CHAPTER VI

FINDINGS AND CONCLUSIONS

Although at the national level estimation of poverty have been done in general yet no detail and comprehensive studies had so far been conducted on the estimation of poverty and inequalities among the rural population of Nagaland both at the national as well as at the state level. Thus, the basic objective of this research was to estimate poverty and inequalities of the rural people of Nagaland. The extent of poor amongst the sample population have been derived based on both sample norms and compared it with the NSSO norms of the State and Country. Then the extent of inequalities in the distribution of calorie intake and income (PCTE) that existed among the rural population are also examined in detail. Moreover, the levels of different socio-economic indicators of the study area, which have direct bearing on poverty of the rural population have been empirically analysed. The summary of important findings of the study is given below in detail.

6.1: SOCIO-ECONOMIC PROFILE:

(i) The indicators of demographic characteristics show that Wokha district has the highest decennial population growth rate with 95.01% as against the state growth rate of 69.44% in 2001. In Wokha the average household size is 6.23 persons, which is higher than the state average of 6.1 persons in 2001. Further, based on the data collected from the respective village councils of the sample villages; it was found that the average household size is 7.44 persons.

However, based on the sample household data, the average household size is 3.97 persons only. Thus there is no conformity in the data relating to household size. If we accept the estimated household size generated from the present sample household data, it may be inferred that the high population growth rate of the district as indicated by 2001 census may be an exaggerated figure which requires a separate indebt study.

Among the villages, Bhandari has the largest family size with 5.4 persons, followed by Yunchuchu, Longsa and Sunglup with 4.67, 3.97 and 3.81 persons respectively.

(ii) A distinctive demographic characteristics that emerge from the study is, the proportion of female population are significantly higher than the male population, which differs from the State’s and the Country’s sex ratio. This fact has been confirmed by the household sample data estimates of 1284 female per 1000 males. Village-wise data shows that Longsa village has the highest sex ratio of 1443 females per thousand males, while Bhandari village has the lowest sex ratio of 800 female per thousand males.
(iii) The household data reveals that the literacy rate is 73.25%, which is lower than the district literacy rate of 81.28% but higher than the state literacy rate of 67.11%. Among the villages, highest literacy rate ranges from 86.11% in Bhandari to 56.76% in Sunglup. Gender-wise analysis shows that male has higher literacy rate of 83.92% than female with 64.48%. Among the villages, Bhandari shows the highest male literacy rate of 92.59%, while Yunchuchu exhibits the highest female literacy rate of 73.91%.

(iv) The development of educational infrastructure in the sample villages is far from satisfactory. Altogether, there are 8 schools ranging from primary to middle school levels, yet, there is a wide variation in the distribution of these institutions among the villages indicated by the fact that Longsa has 4 schools, Sunglup with 2 schools, Yunchuchu and Bhandari having 1 school each. The teacher-student ratio for the sample village is 1:10, which is better than the district and the state ratio of 1:20 and 1:21 respectively.

(v) In regard to the availability of public health care facilities, each sample village has 1 dispensary that caters to the health care need of the people. Further, on an average 1 medical personal (Nurses/compounders) serves 809.44 people which is better than the district ratio of 1:947.63 and state ratio of 1:945.17. However, it was found that none of the dispensary are looked after by doctors.

(vi) Among the many basic needs for human-well being, housing and sanitation facility are of vital importance. The study reveals that none of the population is without shelter. However, the quality of housing differs among the households. On an average, only 6.06% of the household resides in pucca house, which is lower than the district average of 18.90%. While the households residing in semi-pucca houses account for 27.27%, which is lower than the district average of 59.06%. This implies that majority of the households reside in Kutchahouses (66.67%). Further, only 29.29% of the sample household has proper sanitation as against 63.38% of the district and 57% of the state averages. This implies that more than two-third of the household live in poor quality house and inadequate sanitation.

Among the villages, only Sunglup and Longsa have a few household residing in pucca houses (16.67% and 5.88% respectively), whereas, in other villages there is no evidence of pucca house. The highest proportion of semi-pucca houses is in Yunchuchu with 44.44%. It is followed by Sunglup, Longsa and Bhandari with 30%, 27.94% and 8.33% respectively. Among the villages, Sunglup has the highest percentage of proper sanitation with 41.67% while Longsa lies at the bottom with only 25% of its households having proper sanitation.
The result of cross section assessment of the average calorie intake per person per day by age group, village, gender, sex-wise and occupation-wise head of the households shows the following result.

(i) On an average, the per capita calorie intake is estimated at 2441.92 Kcal for the sample population. This average is higher than the NSSO estimate of 2047 Kcal per person for the National rural areas and 2044 Kcal per person for the State rural areas by 19.29% and 19.47% respectively.
(ii) The age-wise average calorie intake shows that it increases from age 1 year and less to 40-49 years, thereafter it declines because of the obvious reason.

(iii) The average calorie intake per person per day among the female population is 2453.16 Kcal that is marginally higher than the male population average of 2427.48 Kcal by 1.06%.

(iv) Among the villages Sunglup and Bhandari with an average of 2613.65 Kcal and 2480.59 Kcal, respectively, are higher than the sample average (2441.92 Kcal) by 7.03% and 1.58% respectively. On the other hand, Longsa and Yunchuchu villages with an average calorie intake of 2428.59 Kcal and 2318.97 Kcal respectively, are lower than the sample average by .55% and 5.03% respectively.

The average calorie intake by gender shows that male average is higher than that of female average in Longsa and Bhandari villages by 1.07% and 2.11% respectively. Whereas, in Sunglup and Yunchuchu villages, the average calorie intake of female is higher than male by 5.15% and 19.52% respectively.

(v) The per capita calorie intake per day by the sex-wise head of household shows that the calorie intake of female-headed household is higher than male headed household by 9.78%. Among the villages, the female headed households in Longsa, Sunglup and Yunchuchu have averages that are higher than their respective male headed household by 15.15%, 17.92% and 7.28% respectively. Thus, it is only in Bhandari the average calorie intake is higher in male headed households than female headed households by 21.18%.

(vi) The estimates of the calorie intake by the occupation-wise head of the household reveals that households headed by farmers have higher averages than the service headed household by 1.05%. The inter-village variation points that in Yunchuchu, Sunglup and Bhandari the households headed by farmers have higher averages than the service headed household by 25.9%, 0.66% and 25.21% respectively, while in Longsa the average calorie intake of service is higher than agricultural headed household by 0.37%.

6.3: THE ESTIMATED MONTHLY PER CAPITA EXPENDITUR (PCTE):

The assessment of the average monthly per capita expenditure (PCTE) by village, gender, sex-wise head and occupation-wise head of the household shows the following result.

(i) On an average, the monthly per capita expenditure for the sample population is Rs. 942.66 (at 2005-06 prices), which is higher than the NSSO estimation of Rs. 558.78
(2004-05 prices) per person per month at National level by 69% but lower than Nagaland state average of Rs. 1010.81(2004-05 prices) per person per month by 7%. The food items accounts for 77% while non-food items account for 23% of the total monthly per capita expenditure (PCTE).

