Chapter - V

5.1. Introduction

This chapter involves the analysis and the interpretation of the collected data to fulfill our set objectives. To derive a scientific conclusion and to ensure that all relevant data are used for making contemplated comparisons and analysis, the data collected in the field survey are processed and analyzed systematically.

In the analysis part of the research work, the collected data are observed in the light of hypothesis so as to draw conclusion. Here, a description has been given of how the data collected from the field survey were analyzed and what are the outcomes. Broadly, the study uses the two methods of analysis. The first is the analysis of the survey outcomes using descriptive statistics and secondly, the logistic regression model has been used.

In the first section of the descriptive statistical analysis, a detailed descriptive statistics has been observed about the variation in poverty identification: inclusion error vs. exclusion error, variation in relative poverty and variation in poverty severity. The second section has followed the regression estimation in order to identify the impact of the various factors on the poverty identification and hence, to see which factors or variables identify the poverty most. For this analysis, a functional model has also been developed to relate different causal factors of poverty identification.

5.2. Poverty Status of the households and the Multidimensional Method:

By using union approach of Sabina-Alkire multidimensional method, out of 738 sample households 305 households are identified as poor in the study area. The detail is given in the Table 5.1 and Figure 5.1.:

| Table 5.1.: Proportion of Poo | or and Non-poor households |
|-------------------------------|----------------------------|
|-------------------------------|----------------------------|

| Category | Total households | Percent |
|----------|------------------|---------|
| Poor | 305 | 41% |
| Non-Poor | 433 | 59% |

Source: Complied on the basis of field survey, 2014-15



Figure 5.1: Distribution of Poor and Non-poor households

Source: Constructed on the basis of field survey, 2014-15 as shown in Table 5.1

5.3. Variation in Poor Households across Revenue Circles-Wise:

The table 5.2 calculated the variation in total number and percentage of poor households across revenue circles-wise in the Cachar District using Intersection Approach (I.A.) and Union Approach (U.A.).

| Revenue Circle | Sample size | Poor by I.A. | Poor by U.A. |
|----------------|----------------|--------------|--------------|
| Silchar | 164 | 0 | 36(22.0) |
| Lakhipur | 140 | 0 | 47(33.6) |
| Katigora | 141 | 1(0.71) | 69(48.9) |
| Sonai | 139 | 0 | 94(67.6) |
| Udharbond | 154 | 0 | 59(38.3) |

 Table 5.2.:
 Variation in Poor households across Revenue Circles

Note: Figure in Parentheses gives percentage value

Source: Complied on the basis of field survey, 2014-15

The table shows that using intersection approach, no poor household has been identified in Cachar district except Katigora circle (0.71%). On the contrary, a significant amount of poor household has been identified in every revenue circle by using union approach. The highest number of poor households is in Sonai (67.6%) and the lowest is in Silchar (22.0%) by U.A. Table 5.2 is shown with the help of Figure 5.2.



Figure 5.2: Variation in Poor households across Revenue Circles

Source: Constructed on the basis of field survey, 2014-15 as shown in Table 5.2

The above figure shows that each sample revenue circle contains a significant amount of poor households under the union approach. On the contrary, Katigora is the only revenue circle where 0.71% poor households are observed by applying intersection approach.

5.4. Variation in Poor Households by Municipality Ward and Village Wise:

The Table 5.3 computed the variation in poor households by Municipal Ward and Village wise in the Cachar District using I.A. and U.A.

| Revenue Circle | Name of the Village / Ward | Sample Size | Poor by I.A. | Poor by U.A. |
|----------------|-------------------------------|----------------|-----------------|--------------|
| Silchar | Ward – 4 | 87 | 0 | 12(13.8) |
| | Ward – 8 | 77 | 0 | 24(31.2) |
| Lakhipur | Ward – 5 | 77 | 0 | 15(19.5) |
| | Ward – 6 | 63 | 0 | 32(50.8) |
| Katigora | Kusiarkul | 58 | 0 | 33(56.9) |
| C C | Tarapur | 83 | 1(1.2) | 36(43.4) |
| Sonai | Sonabarighat PtI | 83 | 0 | 54(65.1) |
| | Narsinghpur Pt.IV | 56 | 0 | 40(71.4) |
| Udharbond | Durganagar PtVI | 77 | 0 | 31(40.3) |
| | Doyapur Pt II | 77 | 0 | 28(36.4) |

Table 5.3: Variation in Poor households by Municipality Ward and Village Wise

Note: Figure in Parentheses gives percentage value

Source: Complied on the basis of field survey, 2014-15

In regard to poor households, it is shown in the Table 5.3 that Ward 4 of Silchar has 12(13.8%) and Ward 8 of Silchar has 24 (31.2%) households by U.A. while no poor household has been identified using I.A. in these Wards. Similarly, both Ward 5 and Ward 6 of Lakhipur have 15(19.5%) and 32(50.8%) poor households respectively by U.A. Contrary to this, by using I.A., only 1(1.2%) household has been identified as poor in Tarapur village of Katigora circle. Apparently, 33(56.9%) households has been found as poor in Kusiarkul and 36(43.4%) in Tarapur by U.A. Under Sonai revenue circle, Sonabarighat Pt.I has 54(65.1%) poor households and Narsinghpur Pt.IV has 40(71.4%) households by U.A. Similarly, in Udharbond circle,

Durganagar Pt.VI and Doyapur Pt. II have 31(40.3%) and 28(36.4%) poor households respectively. In the villages of both Sonai and Udharbond, no household has been known as poor by I.A. From the above table, it is clear that the highest proportion of poor households is found in Narsinghpur Pt. IV (71.4%) of Sonai and the lowest is in Ward 4 (13.8%) of Silchar by U.A. The diagrammatic representation of the table 5.3 is given below:



Figure 5.3: Variation in Poor households by Municipal Ward and Village wise

Source: Constructed on the basis of field survey, 2014-15 as shown in Table 5.3.

The above chart shows the variation in poor households in the sample villages and wards. Among these, the highest percentage of poor households is observed in Narsinghpur Pt. IV of Sonai revenue circle while the lowest share is found in Ward 4 of Silchar circle using union approach.

5.5. Variation in Poverty Identification Error: Inclusion Error vs. Exclusion Error

The table 5.4 estimated the total extent of inclusion error and exclusion error in terms of Union Approach.

| Revenue Circle | Sample size | Inclusion Error | Exclusion Error |
|----------------|-------------|-----------------|-----------------|
| Silchar | 164 | 44(26.83) | 17(10.36) |
| Lakhipur | 140 | 18(12.86) | 31(22.14) |
| Katigora | 141 | 11(07.80) | 39(27.66) |
| Sonai | 139 | 15(10.79) | 58(41.73) |
| Udharbond | 154 | 21(13.63) | 36(23.38) |

 Table 5.4:
 Identification Error by Union Approach

Note: Figure in Parentheses gives percentage value

Source: Complied on the basis of field survey, 2014-15

In Silchar, 44(26.83%) households are erroneously included in the BPL list and 17(10.36%) households are excluded from the list as identified by using Union Approach. Similarly, Lakhipur has 18(12.86%) households who are included and 31(22.14%) households who are excluded incorrectly. On the other hand, among rural revenue circles, 7.80%, 10.79% and 13.63% of inclusion errors have been found in Katigora, Sonai and Udharbond respectively. While exclusion errors have also been recorded in these circles (Table 5.4). Thus, it is observed that the level of inclusion error is 26.83% in Silchar, the highest, and 7.80% in Katigora, the lowest. Secondly, the intensity of exclusion error is 41.73% in Sonai, the highest and 10.36% in Silchar, the lowest. Lastly, the magnitude of exclusion error is high compared to inclusion error in all revenue circles except Silchar under union approach. The above information is presented with the help of Figure 5.4.



