large farmers. By including CPR income. It is clear from the results that on an average 25 per cent of the poor households have crossed the poverty line due to the flow of income from CPR sources. Similarly, about 21 per cent of landless labourers 19 per cent of small farmers, and 7 per cent of marginal farmers and 5 per cent of medium/large farmer have crossed the poverty line, because of CPR income, such as fishing, fodder, fuel-wood collection, dung manure thatched and grass rope making, timeber collection and so on.

From the castewise more analysis on the above measure it is shown that the percentage of poor has declined from 16 per cent to 3 per cent for

Kattunayakan caste groups, from 25 per cent to 12 per cent for kurumba caste group, and from 42 per cent to 9 per cent for urikurumba caste group, by including CPR income. In other words about 13 per cent of Kattunayakan caste group , 23 per cent kurumba caste group 33 per cent of urlikurumba caste group have crossed the poverty line mainly because of flow of CPR income. The results indicate that the CPR income has given good impact in showing the betterment of in their standard of living, particularly for the low caste people such as kattunayaagan caste and kurumba caste and for the low occupational holders such as landless labourers, marginal farmers and small farmers.

The above data analysis shows that the level of poverty has declined from head-count ratio to poverty gap ratio and the poverty gap ratio to Sen's index of poverty for all categories of occupational holders as well as the caste groups. According to Sen's index of poverty, the levels of poverty from 15 per cent 25 per cent among the landless labourers, marginal farmers and small farmers and from 16 per cent to 42 per cent among the scheduled caste, most backward caste and backward class groups, have reduced mainly because of CPR income. This conclusion coincides with the observation made in the earlier section. It is a surprising fact to note that the percentage of poor has declined from 5 per cent to 0 per cent for medium/large farmers by including CPR income for the medium/large farmers.

Foster, Greer Throbecke Index (FGT Index)

The FGT class of measure subsumes all the measures discussed above and provides distributionally sensitive measures through the choice of the parameters λ.The larger is the λ, the greater is the weight given by the index to the severity of poverty. The FGT takes into account the dimension of poverty, incidence and inequality. The FGT index treats poverty-gap ratio and parameter λ inter ring the power of that ratio.(I λ).

I λ is equivalent to the incidence ratio, when $\lambda = 0$; and poverty-intensity ratio when $\lambda = 1$. The index with $\lambda = 2$ is found similar to Sen's index as it considers incidence, intensity and inequality of dimension of poverty. After a

careful examination of the merits of FGT index, it is decided to employ FGT index for the whole sample population. By excluding the medium and large farmers. The results of the FGT index is place in table-5.8.

Table 5.8

FGT Index value for all sample households
(excluding medium and large farmers)

Stage	Particulars	Excluding CPR Income	Including CPR Income
I	When Lambda is '0'	0.51	0.16
II	When Lambda is '1'	0.27	0.19
III	When Lambda is '2'	0.33	0.03

Source : Computed

It is inferred from the results that when λ = '0', the FGT indices are 0.51 and 0.16 when λ =1, the FGT indices are 0.27 and0.19 and when λ = 2, the FGT indices are 0.33 and 0.03 between the excluding and including the CPR income.

It is interesting to note that the values of λ for the entire sample households have low incidence, intensity and inequality of poverty, by including CPR of income.

The FGT poverty index has declined from 33 per cent to 3 per cent for the entire sample households (excluding medium farmers and large farmers), mainly due to the flow of CPR income. It means that the poverty is negligible i.e., income of the most of the poor is not far away from the poverty line by including CPR of income. The results agree with the findings of Tendulkar and Jain. Thus, the value of poverty estimates discussed with the help of different poverty measures, exhibits that the incidence, and inequality of poverty among the "target groups" in Tamil Nadu state are negligible, by including the CPR of income.