(ii) The village wise result shows that Longsa has higher average PCTE than the sample average by 0.79%, while Yunchuchu, Sunglup and Bhandari have lower averages than the sample average by 10.38%, 8.05% and 2.35% respectively. The share non-food item on monthly per capita expenditure in Longsa village is 25% which exhibits the highest among the villages. While in Sunglup, the share food items on per capita monthly expenditure is 87% which is the highest among the selected villages.

(iii) The sex-wise head of the household analysis reveals that male headed household is having higher averages than both the female headed household and the sample averages by 2.26% and 0.33% respectively. Among the villages, Yunchuchu exhibit highest average that is higher than the over all averages of the female headed households by 5.6%, while Bhandari shows the lowest monthly PCTE that is lower than the corresponding average by 28.79%. Among male headed households, Bhandari exhibits the highest average that is higher than the average male headed household by 8.17%, while Yunchuchu village have the lowest average which is lower than the corresponding average by 6.97%.

Moreover, the analysis also shows that the female headed households in Sunglup and Longsa spend higher proportion of their monthly PCTE on food than male headed households, while in Bhandari and Yunchuchu, male headed household spend higher proportion of their monthly PCTE on food items than female headed households.

(iv) The analysis on occupation-wise head of the household shows that households headed by Service (Rs. 999.41) have higher average than the sample average by 6.06% and agricultural headed household by 4.1%.

Among the service headed villages, Longsa exhibit higher average than the corresponding average by 2.49%, while Bhandari village shows a lowest average that is lower than the corresponding average by 13.24%. In regard to the allocation of monthly PCTE on food and non-food items among service headed households, Sunglup village spends highest percentage of PCTE on food items (80.63%).

Among the agricultural headed households, Bhandari exhibit a higher average than the corresponding average by 8.88%, while Yunchuchu villages have the lowest
average that is lower than the corresponding average by 8.6%. Furthermore, Bhandari spends highest percentage of monthly PCTE on food items with 85.41%, while the expenditure on food items is lowest in Longsa with 75.35%.

6.4: ESTIMATION OF RELATIONSHIP:

The relationship between the per capita calorie intake per day with the size of the family, calorie intake and income/PCTE and PCTE and family size have been examined and the result reveals the following relationship.

(i) The correlation coefficient between the average per capita per day calorie intake and family size shows that there exist a negative relationship ($r = -0.703$). However, on calculating the probable error, it was found that the value of $r$ is lower than the probable error ($P.E. r = 0.15$). Moreover, it is observed that its coefficient of determinant ($r^2$) is 0.47, which implies that only 47% of the changes in calorie intake are due to changes in family size. Thus, there is no evidence of correlation between the two variables. Thus, the hypothesis which states that larger the size of the household, smaller is the per capita calorie intake does not hold true and therefore rejected.

(ii) The value of correlation between per capita calorie intake and per capita monthly income is closer to 0 (.0089), therefore there is no linear relationship between the variables.

However, the information about the monthly income as provided by the interviewee cannot be considered as reliable because of two reasons. Firstly, people in the rural areas does not keep any record of their monthly income, thus reliable data at the household level is not available. Secondly, People seldom tell their true monthly income to any interviewer. Therefore, Per Capita Monthly Expenditure is used as a proxy of income while measuring poverty. The Report of the Expert Group (1993) maintains that the household consumer expenditure is more reliable than income and hence more suitable for measuring poverty. The reliability of the consumption expenditure is well recognized.

(iii) The value of correlation between monthly PCTE and average calorie intake per day, it was found that the correlation coefficient is 9.94. The positive correlation coefficient is highly significant as its $r$ value is 39.83 times greater than its probable error of 0.023. This implies that there is a high positive relationship between per capita monthly expenditure and per capita calorie intake. In other words, people with higher income

76 Ibid 75.
The summary on the result of poverty measurement based on different calorie norms for the selected category has been explained below.

(i) Sample population:

The result on the estimation of Head Count Ratio (HCR) based on 2047 Kcal and 2044 Kcal cutoff shows that 28.75% of the sample population are poor or are living below the calorie norms. Whereas, the HCR based on 2441.92 Kcal cutoffs shows a higher percentage of poor with 46.06%.

For the calorie gap ratio based on 2047 Kcal the result came out to be 10.01% per poor person for the sample population. This means that every poor person is falling short of the calorie norms, which states that higher the income higher is the calorie intake has been proved true when income is replaced by PCTE.

(iv) The correlation coefficient between the family size and PCTE shows a negative relation ($r = -0.57$). However, its coefficient of determinant ($r^2$) is 0.32, which indicates that the explained variance is 32%. Moreover, the $r$ value is less than its probable error with 0.14. The negative correlation coefficient is, therefore, not statistically significant. In other word, there is no evidence of relationship between the family size and PCTE.

(v) Looking at the correlation between the distribution of calorie intake and the proportion of poor measured through the sample survey norms, it was found that the correlation coefficient value is positive (+0.79). Testing the significance of the relation, it was also found that the positive correlation coefficient is significant as its $r$ value is more than ten times greater than its probable error of 0.068. This implies that there is a high positive relationship between inequalities in the distribution of calorie and proportion of poor. Thus, the hypothesis, which states that higher the extent of inequalities in calorie distribution, higher is the proportion of poor in the society, has been proved true.

(vi) The correlation coefficient value of inequality and the proportion of poor, measured through the sample survey norm show a negative relation (-0.38). However, it was found that the negative correlation coefficient is not significant as its $r$ value is less than its probable error of 0.1534. This implies that there is no evidence of relationship between inequalities in the distribution of income measured through PCTE and proportion of poor. Thus, the hypothesis, which states that higher the extent of inequalities in income, higher is the proportion of poor in the society, has been proved wrong.

6.5: ESTIMATION OF POVERTY THROUGH CALORIE NORMS:

The summary on the result of poverty measurement based on different calorie norms for the selected category has been explained below.

(ii) Sample population:

The result on the estimation of Head Count Ratio (HCR) based on 2047 Kcal and 2044 Kcal cutoff shows that 28.75% of the sample population are poor or are living below the calorie norms. Whereas, the HCR based on 2441.92 Kcal cutoffs shows a higher percentage of poor for the sample population with 46.06%.

For the calorie gap ratio based on 2047 Kcal the result came out to be 10.01% per poor person for the sample population. This means that every poor person is falling short of the calorie norms, which states that higher the income higher is the calorie intake has been proved true when income is replaced by PCTE.
norm by 204.9 Kcal. However, calorie gap ratio based on 2044 Kcal cutoff shows a lower percentage of 9.97% per poor person for the sample population. Whereas, the calorie gap ratio based on 2441.92 Kcal cutoffs shows a higher calorie deprivation for the sample population with 14.49% per poor person. It means to help every poor person at the calorie norms, calorie intake of 353.83 Kcal per poor person is required.