Figure 5.4: Identification Error by Union Approach

Source: Constructed on the basis of field survey, 2014-15 as shown in Table 5.4.

From the above chart, it is clear that using union approach, the lowest proportion of inclusion error is observed in Katigora circle whereas the highest percentage of exclusion error is found in Sonai circle.

The percentage of inclusion error and exclusion error in terms of Intersection Approach is calculated in the table 5.5 which is shown below.

| Revenue Circle | Sample size | Inclusion Error | Exclusion Error |
|----------------|-------------|-----------------|-----------------|
| Silchar | 164 | 63(38.41) | 0 |
| Lakhipur | 140 | 34(24.29) | 0 |
| Katigora | 141 | 41(29.08) | 1(0.71) |
| Sonai | 139 | 51(36.69) | 0 |
| Udharbond | 154 | 44(28.58) | 0 |

Table 5.5: Identification Error by Intersection Approach

Note: Figure in Parentheses gives percentage value

Source: Complied on the basis of field survey, 2014-15

The table reveals that the percentage of exclusion error, i.e., 0.71% in terms of intersection approach is found only in Katigora. But the inclusion error in terms of intersection approach is found in all the revenue circles. The proportion of inclusion error is 38.41% in Silchar which is the highest among the revenue circles. Lakhipur has 24.29% of inclusion error, the lowest. And the rural circles, viz., Katigora, Sonai and Udharbond have 29.07%, 36.69% and 28.58% of inclusion errors respectively. Table 5.5 is demonstrated with the help of Figure 5.5:



Figure 5.5: Identification Error by Intersection Approach

Source: Constructed on the basis of field survey, 2014-15 as shown in Table 5.5.

Figure 5.5 illustrates that Silchar has 38.41% of inclusion error which is the highest across revenue circles by applying intersection approach. But a little amount of exclusion error is only observed in Katigora circle.

The Table 5.6 estimated the percentage of inclusion error and exclusion error by Municipal Ward wise.

| Revenue | Name of | Name of Sample | Union Approach | | Intersection Approach | |
|----------|---------|----------------|--------------------|--------------------|-----------------------|--------------------|
| Circle | Ward | size | Inclusion Error | Exclusion Error | Inclusion Error | Exclusion Error |
| Silchar | 4 | 87 | 27(31.03) | 04(04.59) | 35(40.23) | 0 |
| Silenui | 8 | 77 | 17(22.08) | 13(16.88) | 28(36.36) | 0 |
| Lakhipur | 5 | 77 | 06(07.79) | 08(10.39) | 13(16.88) | 0 |
| 2 | 6 | 63 | 12(19.05) | 23(36.51) | 21(33.33) | 0 |

Table 5.6: Variation in Identification Error by Municipal Ward Wise

Note: Figure in Parentheses gives percentage value

Source: Complied on the basis of field survey, 2014-15

Using union approach, we find both inclusion and exclusion errors in the wards of urban revenue circles. Among the urban circles, Ward 4 (Silchar) circle has the highest proportion (31.03%) of inclusion error while Ward 6 (Lakhipur) has maximum share of exclusion error (36.51%). Similarly, using intersection approach, no exclusion error is estimated but inclusion error is found in these wards. The lowest percentage (16.88%) of inclusion error is found in Ward 5 (Lakhipur) while the highest share (40.23%) is in Ward 4 (Silchar) as shown in Table 5.6. This is represented with the help of figure 5.6.:



Figure 5.6: Variation in Identification Error by Municipal Ward Wise

Source: Constructed on the basis of field survey, 2014-15 as shown in Table 5.6.

Figure 5.6 reveals that by using union approach, Ward 4 (Silchar) has included a huge proportion of non-poor households in the poverty list whereas Ward 6 (Lakhipur) has left out a significant share of poor households from the list. On the contrary, a major amount of inclusion error as estimated by intersection is observed in both Ward 4 and Ward 8 of Silchar circle.

To show the estimation of the percentage of inclusion error and exclusion error by village wise, we construct the table 5.7.

| | | | | | Inters | ection |
|-----------|--------------------|--------|-----------|-----------|-----------|-----------|
| Revenue | Name of | Sample | Union A | Approach | Appr | oach |
| Circle | the village | Size | Inclusion | Exclusion | Inclusion | Exclusion |
| | | | Error | Error | Error | Error |
| | Kusiarkul | 58 | 07(12.07) | 20(34.48) | 20(34.48) | 0 |
| Katigora | | | | | | |
| | Tarapur | 83 | 04(04.82) | 19(22.89) | 21(25.30) | 1(1.20) |
| | | | | | | |
| Udharbond | Durganagar Pt.VI | 77 | 10(12.99) | 20(25.97) | 21(27.27) | 0 |
| | Doyapore Pt. II | 77 | 11(14.29) | 16(20.78) | 23(29.87) | 0 |
| Sonai | Sonabarighat Pt. I | 83 | 12(14.46) | 37(44.58) | 29(34.94) | 0 |
| | Narsinghpur Pt.IV | 56 | 03(05.36) | 21(37.5) | 22(39.29) | 0 |

Table 5.7: Variation in Identification Error by Village Wise

Note: Figure in Parentheses gives percentage value

Source: Complied on the basis of field survey, 2014-15

The table 5.7 shows that almost all the villages have both inclusion and exclusion errors. Using the union approach, the share of inclusion error is estimated very low i.e., less than 15% in all the six sample villages whereas the highest proportion (44.58%) of exclusion error is found in Sonabarighat Pt. I of Sonai circle. Apparently, only Tarapur village of Katigora contained exclusion error by using intersection approach. Interestingly, most of the villages have a good portion of inclusion error by intersection approach. The figure 5.7 shows the identification errors as presented in the table 5.7



Figure 5.7: Variation in Identification Error by Village Wise

Source: Constructed on the basis of field survey, 2014-15 as shown in Table 5.7.

As shown in the figure 5.7, the proportion of exclusion error by union approach is found high in Sonabarighat Pt.I (Sonai) while it is found low in Doyapore Pt. II (Udharbond). By applying intersection approach, it is observed that Tarapur has only an insignificant amount of exclusion error.

