CHAPTER III

Methodology and Data Collection

3.1 Introduction:

The study is mainly based on primary data. To obtain the primary data, a field survey is conducted by adopting a technique of simple random sampling. Data is collected to get the information relating to migration, employment, income, revenues, costs, profits of brick industries, socio-economic conditions of the workers such as age, education, marital status, education of the children, family members, nature of their house, health and living conditions of the workers and also various problems and prospects associated with the brick industry.

For the study, Barpeta and Kamrup(R) districts are selected. In Barpeta district, agriculture is the prime occupation for most of the people. As agriculture is the main occupation for most of the people of this district, there is available supply of soil. In brick industries, soil is the main raw material for brick production and in Barpeta district, there is no scarcity of soil for brick making. As the main raw material required for brick production is available in Barpeta district, hence large numbers of brick industries are growing up in different parts of the district. Again, in Barpeta district, it is found that Government is also helping the young people by providing them land on lease for the establishment of brick industries so that young people can take it as an important source of their income and also contribute to the development of the economy. So, because of availability of soil and also because of the reason for getting the land on lease from the government, brick industries are developing day by day in the district and thus, Barpeta district is selected for the study.

Again, Kamrup district falls under the lower Brahmaputra Valley zone. Quality of soil of this district is mainly alluvial in nature (Deka, J. et.al 2012) and in brick industries, alluvial soil is highly necessary for getting good quality of bricks. As the alluvial soil is available, this district has a very bright future in respect of establishment of brick industries. Hence, a good number of brick industries are growing up in different parts of this district though the district is not industrially so

developed. Again, out of Kamrup metro and Kamrup rural, Kamrup rural is selected for the study as more brick industries are generally concentrated in rural areas.

Another reason for selecting both Barpeta and Kamrup districts together is that till 1983, both Barpeta and Kamrup were under the same district (www.barpeta.gov.in/Geography.html). After 1983, the districts were separated. So, both the districts are taken together to do a comparative study on brick industries between the 2 districts which were part of the same district. The researcher has tried to compare the impact of all the factors of employment and income in both the districts.

3.2 Tools used for data collection:

The study is based both on primary and secondary sources of data. The primary data is collected by preparing two sets of structured questionnaires. One set is prepared for the workers section and the other set is prepared for the owners section of the industry. Field survey is conducted for collecting primary data. However, secondary information is also collected from various news papers, journals, books, magazines, Pollution Control Office Guwahati, Internet etc.

The tables 3.1 and 3.2 show the total numbers of C.D blocks in both the districts.

Table 3.1: Total number of C.D Blocks in Barpeta district:

District	Total C.D Blocks
Barpeta	1. Gobardhana 2. Chakchaka 3.Ruposhi 4. Mandia 5. Chenga 6. Gomaphulbari 7. Bhabanipur 8. Pakabetbari 9. Barpeta 10. Sarukhetri 11. Bajali 12. Jalah

Source: Census of India 2011, Assam, District census Handbook, Barpeta

Table 3.2: Total number of C.D Blocks in Kamrup(R) district:

District	Total C.D Blocks
Kamrup (R)	1. Bihdia Jajikona 2. Rangia 3. Kamalpur 4. Bezera 5. Hajo 6. Sualkuchi 7. Chaygaon 8. Bongaon 9. Goroimari 10. Chamaria 11. Boko 12. Rampur 13. Chayani Barduar 14. Rani

Source: Census of India 2011, Assam, District Census Handbook, Kamrup

Barpeta district has total 12 C.D Blocks and Kamrup (R) district has total 14 C.D Blocks. Out of total number of C.D blocks each district has, 25% blocks from each district are selected. As Barpeta district has total 12 CD blocks, 25% are selected from 12 CD blocks which means 3 blocks are selected from this district. Similarly, Kamrup(R) district has total 14 CD blocks and 25% from 14 CD blocks are selected which means approximately 3 blocks are also selected from this district. This means from both the districts, total 6 CD blocks are selected, 3 from each district. The blocks are selected taking into account the total number of brick industries each block has. From both the districts, one block is selected having high number (15 and above) of brick industries, one is selected having medium number (10 and above) of brick industries and the another is selected having low number (5 and above) of brick industries.

The 3 selected CD blocks of Barpeta district are- Mandia, Chenga and Bajali. Again, 3 selected CD blocks of Kamrup (R) district are- Kamalpur, Rangia and Hajo. The table 3.3 shows the selected CD blocks in both the districts.