The result also shows that Sen Index (P) based on 2047 Kcal is 7.65% for the sample population. It implies that 7.65% of poor amongst the poor are falling below their calorie norm (mean calorie intake of the poor). Whereas, Sen Index based on 2044 Kcal cutoff is 7.64% for the sample population. However, the P based on 2441.92 Kcal cutoffs shows that the extent calorie deprivation is higher for the sample population with 11.59% of poor amongst the poor falling below their calorie norm.

The estimated result of Foster, Greer and Thorbecke (P') based on 2047 Kcal cutoff shows that the severity of calorie deprivation for the sample population is 5.92% for the poorest of the poor. This means that 5.92% of the poorest of the poor are far below the calorie norms. Whereas, P' based on 2044 Kcal cutoff is 5.91% for the sample population. It means that 5.91% of the poorest of the poor are far below the calorie norms. However, the P' based on 2441.92 Kcal cutoffs shows that calorie inadequacy is more severe for the sample population with 7.79% for the poorest of the poor.

Thus the estimation based on sample survey calorie norms shows higher percentage of poor and more severe calorie deprivation than the estimation based on NSSO norms.

(ii) Gender-wise:

The gender-wise analysis of HCR base on 2047 Kcal and 2044 Kcal cutoff shows that male (30.81%) have a higher percentage of poor than female (28.05%) by 2.76%. Whereas, using 2441.92 Kcal cutoff the percentage of poor for male is 48.26% against female percentage of 44.79%.

The calorie gap ratio estimates based on 2047 Kcal by gender shows that male have higher gap (10.10%) than female (9.86%). Calorie gap ratio based on 2044 Kcal cutoff shows that male and female calorie gap is (205.83 Kcal) 10.07% and (201.12 Kcal) 9.84% respectively. Whereas, the calorie gap ratio based on 2441.92 Kcal cutoff shows a higher calorie deprivation for both male and female population with 15.63% and 14.05% per poor person respectively.

Gender-wise estimation of Sen Index (P) based on 2047 Kcal shows that male have 8.01% of poor amongst the poor falling below their calorie norm, while it is 7.89% for female. The estimation of P based on 2044 Kcal cutoff shows that 7.99% of male and 7.87% of female poor
amongst the poor falling below their calorie norms. However, \( P \) based on 2441.92 Kcal cutoff shows that 12.40% of poor amongst the poor male and 11.24% of poor amongst the poor female are falling below their calorie norm.

Gender-wise \( P^F \) estimates based on 2047 Kcal shows that the severity of calorie inadequacy falls on 6.05% and 5.82% of the poorest poor among the female and male population respectively. However, the estimation of \( P^F \) based on 2044 Kcal cutoff reveals that the calorie inadequacy for both male and female comes out to be 5.81% and 6.04% for the poorest poor respectively. The \( P^F \) based on 2441.92 Kcal cutoff shows that severity of calorie inadequacy falls on 8.39% of the poorest of the poor among the male population, while it is 7.78% for the female population.

The result of the measurement of poor based on both NSSO and sample survey calorie norms shows that the incidence of poverty is relatively higher among the male population than female population. Similarly, the calorie gap or the extent of calorie deprivation is higher among the male population the female. Further, the Sen Index reveals that higher proportion of male poor are below their average calorie intake. The severity of calorie inadequacy also falls relatively more on male population than the female population. However, it may be noted that the difference between male female is not very significant.

(iii) Village-wise:

The result of the village-wise HCR estimates based on 2047 Kcal and 2044 Kcal cutoff shows that, Bhandari has the highest percentage of poor with 31.48%, followed by Longsa with 29.73% and Yunchuchu with 28.57%. Sunglup with 21.05% exhibits the lowest percentage of poor. However, the estimation of HCR based on 2441.92 Kcal cutoffs indicates that Yunchuchu with 54.76% has the highest proportion of poor population. This is followed by Bhandari with 48.15% and Longsa with 46.33%. Sunglup shows the lowest proportion of poor with 28.95%.

The result of the estimates on village-wise calorie gap ratio based on 2047 Kcal cutoff shows that, the depth of calorie deprivation is highest in Yunchuchu with (273.89 Kcal) 13.38% per poor person, while Sunglup with (93.55 Kcal) 4.57% per poor person exhibits the lowest calorie deprivation among the villages. The calorie gap ratio estimates based on 2044 Kcal cutoff shows similar result to that of the analysis based 2047 calorie norms but lower ratio. However, the estimation of calorie gap ratio based on 2441.92 Kcal cutoffs indicates a higher calorie deprivation. Among the villages, Yunchuchu with (433.19 Kcal) 17.44% per poor person shows the highest shortfall of calorie norms, while Sunglup with (186.07 Kcal) 7.62% shows the lowest calorie deprivation among the villages.
The result of village-wise estimation of P based on 2047 Kcal cutoff shows that, Yunchuchu with 10.39% exhibits the highest percentage of poor amongst the poor falling below their calorie norm. It is followed by Longsa with 8.46% and Bhandari with 5.86% of poor amongst the poor falling below their calorie norm. Sunglup with 5.77% of poor amongst the poor falling below their calorie norm exhibits the lowest percentage among the villages. The P estimates based on 2044 Kcal cutoff shows that the extent of calorie deprivation is highest in Yunchuchu with 10.37% of poor amongst the poor falling below their calorie norm, while Sunglup with 5.75% of poor amongst the poor falling below their calorie norm exhibits the lowest percentage among the villages. However, the estimation of P based on 2441.92 Kcal cutoffs indicates that Yunchuchu with 13.54% have the highest percentage of poor amongst their poor falling below the calorie norm, while Sunglup with 6.87% of poor amongst their poor falling below the calorie norm shows the lowest percentage among the villages.

The village-wise $P^F$ estimates based on 2047 Kcal cutoff shows that, the calorie inadequacy is more severe in Yunchuchu with 7.9% for the poorest poor. It is followed by Longsa with 6.51% and Bhandari with 3.51% of the poorest poor facing calorie inadequacy. Sunglup with 1.6% of the poorest poor facing calorie inadequacy exhibits the lowest severity of calorie deprivation among the villages. The $P^F$ estimates based on 2044 Kcal cutoff shows that the severity of calorie deprivation is highest in Yunchuchu with 7.89% for the poorest poor, while Sunglup with 1.59% of the poorest poor facing calorie inadequacy exhibits the lowest severity of calorie deprivation among the villages. However, the estimation of $P^F$ based on 2441.92 Kcal cutoffs indicates a higher severity of calorie deprivation among the sample population. Among the villages, Yunchuchu with 10.08% of the poorest poor shows the highest percentage of severity in calorie deprivation. This is followed by Longsa with 8.61% and Bhandari with 5.46% of the poorest poor facing calorie inadequacy. Sunglup with 3.05% of the poorest poor facing calorie inadequacy shows the lowest severity in calorie deprivation among the villages.

The comparison among different villages on the incidence of poverty based on NSSO calorie norms reveals that Bhandari has the highest proportion of poor. But when it is measured based on sample survey calorie norms, Yunchuchu stands the highest. On the other hand Sunglup is placed at the bottom of the ranking under both calorie norms. Based on all calorie norms, it is seen that the depth and severity of calorie deprivation is the highest in Yunchuchu and lowest in Sunglup.