The study shows a significant amount of inclusion and exclusion errors in Cachar district which is visible from the table 5.8:

 Table 5.8.:
 Identification Error in Cachar District

| | Sample | Union A | Approach | Intersection Approach | |
|-------------------|--------|-------------|-------------|-----------------------|-----------|
| Category | Size | Inclusion | Exclusion | Inclusion | Exclusion |
| | 5120 | Error | Error | Error | Error |
| Municipal Ward | 304 | 62(20.39) | 48(15.79) | 97(31.91) | 0 |
| Village | 434 | 47(10.89) | 133(30.65) | 136(31.34) | 01(0.23) |
| Cachar | 738 | 109 (14.77) | 181 (24.53) | 233(31.57) | 1(0.14) |

Note: Figure in Parentheses gives percentage value

Source: Complied on the basis of field survey, 2014-15

It has been seen that of the total 304 Municipal Ward households, 62 households are identified as wrongly included in the BPL list and 48 households are excluded from the list by using union approach. Only 97 households are wrongly included in the list as estimated by intersection approach. On the contrary, using union approach, only 10.89% non-poor households are listed in the poverty list and 30.65% poor households are not provided poverty cards in the village level. Overall result shows that Cachar district has a significant amount of inclusion and exclusion errors. Table 5.8 is represented below:



Figure 5.8.: Identification Error in Cachar District

Source: Constructed on the basis of field survey, 2014-15 as shown in Table 5.8.

It is seen from the Figure 5.8 that the share of exclusion error is high in Cachar district compare to inclusion error by union approach. While it is not true in case of intersection approach as the percent of inclusion error is high in comparison to exclusion error in the study area.

From the foregoing discussion, it is easily draw a conclusion that both exclusion and inclusion errors are prominent in the study area. It is seen in the Table

5.8, the exclusion error is 24.53% using union approach and the inclusion error is 31.57% by intersection approach in Cachar district. The above findings raise a pertinent question, who are these excluded poor and included non-poor under multidimensional method? The following tables demonstrate a brief picture in this regard.

| Means of Livelihood | Inclusion error | Exclusion error |
|---------------------|-----------------|-----------------|
| Agricultural Labour | 00 | 29 (16.02) |
| Entrepreneur | 48(44.04) | 04 (2.21) |
| Govt. Employee | 20 (18.35) | 01 (0.55) |
| Non-Govt. Employee | 34(31.19) | 02(1.10) |
| Casual Labour | 04(3.67) | 101 (55.80) |
| Vendor | 00 | 07(3.87) |
| Fisherman | 01(0.92) | 07(3.87) |
| Driver | 02(1.83) | 29 (16.02) |
| Priest | 00 | 01 (0.55) |

Table 5.9: Variation in inclusion and exclusion errors by means of livelihood (UA)

Note: Figure in Parentheses gives percentage value Source: Complied on the basis of field survey, 2014-15

It is observed in the table that 55.80%, 16.02% and 16.02% of excluded households are casual labour, agricultural labour and driver respectively. Interestingly, a significant share of inclusion error is also observed in the study area. The proportion of 44.04% and 31.19% of such included households are Entrepreneur and Non-Government employee respectively. This is represented in the Figure 5.9



Figure 5.9: Variation in inclusion and exclusion errors by means of livelihood (UA)

Source: Constructed on the basis of Table 5.9

In order to understand the variation in inclusion and exclusion errors by means of livelihood using Intersection Approach (IA), we build a Table 5.10 and Figure 5.10.

Table 5.10: Variation in inclusion and exclusion errors by means of livelihood (I.A)

| Means of Livelihood | Inclusion error | Exclusion error |
|---------------------|-----------------|-----------------|
| Agricultural Labour | 14(6.01) | 01(100) |
| Entrepreneur | 49(21.03) | 00 |
| Govt. Employee | 20 (8.58) | 00 |
| Non-Govt. Employee | 38(16.31) | 00 |
| Casual Labour | 97(41.63) | 00 |
| Vendor | 03(1.29) | 00 |
| Fisherman | 04(1.72) | 00 |
| Driver | 07(3.00) | 00 |
| Priest | 01(0.43) | 00 |

Note: Figure in Parentheses gives percentage value

Source: Complied on the basis of field survey, 2014-15

The result of the table shows that using intersection approach, 100% of excluded households are agricultural labour while the share of 41.63% and 21.03% of included households are casual labour and entrepreneur respectively



Figure 5.10: Variation in inclusion and exclusion errors by means of livelihood (I.A.)

Source: Constructed on the of Table 5.10

After identifying poor using multidimensional methodology, it is seen that there is a significant irregularity in the distribution of BPL and AAY card among poor and non-poor households in the study area. This is explained with the help of following Table 5.11 and Figure 5.11. Table 5.11 shows variations in the share of total cards (BPL and AAY) among poor and non-poor.

| Type of Households | BPL | AAY | Households having cards |
|-----------------------|-------|-------|-------------------------|
| Poor | 59.43 | 34.48 | 46.78 |
| Non-Poor | 40.57 | 65.52 | 53.22 |

Table 5.11: Distribution of BPL and AAY Card among Poor and Non-poor Households (in %)

Source: Complied on the basis of field survey, 2014-15

Of the total card distributed, only 46.78% is allotted to the "Poor" and the remaining 53.22% to the "Non-poor" households as identified by the union approach in the study area. Around 59.43% of total BPL card is distributed among the poor households, while the share of non-poor households is 40.57%. More significantly, in case of the AAY card, initiated to provide food grains for the poorest among the BPL category households at super subsidized prices, 65.52% of cards are distributed to non-poor.



Figure 5.11: Distribution of BPL and AAY Card among Poor and Non-poor Households

Based on information in figure 5.11, it can be argued that the distribution of poverty cards has gone in favour of the non-poor compared to poor households. In

Source: Constructed on the basis of Table 5.11

this context, Ram et al (2009) are of the view that as the process of identification as well as distribution of BPL and AAY cards is often influenced by politically affluent persons; it is the non-poor who benefits more, irrespective of methods adopted in identifying the poor. Hirway (2003) and Khera (2008) mentioned that outright corruption ensures names of non-poor villagers in the BPL list.

5.6. Variation in Relative Poverty Index

Relative poverty considers the overall distribution of income and the relative position of a household within that distribution pattern. In the present study, the relative position of one household is compared with other households and it is tried to find out the variation. The extent of variation of relative poverty is shown in the subsequent tables. The table 5.12 shows the variation of relative poverty across revenue wise.

| Revenue Circle | Mean | S.D. | Test of Mean Difference |
|----------------|------|------|----------------------------|
| Silchar | 0.58 | 0.17 | |
| Lakhipur | 0.65 | 0.25 | |
| Katigora | 0.55 | 0.27 | F= 17.67*** |
| Sonai | 0.43 | 0.22 | |
| Udharbond | 0.59 | 0.23 | |

 Table 5.12: Variation in Relative Poverty Index across Revenue Circles

Note: (***), (**) and (*) indicate significant at the 1%, 5% and 10% level respectively. Source: Complied on the basis of field survey, 2014-15

The average relative poverty among the households of Lakhipur is lower than the households of Silchar while the variation of relative poverty is high among the households of Lakhipur. The reason for this may be that the income level of the households of Lakhipur is more or less equal. But the income variation among the households of Silchar may be high. On the other hand, among the rural revenue circles, the mean relative poverty of the households of Sonai is high but low among the households of Udharbond. Further, the households of Katigora have high level of variation in respect of relative poverty. Overall observation is that the average relative poverty is found high in Sonai (0.43) and low is in Lakhipur (0.65) among the revenue circles. However, it is also seen that there is a significant difference of relative poverty among the households across revenue circles. This has been confirmed by F-test as shown in the table 5.12.