Table 3.3: Selected CD Blocks in both the districts:

Districts	Selected Blocks
Barpeta	1. Mandia C.D Block 2. Chenga C.D Block 3. Bajali C.D Block
Kamrup (R)	1. Kamalpur C.D Block 2. Rangia C.D Block 3. Hajo C.D Block

Source: Field survey

In Barpeta district, Mandia block has total 16 numbers of brick industries, Changa block has total 10 numbers of brick industries and Bajali block has total 5 numbers of brick industries. The CD blocks having high, medium and low number of brick industries are selected for the study. Similarly, in Kamrup(R) district, Kamalpur block has 15 numbers of brick industries, Rangia block has 10 numbers of brick industries and Hajo block has 7 number of brick industries. Similarly in Kamrup(R) district also, the CD blocks having high, medium and low number of brick industries are selected for the study.

As the total number of industries in Mandia block of Barpeta district and Kampalpur block of Kamrup(R) district are almost same, total 6 industries are selected from each block of the 2 districts. Similarly, total number of industries in Changa block of Barpeta district and Rangia block of Kamrup district are exactly same, so total 3 industries are selected from each block of the 2 districts. Again, total number of brick industry in Bajali block of Barpeta district and Hajo block of Kamrup(R) district are approximately same, so total 2 industries are selected from each block of the 2 districts.

Total 22 brick industries from the total 6 selected Blocks of both the selected districts are visited for the study. Primary data is collected by visiting nearly 600 workers from both the districts by conducting field survey. The collected data are analyzed with the help of various statistical diagrams and table. The tables 3.4 and 3.5 show the total and selected brick industries in Barpeta and Kamrup(R) districts respectively.

Table 3.4: Total and selected brick industries in Barpeta district:

District	Block	Total number of industries	Selected number of industries	Name of the selected industries
Barpeta	Mandia	16	6	ABF MBA SONA BBI DND MDI
	Chenga	10	3	TANTAN RBI MBI
	Bajali	5	2	JB ABI

Source: Field survey

Table 3.5: Total and selected brick industries in Kamrup(R) district:

District	Block	Total number of industries	Selected number of industries	Name of the selected industries
Kamrup(R)	Kamalpur	15	6	DNK RKB GBI MBI VIP JBI
	Rangia	10	3	GKK KPS RBI
	Hajo	7	2	ASB PKB

Source: Pollution Control Board, Assam, Bamunimaidam, Guwahati-21

In Barpeta district, it is found that total numbers of workers in all the selected 11 industries in all the 3 CD blocks is 1300 out of which 750 are local and remaining 550 are migrant. From 750 local workers, 20% are selected randomly for the study which means 150 local workers are selected. Again, from 550 migrant workers also, 20% are selected for the study which means 110 migrant workers are selected. All together 260 workers are selected for the study from this district.

In Kamrup(R) district, the total numbers of workers in all the 11 selected industries in 3 CD blocks are found to be 1700 out of which 680 are local and the remaining 1,020 are migrants. From 680 local workers, 20% are selected randomly for the

study which means 136 local workers are selected. Again, from 1020 migrant workers also, 20% are selected for the study which means 204 migrant workers are selected. All together 340 workers are selected for the study from this district.

Thus, from both the districts, 20% data is collected from local workers and 20% data is collected from migrant workers. The reason for selecting 20% data that is in almost every industry, maximum number of workers is almost 200 and minimum number of workers is at least 100. Again, near about half of the total workers are migrant workers. If the average number of workers is taken to be 150, 20% data from local 75 workers means total 15 local workers and 20% data from migrant 75 workers also means total 15 migrant workers are selected for the study. Thus, from every industry, almost total 30 workers are selected. As total 22 industries are visited for the study from both the districts, near about 600 workers are selected for the study. However, from both local and migrant workers each, 15% data is collected from male and 5% data is collected from female.

3.3 Reference year:

Primary data has been collected from the month of November in 2014 to March in 2015 and again from the month of November in 2015 to March in 2016. The reason for collecting the data from the month November to March is that the brick industry remains open during the period. The industry remains closed as soon as rainy season starts.

3.4 Methodology

Regarding the methodology, for analyzing the collected data, techniques like frequencies, percentages, averages etc are used. Various tables and statistical diagrams are also used whenever necessary. Again**,** Logit regression is used for testing the 1st hypothesis by using statistical software STATA. Logit regression is used in order to find out the determinants affecting migration of workers in brick industry as the data includes both migrant and non migrant workers. Chi square test is used in order to show whether there is any association between the partents'

educational qualification and the number of children they have. Chi square test is used by using the following formula:

Chi square= $\frac{(Oi-Ei)^2}{Ei}$ where, O_i= Observed frequencies and E_i= Expected frequencies.

3.5 Reference:

Deka, J. et.al (2012) "High Dominance of Shorea robusta Gaertn. in Alluvial Plain Kamrup Sal Forest of Assam, N.E. India", *International Journal of Ecosystem,* 2(4):67-73