(iv) Range-wise:
The range-wise HCR estimate based on NSSO norms shows that, middle range has the lowest percentage of poor with 25%. However, the estimation of HCR based on sample norms indicates that lower range with 48.15% has the highest proportion of population living below the calorie norms. On comparison among different ranges HCR based on different calorie norms, it is seen that middle range has the lowest proportion of poor among the ranges, while lower range has the highest percentage of poor.

The estimation of calorie gap ratio based on NSSO norms shows that, among the ranges, the depth of calorie deprivation is highest in upper range with a gap of about 10% per poor person. Moreover, the estimation of calorie gap ratio based on sample norms also indicates that upper range with (374.59 Kcal) 15.34% per poor person has the highest calorie deprivation. Thus it is seen that the calorie gap ratio of Upper range is higher than other ranges across different calorie norms.

The analysis of Sen Index (P) based on NSSO norms shows that the extent of calorie deprivation is highest in middle range with about 11% of poor amongst the poor falling below their calorie norm. The estimation of P based on sample survey norms also indicates that middle range with 18.52% has the highest percentage of poor amongst the poor falling below their calorie norm. On comparison, it is seen that Sen Index of middle range is higher than other ranges across different calorie norms, while lower range has the lowest percentage of poor amongst the poor.

Estimation of Foster, Greer and Thorbecke (P^F) based on NSSO and sample survey norms shows that, the calorie inadequacy is more severe in upper range with 6.51%, 6.5% and 8.61% respectively for the poorest poor facing calorie inadequacy, while lower range exhibits smaller calorie inadequacy than other ranges. (v) Sex-wise head of the household:

The result sex-wise head of household estimation of HCR based on NSSO norms shows that around 30% of the population in male headed family are below the calorie norms, while female headed family has around 18% of poor people. However, the estimation of HCR using 2441.92 Kcal cutoff shows that the proportion of poor for male headed family is 46.01%, while it is 43.75% for the female headed family.

The estimation of calorie gap ratio based on NSSO norms shows that the calorie gap of male headed household is about 11% per poor person while it is about 5% in female headed household. The estimation of calorie gap ratio using sample survey norms shows that the calorie short fall of the population in male headed family is 15.58% per poor person, while it is 10.09% per poor person in female headed family.
Gender-wise head of household estimation of P based on NSSO norms reveals that the percentage of poor amongst the poor falling below their calorie norms in male headed family is about 8%, while it is about 4% for the female headed family. The estimation of Sen Index using 2441.92 Kcal cutoff shows that the percentage of poor amongst the poor falling below their calorie norm in male headed family is 12.28%, while it is 8.42% for the female headed family.

The result on the estimation of P sex-wise head of household based on NSSO norms shows that the severity of calorie deprivation in male headed family is about 6% for the poorest of the poor, while it is around 3% for the poorest of the female headed family. However, the estimation of calorie inadequacy using 2441.92 Kcal cutoff shows reveals that the calorie inadequacy in male headed family is 8.65% for the poorest poor, while it is 4.46% for the poorest poor in female headed family.

The result estimate based on NSSO and sample survey calorie norms shows that the extent, depth and severity of calorie deprivation of male headed household is higher than female headed household. It may be due to the reason that when women have sole control over family resources, the expenditure on food items tend to be higher because they are more concern in providing better food to the family.

(vi) Occupation-wise head of household:

The result of HCR on occupation-wise head of the households based on NSSO norms shows that the household headed by agriculturalist have around 30% of its population below the calorie norms; whereas, those household headed by service have around 27% of its population below the calorie norm. However, the estimation of HCR based on 2441.92 Kcal cutoffs indicates that the service headed family has 46.54% of poor population, while it is 45.31% in agriculture headed family.

The result on the analysis of calorie gap ratio based on NSSO norms shows that agriculturalist have higher gap of around 11% than the services with around 8%. Whereas, the calorie gap ratio based on 2441.92 Kcal cutoff that the calorie short fall is 12.96% per poor person for the household headed by service, while it is 15.50% in agricultural headed household.

The result analysis of P based on NSSO norms shows that agricultural headed family have higher percentage of poor amongst the poor falling below their calorie norm with around 8% than the service headed family with around 7%. Whereas, the Sen Index based on 2441.92 Kcal cutoff shows that the percentage of poor amongst the poor falling below their calorie norm in agricultural headed family is 12.09%, while it is 11.04% for the service headed family.
The estimation of $P^F$ based on NSSO norms reveals that the severity of calorie inadequacy falls on around 6% of the poorest poor among the agricultural headed family, while it is around 4% for the service headed family. Whereas, the $P^F$ result based on 2441.92 Kcal cutoff reveals that the percentage of the poorest poor facing calorie inadequacy in agricultural headed family is 8.86%, while it is 8.88% for the service headed family.

The comparison between service and agricultural headed household in the proportion and severity of calorie deprivation based on NSSO calorie norms reveals that the proportion and percentage of the poorest poor is higher in agricultural headed household than the service headed household. However, the depth and sensitivity of calorie deprivation based on NSSO and sample survey caloric norms reveals that it is higher in agricultural headed household than the service headed household.

6.6: ESTIMATION OF POVERTY THROUGH PCTE:

The result of poverty measurement based on different poverty line for the selected category has been explained below.

(i) Sample population:

The result of Head Count Ratio (HCR) based on the poverty line of Rs. 558.78 shows that 2.04% of the sample population is poor. The HCR based on poverty line of Rs. 1010.81 shows that 67.18% of the sample population are poor. Whereas, the HCR based on the poverty line of Rs. 942.60 reveals that 59.54% of the sample population are poor.

The analysis of poverty gap ratio based on National poverty for the sample population is .13% per poor person. This means that every poor person is falling short of the income by Rs. 0.73. In other words, to support every poor person at the poverty line, Rs. 0.72 of income is needed per poor person. The poverty Gap ratio based on State poverty line shows a higher income deprivation for the sample population with 13.82%. However, the poverty gap ratio based on sample survey poverty line with 10.09% shows a lower income deprivation for the sample population than the estimation based on State poverty line but higher than the estimation based on National poverty line.

The result on the estimation of Sen Index (P) based on National poverty line reveals that 0.11% of poor amongst the poor in the sample population are falling below their poverty line. The P based on the State poverty line shows that the extent of income deprivation for the sample population is 21.22%. However, the P based on sample survey poverty line shows that 16.94% of poor amongst the poor are living below the mean income of the poor.
The analysis of Foster, Greer and Thorbecke measure ($P^F$) based on National poverty line shows that 0.01% of the poorest poor are facing income inadequacy. The $P^F$ based on the State poverty line shows that 5.22% of the poorest of the poor are far below the poverty line. However, the $P^F$ based on sample survey poverty line shows that income inadequacy with 4.2% for the poorest poor is less severe than the estimation based on State poverty line but more severe than the estimation based on National poverty line.

On comparison between the estimate based on state poverty line and sample survey poverty line, it was found that the proportion, depth and severity based on State poverty line is higher.