Figure 5.12: Variation in Relative Poverty Index across Revenue Circles

Source: Constructed on the basis of field survey, 2014-15 as shown in Table 5.12.

The Figure 5.12 describes that the average relative poverty is high among the households of Sonai and the variation of relative poverty is low among the households of Silchar.

The Table 5.13 represents Ward Wise Variation of Relative Poverty Index in the study area:-

| Revenue Circle | Name of the Ward Mean | | S.D. | Test of Mean Difference |
|-------------------|--------------------------|------|------|----------------------------|
| Silahar | 4 | 0.60 | 0.16 | |
| Silchar | 8 | 0.55 | 0.17 | |
| Lakhipur | 5 | 0.76 | 0.21 | F=22.94*** |
| | 6 | 0.52 | 0.23 | |

Table 5.13: Ward Wise Variation in Relative Poverty Index

Note: (***), (**) and (*) indicate significant at the 1%, 5% and 10% level respectively. Source: Complied on the basis of field survey, 2014-15

Using the field survey data, in table 5.13 we see how relative poverty difference exists among the households of Municipal Wards. The mean difference of relative poverty among the households of Municipal Wards is significant as reflected by F-test. The study also finds that Ward 6 of Lakhipur has the highest (0.52) while Ward 5 of Lakhipur has the lowest (0.76) average relative poverty among the households of Municipal Wards. This is graphically represented in the Figure 5.13:



Figure 5.13: Ward Wise Variation in Relative Poverty Index

Source: Constructed on the basis of field survey, 2014-15 as shown in Table 5.13.

Figure 5.13 represents the ward wise variation in relative poverty index. It shows that the households of Ward 5(Lakhipur) revenue circle have low level of relative poverty. However, the variation is high among the households of Ward 6 (Lakhipur).

Village Wise Variation of Relative poverty among the households of Cachar district is shown in Table 5.14.

| Revenue Circle | Name of the Village | Mean | S.D. | Test of Mean Difference |
|----------------|------------------------|------|------|----------------------------|
| Katigora | Kusiarkul | 0.53 | 0.27 | |
| Kaugora | Tarapur | 0.57 | 0.28 | |
| Udharbond | Durganagar Pt VI | 0.61 | 0.23 | E_7 25*** |
| | Doyapore Pt. II | 0.57 | 0.24 | $\Gamma=7.25^{+1.1}$ |
| Sonai | Sonabarighat Pt.I | 0.44 | 0.24 | |
| | Narsinghpur Pt.IV | 0.41 | 0.20 | |

 Table 5.14: Village Wise Variation in Relative Poverty Index

Note: (***), (**) and (*) indicate significant at the 1%, 5% and 10% level respectively. Source: Complied on the basis of field survey, 2014-15

It appears from the table 5.14 that the average relative poverty among the households across villages is significant as it is shown by F-test. Of these villages, the average relative poverty of the households of Durganagar Pt. VI of Udharbond is low (0.61). Apparently, the variation of relative poverty is high among the households of Tarapur of Katigorah (0.28). It is also observed that the households of Narsinghpur Pt IV of Sonai have both high average relative poverty (0.41) and low variation (0.20) of relative poverty. Table 5.14 is explained with the help of following chart:



Figure 5.14: Village Wise Variation in Relative Poverty Index

Source: Constructed on the basis of field survey, 2014-15 as shown in Table 5.14.

It is observed from the figure 5.14 that the relative poverty is high among the households of Narsinghpur Pt. IV of Sonai circle and low among the households of Durganagar Pt. VI of Udharbond. The high level of variation of relative poverty is seen among the households of Tarapur.

The Classification of Relative poverty of the households in the study area is represented in table 5.15:

| Religion/ | Category | Mean | S D | Test of Mean |
|-----------------|-----------|--------|-------|--------------|
| Residence/Caste | Cutegory | Wittin | 5.12. | Difference |
| | Hindu | 0.59 | 0.24 | |
| Religion | Muslim | 0.53 | 0.24 | F=6.64*** |
| | Christian | 0.79 | 0.13 | |
| Residence | Urban | 0.61 | 0.21 | t=5.14*** |
| | Rural | 0.52 | 0.25 | |
| | General | 0.58 | 0.24 | |
| Caste | SC | 0.52 | 0.23 | F=4.45*** |
| | OBC | 0.52 | 0.23 | |
| | ST | 0.80 | 0.35 | |

Table 5.15: Classification of Relative Poverty Index

Note: (***), (**) and (*) indicate significant at the 1%, 5% and 10% level respectively. Source: Complied on the basis of field survey, 2014-15

The table 5.15 observes that the average relative poverty is low (0.79) among the Christian households and high (0.53) among the Muslim households. Interestingly, the variation of relative poverty is equally high (0.24) among the Hindu and Muslim households. There is a significant mean difference among the three religions and the value of F-statistics is 6.64***. Regarding residence, the low average relative poverty is observed among the urban household whereas the high variation of relative poverty is found among the rural households. This difference is highly significant as reflected by t-test in the table. In case of Caste, we find that the average relative poverty is high among both the SC and OBC households and also the variation is high among the ST households. The significant difference is observed among these categories. This has been confirmed by F-test. The classification of relative poverty is shown below:



Figure 5.15: Classification of Relative Poverty Index

Source: Constructed on the basis of field survey, 2014-15 as shown in Table 5.15.

The classification of relative poverty chart shows that relative poverty is high among the Muslim households and the variation is low among Christian. It seems that rural households have high level of relative poverty in comparison to urban households. The high variation of relative poverty is seen among the ST households.

Table 5.16 shows the share of Relative Poverty in the study area:

| Religion/ Residence/ Caste | Category | Total Number of Households |
|----------------------------------|-----------|-------------------------------|
| | Hindu | 410(55.55) |
| Religion | Muslim | 325(44.04) |
| | Christian | 03(0.41) |
| Residence | Urban | 304(41.19) |
| | Rural | 434(58.81) |
| | General | 491(66.53) |
| Caste | SC | 110(14.91) |
| | ST | 03(0.41) |
| | OBC | 134(18.16) |

Table 5.16: Share of Relative Poverty Index

Note: Figure in Parentheses gives percentage value. Source: Complied on the basis of field survey, 2014-15.

It is clear from the table 5.16 that the proportion of relative poverty among the Hindu households is high (55.55%). Further, the share of urban households is low (41.19%). Lastly, it is also observed that the percentage of SC and OBC households is 14.91% and 18.16% respectively which are less than the share of General households (66.53%) in the study area.



Figure 5.16: Share of Relative Poverty Index

Source: Constructed on the basis of field survey, 2014-15 as shown in Table 5.16.

The above figure shows that the percentage share of relative poverty is high among the Hindu households whereas this is low among the urban households. But in case of caste, it is high among the General households and next among the OBC and SC households.

5.7. Variation in Severity Poverty Index:

In order to know the intensity of the poverty, we also measured the severity of poverty of the households of the study area. The variation of severity of poverty across revenue circles is calculated and statistically tested as shown in the table 5.17:

| Revenue Circle | Mean | S.D. | Test of Mean Difference |
|----------------|------|------|----------------------------|
| Silchar | 0.41 | 0.13 | |
| Lakhipur | 0.37 | 0.12 | |
| Katigora | 0.34 | 0.15 | F=7.57*** |
| Sonai | 0.31 | 0.12 | |
| Udharbond | 0.41 | 0.13 | |

Table 5.17: Variation in Severity Poverty Index across Revenue circles

Note: (***), (**) and (*) indicate significant at the 1%, 5% and 10% level respectively. Source: Complied on the basis of field survey, 2014-15

The average poverty severity across revenue circles is high among the households of Sonai but the highest variation is observed among the households of Katigora. Noteworthy, it is observed that the mean poverty severity and variation is equal among the households of Silchar and Udharbond. However, it has been confirmed by F-test that there is a significant difference of severity of poverty across the circles. Table 5.17 is represented below:



Figure 5.17: Variation in Severity Poverty Index across Revenue circles

Source: Constructed on the basis of field survey, 2014-15 as shown in Table 5.17.

Table 5.18 represents the Ward wise variation of poverty severity among the households of Silchar and Lakhipur urban circles.

| Revenue Circle | Name of the Ward | Mean | S.D. | Test of Mean Difference |
|-------------------|---------------------|------|------|----------------------------|
| Silchar | 4 | 0.45 | 0.13 | |
| | 8 | 0.40 | 0.13 | F-3 96*** |
| Lakhipur | 5 | 0.44 | 0.12 | 1-5.90 |
| Lakinpui | 6 | 0.34 | 0.10 | |

 Table 5.18: Ward wise variation in Severity Poverty Index

Note: (***), (**) and (*) indicate significant at the 1%, 5% and 10% level respectively. Source: Complied on the basis of field survey, 2014-15

Among the Municipal Wards, the severity of poverty is high among the households of Ward 6 (Lakhipur) but low in Ward 4 (Silchar). Further, the variation of poverty severity is equally high both in the households of Ward 4 and Ward 8 of Silchar circle. It is also observed that there is a significant difference among the households across wards of Silchar and Lakhipur as it is reflected by F-test.



Figure 5.18: Ward wise variation in Severity Poverty Index

Source: Constructed on the basis of field survey, 2014-15 as shown in Table 5.18.

As shown in the figure 5.18, it is clear that severity of poverty is found low among the households of Ward 4 of Silchar and the variation is seen high among the households of both Ward 4 and Ward 8 of Silchar.

Village Wise Variation of Severity Poverty is tabulated in the table 5.19 which is given below:

| Revenue | Name of the | Maan | S D | Test of Mean |
|-------------|--------------------|-------|------|------------------|
| Circle | Village | Wiean | S.D. | Difference |
| Katigora | Kusiarkul | 0.36 | 0.15 | |
| | Tarapur | 0.33 | 0.16 | |
| Udharbond | Durganagar Pt VI | 0.45 | 0.11 | |
| Cultarbolid | | | | $F = 5.66^{***}$ |
| | Doyapore Pt. II | 0.37 | 0.14 | |
| Sonai | Sonabarighat Pt. I | 0.31 | 0.13 | |
| | Narsinghpur Pt. IV | 0.31 | 0.12 | |

 Table 5.19: Village wise variation in Severity Poverty Index

Note: (***), (**) and (*) indicate significant at the 1%, 5% and 10% level respectively.

Source: Complied on the basis of field survey, 2014-15

There are six sample villages in the study area. Among these villages, the highest average poverty severity is found in both Sonabarighat Pt I and Narsinghpur Pt IV of Sonai while the lowest variation is observed in Durganagar Pt. VI (Udharbond). The ANOVA test result for village wise difference in severity of poverty is represented in Table 5.19. Based on this test, it is said that there is a significant difference in poverty severity among the households across villages of rural revenue circles.



Figure 5.19: Village wise variation in Severity Poverty Index

Source: Constructed on the basis of field survey, 2014-15 as shown in Table 5.19.

The above figure represents village wise variation in Severity Poverty Index. From this, it is concluded that the poverty severity is low among the households of Durganagar Pt. VI of Udharbond and the variation of severity of poverty is high among the households of Tarapur of Katigora circle.

The Poverty severity of the households in the study area is measured on the basis of religion, caste and residence. This is shown in table 5.20:

| Religion/ | Category | Maan | S D | Test of Mean |
|-----------------|-----------|------|------|--------------|
| Residence/Caste | | Mean | 5.D. | Difference |
| | Hindu | 0.35 | 0.14 | |
| Religion | Muslim | 0.37 | 0.13 | F=2.48* |
| | Christian | 0.58 | | |
| Residence | Urban | 0.39 | 0.12 | t=2.54*** |
| | Rural | 0.35 | 0.14 | |
| | General | 0.36 | 0.14 | |
| Caste | SC | 0.38 | 0.15 | F=1 17 |
| | OBC | 0.33 | 0.13 | 1 1117 |
| | ST | 0.40 | | |

 Table 5.20: Classification of Severity of Poverty Index

Note: (***), (**) and (*) indicate significant at the 1%, 5% and 10% level respectively. Source: Complied with field survey 2014-15

The Table 5.20 reveals that the average poverty severity among the Muslim households is lower than the Hindu households. On the other hand, the variation of severity of poverty is high among the Hindu households but only a little bit low among the Muslim households. There is low significance of mean difference among the categories of religion and the value of F-statistics is 2.48*. In case of residence, there is very low level of severity of poverty among the urban households in relation to rural household and the variation of severity is found high among the rural households than that of urban households. This difference is highly significant as reflected by t-test in the table. For regard to caste, we find that the average severity of poverty is high among the OBC households and variation is high among these categories. This has been confirmed by F-test. The graphical representation of Table 5.20 is shown below:



Figure 5.20: Classification of Severity of Poverty Index

Source: Constructed on the basis of field survey, 2014-15 as shown in Table 5.20.

Figure 5.20 describes that the average severity of poverty is little bit high among the Hindu households in comparison to Muslim households in the study area. It is also observed that severity is high among rural households and households belong to OBC caste. The variation of poverty severity is high among the SC households.

The share of Severity of Poverty Index in the study area is represented in the table 5.21:

| Religion/ Residence/ Caste | Category | Total Number of Households |
|----------------------------------|-----------|-------------------------------|
| | Hindu | 148(48.52) |
| Religion | Muslim | 156(51.15) |
| | Christian | 01(0.32) |
| Residence | Urban | 83(27.21) |
| Residence | Rural | 222(72.79) |
| | General | 192(62.95) |
| Caste | SC | 56(18.36) |
| | ST | 01(00.32) |
| | OBC | 57(18.69) |

 Table 5.21:
 Share of Severity of Poverty Index

Note: Figure in Parentheses gives percentage value.

Source: Complied on the basis of field survey, 2014-15.

Out of the total 738 sample households, 305 households are identified as poor as per the adopted methodology. Of these, 156 (51.15%) households are Muslim which contains the highest share of poverty severity. It also seems that the percentage share of severity of poverty is low among the urban (27.21%) households. Lastly, the proportion of poverty severity among the general (62.95%) households is high and just equal among the OBC (18.69%) and SC (18.36%) households (Table 5.20). The above table is illustrated with the help of figure 5.21:





Source: Constructed on the basis of field survey, 2014-15 as shown in Table 5.21.