(ii) Gender-wise:

The result of Gender-wise analysis of HCR based on the poverty line of Rs. 558.78 shows that 1.16% of the male population is poor, while 2.71% of the female population is poor. The estimation of HCR based on poverty line of Rs. 1010.81 shows that that male (68.6%) have a higher percentage of poor than female (66.06%) by 2.54%. The estimation of HCR using Rs. 942.60 shows that 62.79% of male population is poor whereas 57.01% of female population is poor.

The result of income gap ratio estimates based on National poverty line for male and female shows that female have higher ratio of .19% per person than male ratio of .004% per person. However, poverty gap ratio based on State poverty line shows that poverty gap is (Rs. 141.31) 13.98% and (Rs. 138.38) 13.69% per poor person for male and female population respectively. Whereas, the poverty gap ratio based on sample survey poverty line shows a lower income shortfall for both male and female population with 10.12% and 10.06% per poor person respectively.

The analysis of $P$ based on National poverty line shows that female have higher percentage (.16%) of poor amongst the poor falling below their poverty line than male percentage (.004%). However, the estimation of $P$ based on State poverty line that male have 12.19% of poor amongst the poor falling short of their poverty line that is slightly higher than female percentage of 11.81%. Whereas, $P$ based on poverty gap ratio based on sample survey poverty line shows that male population have 8.82% of poor amongst the poor, while female have 8.68% of poor amongst the poor falling below their poverty line.

The result of $P^F$ estimates based on National poverty line shows that the severity of income inadequacy falls on 0.0023 % of the poorest poor among the female population, while it is 0.0002% for the poorest poor male population. The estimation of $P^F$ based on State poverty line reveals that the income inadequacy for both male and female comes out to be 3.49% and 3.66% for
the poorest poor respectively. However, \( P \) based on sample poverty line shows that severity of income inadequacy falls on 2.19% of the poorest poor among the male population, while it is 2.42% for the female population.

The based on National poverty line shows that the incidence and depth of income deprivation of female is higher among male. However, the estimation based on State and sample survey poverty line reveals that the incidence and depth of male poor is higher than female poor. The comparison between male and female \( P^F \) based on NSSO and sample survey poverty line shows that the income inadequacy of female is higher than male.

(iii) Village-wise:

The result of village-wise HCR estimate based on National poverty line shows that only Longsa exhibits the existence of poor population with 3.09%, while other villages shows that every one is above the poverty line. However, the estimation of HCR based on State poverty lines indicates that Sunglup with 89.47% has the highest proportion of population below poverty line, while Bhandari shows the lowest proportion of poor with 57.41%. The estimation of HCR based on sample survey poverty line shows Sunglup with 76.32% has the highest percentage of poor among the villages, while Yunchuchu with 57.14% shows the lowest percentage of poor people living below the poverty line.

The result of poverty gap ratio estimates based on National poverty line shows that, the depth of income deprivation exist only in Longsa with (Rs. 1.06) .19% per poor person. The estimation of poverty gap using State poverty line shows that the depth of income deprivation is highest in Bhandari with (Rs. 213.28) 21.12% per person. It is followed by Longsa with (Rs. 143.64) 14.21% per poor person and Sunglup with (Rs. 135.35) 13.39% per poor person. Yunchuchu with (Rs. 132.72) 13.13% per poor person exhibits the lowest income deprivation among the villages. However, the estimation of poverty gap ratio based on sample survey poverty indicates that Longsa with (Rs. 101.61) 10.78% per poor person shows the highest shortfall of income. This is followed by Bhandari with (Rs. 83.23) 8.83% per poor person and Yunchuchu with (Rs. 82.38) 8.74% per poor person. Sunglup with (Rs. 79.74) 8.46% shows the lowest income deprivation among the villages.

The analysis of village-wise \( P \) estimates based on National poverty line shows that, the extent of income deprivation exist only in Longsa with 0.58% of poor amongst the poor falling below their poverty line. The \( P \) based on State poverty line shows that, among the villages, Sunglup with 12.22% exhibits the highest percentage of poor amongst their poor falling below their mean PCTE of the poor, while Bhandari with 10.48% of poor amongst the poor falling below
their mean PCTE of the poor exhibits the lowest percentage among the villages. However, the estimation of P based on sample survey poverty line indicates that Longsa with 9.19% have the highest percentage of poor amongst the poor falling below their mean PCTE of the poor, while Bhandari with 7.65% of poor amongst their poor falling below the mean PCTE of the poor shows the lowest percentage among the villages.

The result of \( P^F \) village-wise based on National poverty line shows that, the severity of income deprivation exist only in Longsa with 0.02% for the poorest poor. The \( P^F \) based on State poverty line shows that, among the villages, income inadequacy is more severe in Longsa with 3.93% for the poorest poor, while Sunglup with 2.68% of the poorest poor facing income inadequacy exhibits the lowest severity of income deprivation among the villages. However, the estimation of \( P^F \) based on sample survey poverty line indicates a higher severity of income deprivation than the estimation based on National poverty line but lower than the estimation based on State poverty line. Among the villages, Income inadequacy is more severe in Longsa with 2.63% for the poorest poor. Sunglup with 1.44% of the poorest poor facing income inadequacy exhibits the lowest severity of income deprivation among the villages.

The estimation of HCR based on National poverty line shows that the proportion of poor is higher in Longsa. However, the proportion of poor is shown highest in Sunglup when the estimation if based on Sample survey and State poverty line. The estimation of depth based on National shows that Bhandari has the highest shortfall of income, while Longsa exhibit the highest when the estimation is based on National and sample survey poverty line. However, the sensitivity measures based on National and sample poverty line shows that Longsa has the highest number of poor who are falling below their average poverty norm. However, the estimate based on State poverty line shows that Sunglup has the number of poor who are falling below their average poverty norm. The severity of income based on NSSO and sample survey poverty line shows that Longsa has the highest income inadequacy among the sample villages.

(iv) Range-wise:

The HCR estimate based on National poverty line for the sample villages shows that only upper range exhibits the existence of poor population with 3.09%, while other ranges shows that every one is above the poverty line. The estimation of HCR based on State poverty line and sample survey poverty line shows that middle range with 81.25% and 66.25% has the highest proportion of population below poverty line. On comparing the proportion of poor among different ranges based on poverty line of the State and Sample survey, it is seen from the table that middle range exhibits highest existence of poverty, while lower range exhibits the lowest percentage of poor.
The poverty gap ratio estimates based on National poverty line shows that, the depth of income deprivation exist only in upper range with (Rs. 1.06) 1.19% per poor person. The estimation of poverty gap using State poverty line shows that the depth of income deprivation is highest in lower range with (Rs. 213.28) 21.12% per person. However, the estimation of poverty gap ratio based on sample survey poverty indicates that upper range with (Rs. 101.61) 10.78% per poor person shows the highest shortfall of income. On comparison among the ranges it is seen that the highest depth of income deprivation exist in lower range when measurement is based on State poverty line. However, the estimation of poverty gap ratio based on sample survey poverty line and National poverty line indicates that upper range has the highest shortfall of income per person.

The estimation of Sen Index (P) based on National poverty line shows that, the extent of income deprivation exist only in upper range with 0.58% of poor amongst the poor falling below their poverty line. The P based on State poverty line and sample survey poverty line shows that, middle range with 19.29% and 13.86% respectively exhibits the highest percentage of poor amongst the poor falling below their poverty line. On comparing among the ranges, it was found that middle range has the highest number of poor amongst the poor when measurement is based on State poverty line and sample survey poverty line, while lower range has the lowest percentage.

Range-wise analysis of P^F based on National poverty line shows that, the severity of income deprivation exist only in upper range with 0.02% for the poorest poor. The P^F based on State poverty line and sample survey poverty line shows that, among the villages, income inadequacy is more severe in upper range with 3.93% for the poorest poor. It is followed by lower range with 3.11% and 2.63% respectively for the poorest poor facing income inadequacy. On comparison among the ranges it was found that upper range exhibits higher severity of income deprivation, while lower range has a lower income inadequacy across different poverty line.

(v) Sex-wise head of household:

The result of HCR on gender-wise head of household based on National poverty line shows that 2.5% of the populations in female headed family are living below the poverty line, while male headed family has 1.92% of poor people. The estimation of HCR using State poverty line shows that 71.25% of the populations in female headed family are living below the poverty line, while it is 66.13% for the male headed family. However, the estimation of HCR based on Sample survey poverty line shows that the percentage of poor based on sample survey poverty line is 62.5% for female headed family and 58.79% for male headed family.

The analysis of poverty gap ratio based on the National poverty line shows that the depth of income deprivation in female headed family is 0.31%(Rs. 1.73) per poor person, while it is 0.08%
(Rs. 0.44) per poor person for male headed family. The estimation of poverty gap ratio using State poverty line shows that the income shortfall of the population in female headed family is (Rs. 150.31) 14.87% per poor person, while it is (Rs. 136.96) 13.55% per poor person in male headed family. However, the estimation of poverty gap ratio based on Sample survey poverty line shows that the female headed household has an income shortfall of (Rs. 102.93) 10.92% per poor person, while it is (Rs. 92.85) 9.85% per poor person.

The estimation of P based on the National poverty line reveals that the percentage of poor amongst the poor in female headed family is .051%, while it is .028% for the male headed family. The estimation of P using State poverty line shows that the number of poor amongst the poor falling below their poverty line in female headed family is 12.89%, while it is 11.72% for the male headed family. However, the result of P based on Sample survey poverty line shows that the female headed household with 9.47% of poor amongst the poor living below their poverty line has higher percentage than male headed family with 8.54%.

The result of $P_F$ on the National poverty line shows that the severity of income deprivation in female headed family is 0.05% for the poorest poor that is higher than male headed family with 0.003%. The estimation of $P_F$ using State poverty line shows that the income inadequacy for the poorest poor in female headed family is 5.52% for the poorest poor, while it is 3.49% for the poorest poor in male headed family. However, the estimation of $P_F$ based on Sample survey poverty line reveals that the female headed household has an income inadequacy of 2.58% for the poorest poor, while it is 2.25% for the poorest poor in male headed family.

Thus the estimation based on NSSO and sample survey poverty line reveals that the proportion of poor, depth and severity of poverty is higher in female headed family than male headed. It may be due to the fact that the income earning ability of male is higher than female.

(vi) Occupation-wise head of household:

The result of HCR estimation on occupation-wise head of the households based on National poverty line shows that poverty exist only the household headed by agriculturalist with 3.42%. But the analysis of HCR based on State poverty line shows that the household headed by service have 75.47% of its population below the poverty line, whereas, those household headed by agriculturalist have 73.5% of its population living below the poverty line. However, the estimation of HCR based on the sample survey poverty line indicates that the household headed agriculture has 65.52% of poor population, while it is 49.69% in service headed family.

The analysis of poverty gap ratio based on National poverty line shows that poverty exists only in the household headed by the agriculturalist with .21% per person. The estimation of
The estimation of $P$ based on National poverty line shows that poverty exists only in the household headed by the agriculturalist with .19% of the poor amongst the poor. While the estimation of Sen Index based on State poverty line shows that 14.54% and 7.19% of the poor amongst the poor agricultural headed household and service headed household respectively are falling below their poverty line. Whereas, the Sen Index based on sample survey poverty line shows that the percentage of poor amongst the poor falling below their poverty line in agricultural headed family is 10.85%, while it is 4.71% for the service headed family.

The result of $P^F$ based on National poverty line shows that severity of income deprivation is .92% for the poorest poor among the agricultural headed family; while the service headed family have zero poor population. The estimation of $P^F$ based on State poverty line shows that 4.39% and 3.75% of the poorest poor among the agricultural headed household and service headed household respectively are facing income inadequacy. However, the $P^F$ based on sample survey poverty line shows that the percentage of the poorest poor facing income inadequacy in agricultural headed family is 2.93%, while it is 3.19% for the service headed family.

The result of the HCR estimation based on National and sample survey poverty line shows that the proportion of poor is higher among agricultural headed household than the service headed household. However, the estimate based on the State poverty line reveals that the proportion of poor is higher in service headed household than agricultural headed household. The estimation based on NSSO and sample poverty line shows that the depth and severity of income inadequacy is higher in among agricultural headed household than the service headed household.

Thus, measuring poverty based on different poverty line shows that the extent and depth of poverty is higher when measurement is based on State poverty line. However, the extent and depth of poverty reveals a negligible existence of poor people when the estimation is based on National poverty line. Thus, the poverty line derived from the sample survey lies in between the National and State poverty line.

6.7: ESTIMATION OF INEQUALITIES THROUGH CALORIE INTAKE:

(i) Sample population:
The distribution of calorie intake among the population reveals that the bottom 14% of the population consumes about 4% of the total calorie intake at one end and at the other end about 17% of the total calorie intake is shared by the top 10%. Thus 90% of the population share 83% of the total calorie intake. This shows that the distribution of calorie intake is not fairly equal. This is confirmed by the Gini index or coefficient of 0.2032.

(ii) Gender-wise:

The cumulated percentages calorie intake and population of male reveals that the bottom 15% of the population consumes about 5% of the total calorie intake at one end. But at the other end about 14% of the total calorie intake is shared by the top 8%, which is lower than the percentage of the sample population. This shows that the distribution of calorie intake for the male population is not equal and the Gini-coefficient is 0.2067. However, the distribution of calorie intake among the female shows that the bottom 12% of the population consumes about 3% of the total calorie intake at one end. But at the other end about 19% of the total calorie intake is shared by the top 10%, which is higher than the percentage of the sample population. The Gini-coefficient of calorie intake for the population of female comes out to be 0.1996. Both Gini-coefficient and the cumulative distribution of calorie intake shows more equitable distribution of calorie intake among the population of female as compared to that of the sample and male population.