The above figure shows that the percentage share of severity of poverty is high among the Muslim households whereas this is low among the urban households. But in case of caste, it is high among the households belong to General category.

Households' share in the Severity of Poverty in the study area is shown in the Table 5.22:

| Severity | Number of Households | Percentage |
|----------|----------------------|------------|
| High | 0 | 0 |
| Moderate | 229 | 75 |
| Low | 76 | 25 |
| Total | 305 | 100 |

Table 5.22: Distribution of High, Moderate and Low Severity of Poor Household

Source: Complied on the basis of field survey, 2014-15

To identify the more severe strata of severity, we divide the severity of poverty index into three groups, viz., high severity which ranges between 0.75 to 1, moderate severity which is ranging between 0.25 and 0.74 and low severity which is in between 0 to 0.24. When we measure the level of severity, it is found that 75% households in the study area fall under moderate severity and 25% households are in the low. Interestingly, no household is found in the high severity zone. Hence, the poverty of majority of the households of the study area is observed as moderately severe.

5.8. Correlation Analysis of the Variables:

To have an idea about the nature and degree of relationship between the poverty status of the household and the selected explanatory variables in the analysis, Pearson's correlation estimation was carried out and the resultant correlation coefficient is depicted in the table 5.23 below:

| | | POV | RES | RWM | CAST | LIT | REL |
|------|------------------|---------------|---------------|--------------|----------------|-------|-----|
| POV | Pearson Corr. | 1 | | | | | |
| RES | Pearson Corr. | 0.238 (**) | 1 | | | | |
| RWM | Pearson Corr. | 0.153 (**) | 0.096 (**) | 1 | | | |
| CAST | Pearson Corr. | 0.064 | 0.022 | -0.013 | 1 | | |
| LIT | Pearson Corr. | 0.265 (**) | 0.138 (**) | 0.091 (*) | 0.038 | 1 | |
| REL | Pearson Corr. | 0.119 (**) | 0.117 (**) | 0.063 | -0.565 (**) | 0.065 | 1 |

 Table 5.23: Correlation between variables

Note: (**) and (*) indicate significant at the 5% and 10% level respectively. Source: Complied on the basis of field survey, 2014-15 From the table above we can say that poverty is highly correlated with the variable literacy (LIT) of the household (0.265), while poverty is also positively related with the variables like, Residence (RES) of the households (0.238), Ratio of the working member (RWM) of the households (0.153), and Religion (REL) of the households (0.119). All these correlations are found to be statistically significant. It is also seen that there is positive correlation of poverty with the variable Caste (CAST).

About the relation between the variables, it is seen from the table 5.23 that there is significant correlation among the variables, viz. ratio of the working member, literacy and residence. It is also observed that there is a significant correlation between the religion and residence.

The above analysis revealed that literacy, religion, ratio of the working member, and residence are significantly correlated with the poverty variable, but, as already mentioned simply having correlation does not necessarily imply that there is cause and effect relationship between them i.e., we cannot say that the variable literacy (more prominently), religion, ratio of the working man determine the poverty status of the household. So, taking the poverty status as the dependent variable and the other variables as independent variable the regression analysis has been carried out to verify whether the existence of the resulted correlation truly implies the causal impact on the poverty identification.

5.9. Determinants of Poverty in Cachar District:

It is very important to identify the factors which influence the poverty status of the households in the study area. Identification of the factors will provide a map to initiate any plans and strategies for implementing the poverty alleviation programme. So, we have the objective to investigate the factors which influences the poverty status of the households. For this purpose, we have estimated two models. In the first model, we have considered five variables. In the second model, we have considered eight variables which included four explanatory variables and four revenue circles as dummy variables. Here, the revenue circle 'Silchar' is not included in the model and it works as bench mark circle.

The variables for poverty status without revenue circles are as follows:

- 1. Residence
- 2. Religion
- 3. Literacy
- 4. Caste
- 5. Ratio of working member.

The variables for poverty status including revenue circles are:

- 1. Religion
- 2. Literacy
- 3. Caste
- 4. Ratio of working member
- 5. Lakhipur
- 6. Katigora
- 7. Sonai
- 8. Udharbond

Both these models have been estimated under the frame work of logistic regression model. The details of regression model had already been discussed in the Chapter – III. The estimated results of the regression for poverty status are presented in tables 5.24 and 5.25. The results are estimated by using the data analysis and statistical software.

| Dependent Variable= (1=Non-Poor, 0=Poor) | | | |
|--|-------------|---|----------|
| Variables | Coefficient | Odd ratio | z-value |
| const | -2.54 | 0.08 | -7.32*** |
| Religion | 0.79 | 2.21 | 3.83*** |
| Ratio of Working member | 1.34 | 3.80 | 2.77*** |
| Caste | 0.76 | 2.14 | 3.53*** |
| Literacy | 1.38 | 3.97 | 5.79*** |
| Residence | 0.83 | 2.30 | 4.83*** |
| Diagnostic Statistics | | Hosmer -Lemeshow Test=8.09 (P- Value=0.43) Nagelkerke R Square=0.19 | |

 Table 5.24: Determinants of Poverty: Logistic Regression (Model 1)

Note: (***), (**) and (*) indicate significant at the 1%, 5% and 10% level respectively. Source: Researcher's own calculation based on primary data

The model 1 shows, in the table, Nagelkerke R square value is 0.19 which indicates that 19% variation is explained by the model. This means that the data gives a satisfactorily fit to the model. Moreover, the P-value of Hosmer and Lameshow test statistics is greater than 0.10 which means we cannot reject the null hypothesis that the model is rightly specified and acceptable.

We can interpret the odd ratio in terms of the change in odds, i.e., if the value is greater than 1, it indicates that as the predictor increases, the odds of the outcome occurring increase. Conversely, a value less than 1 indicates that as the predictor increases, the odds of the outcome occurring decrease.

The estimation result shows that the variable religion is statistically significant at 1 percent level and shows a positive influence on the poverty status of the households. The Hindu household has more chance of being non-poor as shown by the odd ratio (2.21), i.e., two times more chance of being non-poor, compared to households belonging to other religions in the study area.

It is also seen from the table that ratio of working member of the households is significant at 1 percent level which affects positively the poverty status of the households. The households having more working member have showed three times more chance of being non-poor compared to households having less working member. It throws light on the fact that a higher dependency ratio has worse affect on the household's economic status. This variable is one of the strongest variables to determine the poverty status of the household in the study area.

For the variable, residence, the odd ratio (Table 5.24) comes out as 2.30, which means that urban households have 2.30 times more chance of being non-poor in comparison to rural households. It is a known fact that the urban households have got more opportunities of earning money than the rural households. They are well-informed, well-communicated, well-educated and well-trained. So, the economic condition of the urban households is better than the rural households. On the other

hand, the rural households have not been able to avail all the modern facilities and as a result, they are deprived from enjoying an economically sound life. In the present study, it is observed that both urban and rural households have above mentioned features. Hence, the urban households have higher probability of being non-poor compared to rural households. However, the variable residence is statistically significant at 1 percent level which ascertains a positive relationship between residence and poverty status of the households.