(iii) Village-wise:

The distribution of calorie intake in Yunchuchu village reveals that the bottom 12% of the population consumes about 3% of the total calorie intake at one end that is lower than the percentage of the sample population. But at the other end about 22% of the total calorie intake is shared by the top 14%, which is higher than the percentage of the sample population. This shows that Yunchuchu has the highest percentage of inequality in the distribution of calorie intake among the villages. This is confirmed by the Gini coefficient of 0.2032. While the cumulated percentages calorie intake and population of Sunglup village reveals that the bottom 21% of the population consumes about 12% of the total calorie intake at one end and at the other end about 7% of the total calorie intake is shared by the top 5%, which is lower than the percentage of the sample population. Thus 95% of the population share 93% of the total calorie intake. Both Gini-coefficient (0.0984) and the distribution of calorie intake among the people of Sunglup village show that it has the lowest percentage of inequalities as compared to other villages. However, Longsa has higher inequality than the sample population as shown by Gini-coefficient of 0.2116. The Gini-coefficient (0.1863) of Bhandari shows that it has lesser inequalities than the sample population.

(iv) Range-wise:
The distribution of calorie intake in middle range reveals that the bottom 15% of the population consumes only 5.8% of the total calorie intake at one end but at the other end about 15% of the total calorie intake is shared by the top 10%, which is slightly lower than the percentage of the sample population. The Gini-coefficient of calorie intake for the population of middle range comes out to be .184. Both Gini-coefficient and the shape of Lorenz curve shows the lower inequalities in the distribution of calorie intake among the population of middle range as compared to that of the sample population and the other two ranges.

(v) Sex-wise head of household:

The analysis of male headed family reveals that the bottom 15% of the population consumes about 5% of the total calorie intake at one end that is higher than the percentage of the sample population. But at the other end about 16% of the total calorie intake is shared by the top 10%, which is slightly lower than the percentage of the sample population. Both Gini-coefficient (.2121) and the distribution of calorie intake shows higher inequalities among the population of male-headed family as compared to that of the sample population and female headed family. The inequality in the female-headed family as shown by Gini-coefficient is .1655.

(vi) Occupation-wise head of household:

The distribution of calorie intake among the service headed household reveals that the bottom 11% of the population consumes about 4% of the total calorie intake at one end, while at the other end about 33% of the total calorie intake is shared by the top 26%, which is lower than the percentage of the sample population. This shows that service headed household has the lower percentage of inequality than the sample population and the agricultural headed household. The Gini-coefficient of calorie intake for the population of service headed household comes out to be .1479. The Gini-coefficient of inequalities for the agricultural headed household is .2206.

6.8: ESTIMATION OF INEQUALITIES THROUGH PCTE:

(i) Sample population:

The distribution of income among the sample population reveals that the bottom 10% shares about 6% of the total income at one end and at the other end about 13% of the total income is shared by the top 8% of the population. This shows that there exist inequalities in the distribution of income among the sample population and the Gini-coefficient of income distribution is .1392.

(ii) Gender-wise:

The distribution of income among male population reveals that the bottom 10% of the population is sharing about 7% of the total income at one end and at the other end, about 9% of the
total income is shared by the top 5% of the population that is lower than the share of the sample population. Both Gini-coefficient (.1280) and the distribution of income show less inequalities in the distribution of income among male population than the sample population but higher than the female. The Gini-coefficient of inequality for the female population is .1377.

(iii) Village-wise:

The distribution of income/PCTE among the population of middle reveals that the bottom 28.75% of the population is sharing about 23.54% of the total income at one end but at the other end about 10% of the total income is shared by the top 7%, which is slightly lower than the percentage of the sample population. Both Gini-coefficient and the shape of Lorenz curve shows the lower inequalities in the distribution of income among the population of middle range as compared to that of the sample population and the other two ranges. This has been confirmed by the Gini-coefficient of .1489. On the other hand, the distribution in Sunglup village reveals that the bottom 23.68% of the population is sharing about 19% of the total income at one end and at the other end, about 8% of the total income is shared by the top 5% of the population that is slightly lower than the share of the sample population. Both Gini-coefficient (.0870) and the distribution of income show less inequalities compared to other villages and the sample population. The Gini-coefficient of inequalities for the female population is .1377.

(iv) Range-wise:

The distribution of income/PCTE among the population of middle reveals that the bottom 28.75% of the population is sharing about 23.54% of the total income at one end but at the other end about 10% of the total income is shared by the top 7%, which is slightly lower than the percentage of the sample population. Both Gini-coefficient and the shape of Lorenz curve shows the lower inequalities in the distribution of income among the population of middle range as compared to that of the sample population and the other two ranges.

(v) sex-wise head of household:

The distribution of income in Male headed family reveals that the bottom 9% of the population is shares about 6% of the total income at one end and at the other end, about 10% of the total income is shared by the top 6% of the population that is slightly higher than the share of the sample population. This explains that inequality is more in male headed family than female and the sample population. This is confirmed by the Gini-coefficient of .1352. The Gini-coefficient of inequality for female headed family is .1340.

(vi) Occupation-wise head of household:
The result of the analysis on the impact of poverty alleviation programme reveals that only 4.07% of the total sample populations have been benefited from the implementation of poverty alleviation programme. Out of this 1.78% of the population got the help from JRY, while 2.29% of the population got the Below Poverty Line (Rice). Among the villages, 5.79% of the populations in Longsa were benefited from the implementation of poverty alleviation programme. Out of this, 2.32% benefited from JRY, while 3.47% benefited from the Below poverty Line (Rice). Sunglup followed next with 2.63% of its total population surveyed getting the benefits from JRY. For the remaining two villages the surveyed showed a zero benefit from any such programmes by the sample population. The resultant figure clearly reveals that only a meagre proportion of poor of the sample population have been benefited from such programmes, while 64.64% (based on State Poverty line) of the poor or 57.73% (based on Sample survey poverty line) of the poor remained outside the parameter of the poverty alleviation programme. This clearly shows the failure of the poverty alleviation programme in giving complete coverage to the poor people.

6.8: POLICY IMPLICATION AND SUGGESTION:

Measurement of poverty has great bearing in resolving issues that arise for designing cost-effective relieve work schemes especially on the aspects relating to choices of coverage for the scheme and choice for the benefit level.

(i) The existence of poverty line has significant bearing on the policy choice over coverage of poverty alleviation programmes, as it defines the critical income level needed to escape poverty in a given society and that attaining this income level is qualitatively significant.

(ii) Identification of this unique level of income helps to identify those persons who are considered socially acceptable to be the participants in a poverty alleviation scheme, which is given by head count index of poverty. Further, it becomes possible to assess the required amount of resources or
Based on the estimation of the proportion of poor (HCR) and the measure of severity in income (PCTE) deprivation among the villages, it was found that even though Sunglup has the highest proportion of poor people, yet the severity of income among the poorest of the poor falls more in Longsa village. This implies that in order to achieve various efficiencies, while implementing any poverty alleviation programme, the severity of deprivation needs to be considered.