Out of all the estimated variables, the variable literacy of the households influences the probability of being non-poor the most. The odd ratio for literacy is 3.97 which implies that the literate households have 3.97 times more probability of being non-poor than the illiterate households. It throws light on the fact that household with primary education having good opportunity to get job and better income. This variable is highly significant at 1 percent level.

The variable caste is also statistically significant at 1 percent level and it shows a positive influence on the poverty status of the households. The probability of being non-poor of the General household is two times more compared to households belonged to other social groups, i.e., SC, ST and OBCs.

The results of the second model are given in Table 5.25.

| Dependent Variable= (1=Non-Poor, 0=Poor) | | | |
|--|-------------|--------------------------|-----------------|
| Variables | Coefficient | Odd Ratio | z-value |
| const | -1.23 | 0.29 | -2.98*** |
| Religion | 0.74 | 2.10 | 3.49*** |
| Ratio of Working member | 1.29 | 3.62 | 2.67*** |
| Caste | 0.61 | 1.84 | 2.74*** |
| Literacy | 1.36 | 3.90 | 5.51*** |
| Katigora | -0.98 | 0.38 | -3.63*** |
| Sonai | -1.76 | 0.17 | -6.26*** |
| Lakhipur | -0.64 | 0.53 | -2.27** |
| Udharbond | -0.78 | 0.46 | -2.96*** |
| | | Hosmer -Leme | eshow Test=7.94 |
| Diagnostic Statistics | | (P- Value=0.44) | |
| | | Nagelkerke R Square=0.22 | |

 Table 5.25: Determinants of Poverty: Logistic Regression (Model 2)

Note: (***), (**) and (*) indicate significant at the 1%, 5% and 10% level respectively. Source: Researcher's own calculation based on primary data

The R-square statistics indicates that 22% variation is explained by the model 2 (R square value is considered here based on Nagelkerke R square). This implies that the data is a satisfactorily fit to the model. The Hosmer and Lameshow Test is the preferred test of goodness-of-fit. In the above table, we see model fit is acceptable chi-square = 7.94, p=0.44, which indicates our model predicts values not significantly different from what we observed.

The result of the Model 2 shows that the households belong to the Hindu religion have higher probability of being non-poor compared to non-Hindus as shown by the odd ratio (2.10). The variable religion is statistically significant at 1 percent level.

The households having more working member have showed three times more chance of being non-poor compared to households having less working member. It throws light on the fact that a lower dependency ratio is better for the increase of household's income which in turn pulls out the household from poverty. It is seen from the table that ratio of working member of the households is significant at 1 percent level which establishes a positive relation between ratio of working member and poverty status.

It is estimated that the variable Caste is statistically significant at 1 percent level which ascertains a positive relationship between caste and poverty status of the households. For the variable, caste, the odd ratio (Table 5.25) comes out as 1.84, which means that General caste households have 1.84 times more chance of being non-poor in comparison to people those who have belonged to other social groups, viz., SC, ST and OBC. It is a known fact that the General households are traditionally considered advance in social, economical and educational field. They possessed most of the productive resources and also lived in well connected places where job opportunities are available. On the other hand, due to limited control over productive resources and other social constraints, households from SC, ST, and OBC category are more likely to be poor. In the present study, the above mentioned characteristics of both General and, SC, ST and OBCs households are also observed. So, the General households have higher probability of being non-poor compared to other social groups.

The variable literacy is also highly significant at 1 percent level and it shows a positive influence on the poverty status of the households. The probability of being non-poor of the literate household is three times more compared to other households. It throws light on the fact that literate households having good job, perfect market knowledge and better income lead towards non-poor strata of the society.

Again, we can see from the table that variables, like, Katigora, Sonai and Udharbond are statistically significant at 1 percent level and show a lower probability of being non-poor in comparison to Silchar. The variable Lakhipur is also significant at 5 percent level.

However, the odd ratio for Katigora is 0.38. This implies that households living in Katigora have showed 62% less chance of being non-poor in comparison to Silchar. While, for the Udharbond, the 'odd ratio' (Table 5.25) comes out as 0.46, which means that the households of Udharbond have 54% lower probability of being non-poor compared to Silchar.

Regarding the poverty status of the households of Lakhipur, the estimation reveals that the households have 47% less possibility of being non-poor in comparison to Silchar. Lastly, the Table 5.25 shows that the households reside in Sonai have 83% less chance of being non-poor compared to Silchar. Hence, the study estimates more poor households in the Sonai across revenue circles. The above analysis ultimately

reveals that Religion, Ratio of working member, Caste, Literacy, Katigora, Sonai and Udharbond strongly influences the poverty status of the households.

5.10. Determinants of Poverty by Revenue Circles wise:

To evaluate the factors which affect the poverty status of the households of a particular revenue circle, the logistic regression has been prepared separately which had already explained in the Chapter III. Here, the result of logistic regression estimated for the different revenue circles is discussed and analyzed. It may be mentioned here that the model for revenue circle Katigora could not be estimated due to almost non-variation in two variables, viz., residence and caste.

| Variables | Co-efficient | Odd ratio | Z-value |
|-------------------------|-----------------|-----------------------------|-------------|
| const | -0.94 | 0.39 | -1.16 |
| Religion | 0.65 | 1.92 | 1.60 |
| Ratio of Working member | 3.46 | 31.88 | 2.58*** |
| Caste | 0.28 | 1.33 | 0.62 |
| Literacy | 0.48 | 1.61 | 0.72 |
| Diagnostic Statistics | Hosmer -Lem | Hosmer -Lemeshow Test=12.86 | |
| | (P- Value=0.12) | | Square=0.12 |

 Table 5.26: Determinants of Poverty: Logistic Regression Analysis

 (Silchar Revenue Circle)

Note: (***), (**) and (*) indicate significant at the 1%, 5% and 10% level respectively. Source: Researcher's own calculation based on primary data.

The result of analysis for finding out the factors influencing the poverty status of the households of Silchar obtained by using logistic regression is presented in the table 5.26. The result explains that the variable ratio of working member is statistically significant at 1 percent level. Here, the co-efficient of the ratio of working member is 3.46 which means that, with other variables held constant, if ratio of working member increases by a unit, on average the estimated logit increases by about 3.46 units, thereby, suggesting a positive relation between ratio of working member and non-poverty status of the household.

| Variables | Co-efficient | Odd ratio | Z-value |
|-------------------------|----------------|----------------------------|-------------|
| const | -1.54 | 0.21 | -1.86* |
| Religion | 2.07 | 7.96 | 3.93*** |
| Ratio of Working member | -1.41 | 0.25 | -1.24 |
| Caste | 0.73 | 2.07 | 1.36 |
| Literacy | 0.97 | 2.63 | 1.33 |
| Diagnostic Statistics | Hosmer -Leme | Hosmer -Lemeshow Test=6.53 | |
| │ | ► (P- Value=0. | | Square=0.23 |

 Table 5.27: Determinants of Poverty: Logistic Regression Analysis

 (Lakhipur Revenue Circle)

Note: (***), (**) and (*) indicate significant at the 1%, 5% and 10% level respectively. Source: Researcher's own calculation based on primary data

The table shows that Nagelkerke R square value is 0.23 which indicates that 23% variation is explained by the model. This means that the data is a satisfactorily fit to the model. In the table, the Hosmer and Lameshow test shows model fit is acceptable chi-square = 6.53, P=0.59, which indicates our model predicts values not significantly different from what we observed.