(iii) However, under head count index, it is more likely that few privileged among the prospective participant may get the lion share of the benefit. Therefore, while implementing any poverty alleviation programme, the Sen Index and Foster, Greer and Thorbacke Indices should be taken into consideration, since these measures gives the implementing agency the option to target the benefits towards the poorest of the poor.

(iv) Other aspects of poverty measures also have bearing on policy choice over coverage and benefit levels. When a budget is made available to operate a poverty alleviation scheme, but if it is insufficient to bring all the poor up to the critical level of income, the policy planners face a dilemma as to whether they should adopt a wide coverage or limited coverage schemes so as to bring the greatest possible impact on aggregate level of poverty.

(a) When budget is low and the cost of administration is high or when the workers participation in the scheme is costly (high opportunity cost) limited coverage at benefit levels sufficient to escape poverty will be a desirable scheme for monotonic poverty measure (Sen Index and FGT which are distributionally sensitive). This will give a greater impact in reducing the proportion of poverty level (HCR).

(b) On the other hand, when the given budget is sufficiently high and the cost of administration is low, approaching the critical values needed to eliminate poverty and there is no participation cost for the poor and the assessment is based on monotonic measures, wide coverage scheme and flexible benefits levels should be the preferred policy, eg. Self-targeting employment generating scheme. Thus coverage and target efficiencies may be achieved.

(v) It follows that systematic survey and assessment of actual status of the living standards must be undertaken before implementing any programmes meant for poverty alleviation, so as to device a programme which will ensure coverage, target, transfer and impact efficiencies with high benefit-cost ratio.

Based on the estimation of the proportion of poor (HCR) and the measure of severity in income (PCTE) deprivation among the villages, it was found that even though Sunglup has the highest proportion of poor people, yet the severity of income among the poorest of the poor fails more in Longsa village. This implies that in order to achieve various efficiencies, while implementing any poverty alleviation programme, the severity of deprivation needs to be considered.
Similarly, among the other selected categories, the most vulnerable sections were male, female-headed households and agricultural-headed households. Thus, these sections of population should be the targeted group under any poverty alleviation programme.

(vi) The sample survey shows that none of the household has been covered by the ongoing NREG scheme. Therefore, it must be extended to all the rural areas targeting the poorest of the poor as it promotes supplementary employment for unskilled labour. This programme is self selecting having target efficiency as the wages are low so as to attract the poorest of the poor. Under this programme, the benefit-cost ratio may not be so high, as its direct transfer of benefit to individuals is usually small, but the indirect benefit to the society as a whole will be huge.

(vii) Selection of any such programme must be directed towards providing indirect benefits to the poor from the assets created under the employment generation scheme. As such, assets created under the programme should be durable (not just for instance, roads that are washed away in the next rain) and should benefit the poor at least along with the non-poor, through growth, developing rural-urban linkages etc.

(viii) The programme like land development and conservation must be given importance as social security options because land provides food security enables utilization of family labour and reduces vulnerability of the poor in labour and food market.

(ix) Availability of credit can also play important safety net function, which can prevent asset depletion of the poor and provide working capital to the self-employed poor.

(x) The study reveals that the incidence of poverty and inequality are positively related in terms of calorie intake. This implies that higher equitable distribution of calorie intake leads to lower incidence of poverty in a given social strata. It underlines the need to pursue a specific policy with an objective to ensure equal access to food and nutrition.

In view of this objective, public distribution system needs to be extended to the rural areas as this system ensures high transfer efficiency and wide coverage. Also midday school meals and children nutrition schemes are viewed as a means to attain food security. Further, it has an indirect impact on improving school enrolment and attendance. Thus this programme needs to be more regular with improved quality of food.

(xi) The main elements of social assistance are, it targets the poor and vulnerable sections of the society, and they are need based minimum assistance that protects the poor as a matter of entitlement (ILO, 1942). Thus, optimal mix of social schemes in terms of feasibility and appropriateness in meeting the spectrum of the need of poor and vulnerable section is important.
with an attempt to reduce administration overhead, leakages, cooperation and other factors that undermines the targeting and efficiencies.

- Under social assistance programme of old age pension, the current amount of Rs. 90 per month needs to be enhanced to a reasonable level so that it will help the beneficiaries in meeting the basic minimum needs.
- This kind of social assistance should be extended to poor widows and handicaps.
- Moreover, maternity assistance limiting to the first two births, equal to two or three months wages for the female agricultural labour may be given in the rural areas.
- The selection of the beneficiaries should be based on distributionally sensitive measure of poverty, targeting the poorest of the poor. Such social assistance will benefit a very high proportion of the poor especially women who are in absolute destitution.

(xii) The social assistance and poverty alleviation programmes should be operated through the decentralized delivery systems operating through local institutions in which poor are members and which system empowers them, so as to reduce the costs of information, check frauds and corruptions at the roots. This system also enables quick settlement of claims, localization, provisions of credits, etc.

(xiii) Training programme for the development of skills and technical know-how to the rural population is required so as to enhance their earning capacity and income.

(xiv) Other indirect approaches to poverty alleviation programmes that are related to health and education policy like child care and nutrition can also influence nutritional status.

(xv) To ensure a better standard of living for the rural population of Nagaland importance should be given to the development of physical and social infrastructures. The development of these infrastructures will indirectly uplift the living standard of the rural population.

a) The road connectivity to the rural areas should be an all weather road. This is important because it will improve transport and communication, which in turn will improve the connectivity to urban areas and thereby leads to better agricultural marketing system of the rural people.

b) Since 66.67% of the total households in the sample villages are still residing in Kutchha house and 70.71% of the rural household does not have proper sanitation facility. Therefore it may be suggested the ongoing programme that covers housing of the rural people should still be continued and implemented judiciously. Moreover, common toilets for male and female separately should be built in every rural village.

b) Safe drinking water supply by the government to every village has to be given priority.
Conclusion:

The present empirical study reveals that there exists high percentage of poor population in the district as measured at both State as well as Sample survey poverty line. The result shows that 67.18% and 59.54% of the population are below the poverty line. Moreover, the result also reveals that the income deprivation of the poor people is more than 10% per person measured using the "state as well as sample survey poverty line. The severity of income deprivation comes out at more than 4% for the poorest poor estimated using the same poverty line. Thus, any policy designed to ameliorate the plight of the poor must, among other things, recognize the importance of these income deprivation and severity of the poor apart from the proportion of the poor, before implementing any anti-poverty programmes. This is vital for proper coverage and impact efficiency of any poverty alleviation programme. The analysis also reveals that lots need to be done in development of credit, social securities and basic amenities like, housing, provision of potable water, health care facilities, proper road condition, education, subsidized food supplies and agriculture sector in the study areas. This is important because it will improve the living condition of the rural people which will directly or indirectly reduce the proportion of poor. Thus, the need to alleviate poverty in Wokha in particular and Nagaland as a whole should be the highest priority of the government because no society can surely flourish when greater part of its population is poor and miserable. For which, proper assessment of the extent and severity of income deprivation is vital for implementing and targeting the beneficiaries. Moreover, the present administrative
mechanism is not likely to be efficient for the task, therefore, local delivery system at grass root level should be involved and empowered.