The result shows that for the variable, religion, the odd ratio (table 5.27) comes out as 7.96, which means that Hindu households have 7.96 times more chance

of being non-poor in comparison to households belonging to other religions. It is statistically significant at 1 percent level.

| Variables | Co-efficient | Odd ratio | Z-value |
|-------------------------|----------------------------|-------------|--------------|
| const | 15.84 | 148508241.4 | 11.70*** |
| Religion | -18.45 | 0.00 | -5.05*** |
| Ratio of Working member | 1.42 | 4.14 | 1.13 |
| Caste | -18.04 | 0.00 | -4.66*** |
| Literacy | 1.44 | 4.24 | 2.49** |
| Diagnostic Statistics | Hosmer -Lemeshow Test=7.43 | | Nagelkerke R |
| | (P- Value=0.49) | | Square=0.13 |

 Table 5.28: Determinants of Poverty: Logistic Regression Analysis
 (Sonai Revenue Circle)

Note: (***), (**) and (*) indicate significant at the 1%, 5% and 10% level respectively. Source: Researcher's own calculation based on primary data

The estimated result of the factors influencing the poverty status of the households of Sonai obtained by using a logistic regression is presented in the table 5.28. The result reveals that variables viz., religion and caste are statistically significant at 1 percent level which indicates that if the household is non-Hindu, then the probability of being non-poor is less in comparison to Hindu. The co-efficient of literacy is 1.44 which implies that, with other variables held constant, if literacy increases by a unit; on average the estimated logit increases by about 1.44 units suggesting a positive relative between literacy and poverty status of the households of Sonai. It is significant at 5 percent level.

In the table, the Hosmer and Lameshow test shows model fit is acceptable chisquare = 7.43, P=0.49, which indicates our model predicts values not significantly different from what we observed.

| Variables | Co-efficient | Odd ratio | Z-value |
|-------------------------|----------------------------|-----------|--------------|
| const | -2.64 | 0.07 | -2.57** |
| Religion | 0.46 | 1.58 | 1.10 |
| Ratio of Working member | 2.48 | 11.97 | 1.93* |
| Caste | 0.35 | 1.42 | 0.67 |
| Literacy | 1.98 | 7.25 | 2.80*** |
| Diagnostic Statistics | Hosmer -Lemeshow Test=9.45 | | Nagelkerke R |
| → → | (P- Value=0.31) | | Square=0.16 |

| Table 5.29: Determinants of Poverty: Logistic Regression Analysis |
|---|
| (Udharbond Revenue Circle) |

Note: (***), (**) and (*) indicate significant at the 1%, 5% and 10% level respectively. Source: Researcher's own calculation based on primary data

In the Udharbond circle, the most prominent factor is literacy as it is statistically significant at 1 percent level. The odd ratio for literacy is 7.25 which implies that the literate households have seven times more probability of being nonpoor than the illiterate households. However, another variable ratio of working member is also significant at 10 percent level and shows a positive influence on the poverty status of the households.

5.11. Summary of the Chapter:

This chapter includes the analysis of result which we get by using different descriptive statistics and logistic regression model. The results of analysis show a significant variation in poor households across revenue circles. The highest number of poor households is in Sonai (67.6%) and the lowest is in Silchar (22.0%) by Union Approach. The municipal wards and village wise study reveals that the highest proportion of poor households is found in Narsinghpur Pt. IV (71.4%) of Sonai and the lowest is in Ward 4 (13.8%) of Silchar by Union Approach.

It is observed in the study area that 24.53% households are erroneously excluded from and 14.77% households are mistakenly included in the BPL list as reflected by union approach of the multidimensional method. While using intersection approach, 31.57% households are incorrectly included in the list and only 0.14% households are wrongly left out from the list. Thus, it is seen that the survey area has a huge amount of exclusion and inclusion errors.

It is observed that rural revenue circles show more exclusion errors than urban circles. The proportion of 30.65% households has been found wrongly excluded from the list in rural areas using union approach. The households of Sonabarighat Pt I have been observed maximum share (44.58%) of exclusion error in comparison to other villages. On the contrary, in case of inclusion error, the result is reverse one. Here, urban circles show more inclusion errors compared to rural circles. About 20.39% households have been incorrectly included in urban areas. Among the municipal wards, Ward 4 has the highest proportion of inclusion errors across municipal wards.

Apparently, an insignificant difference is observed between sample municipal wards and villages in regard to inclusion errors estimated by intersection approach. It is observed that the distribution of poverty cards has gone in favour of the non-poor compared to poor households. 55.80% and 16.02% of excluded households are casual labour and both agricultural labour as well as driver respectively.

In the present study, the relative position of one household is compared with other households and tried to find out the variation. Overall observation is that the average relative poverty is found high in Sonai (0.43) and low is in Lakhipur (0.65) among the revenue circles. The study also finds that Ward 6 of Lakhipur has the highest (0.52) while Ward 5 of Lakhipur has the lowest (0.76) average relative poverty among the households of Municipal Wards. Of the six sample villages, the average relative poverty of the households of Durganagar Pt. VI is low (0.61). The average relative poverty is low (0.79) among the Christian households and high (0.53) among the Muslim households. Regarding residence, the low average relative poverty is observed among the urban household whereas the high variation of relative poverty is found among the rural households. In case of Caste, we find that the average relative poverty is high among both the SC and OBC households and variation is high among the ST households.

The average poverty severity across revenue circles is high among the households of Sonai but the highest variation is observed among the households of Katigora. Among the Municipal Wards, the severity of poverty is high among the households of Ward 6 (Lakhipur) but low in Ward 4 (Silchar). The highest average poverty severity is found in both Sonabarighat Pt I and Narsinghpur Pt IV of Sonai

but the lowest variation is observed in Durganagar Pt. VI (Udharbond). Of 305 poor households, 156 (51.15%) households are Muslim which contains the highest share of poverty severity. It also seems that the percentage share of severity of poverty is low among the Urban (27.21%) households. Lastly, the proportion of poverty severity among the General (62.95%) households is high. The poverty of majority of the households of the study area is observed as moderately severe.

Using Pearson Correlation method, it is found that literacy, religion, ratio of the working member, caste and residence are significantly correlated with the poverty. In order to find out the existence of the resulted correlation truly implies the causal impact on the poverty identification.

The result of logistic regression Model 1 shows that all the variables, viz, residence, religion, caste, literacy and ratio of working member of the households are significant at 1 percent level which affects positively the poverty status of the households. Literacy (LIT) of the households influences the probability of being non-poor the most. However, the Model 2 reveals that Religion, Ratio of working member, Caste, Literacy, Katigora, Sonai and Udharbond strongly influences the poverty status of the households. The revenue circle wise logistic analysis shows that the variable ratio of working member is statistically significant at 1 percent level which shows a positive influence on the poverty status of the households of Silchar. Similarly, in Lakhipur, the variable religion plays a significant at 1 % level and influence poverty status negatively in Sonai. While literacy is significant at 5% level and positively influences the poverty status. The poverty status of the

households of Udharbond is influenced by the variable literacy at 1% level of significance and the variable ratio of working member at 10% level of significance.