A Study of Horizontal Education Inequalities in Bodoland Territorial Area Districts of Assam

A thesis submitted to Indian Institute of Technology Guwahati in partial fulfillments for the degree of Doctor of Philosophy

Submitted by

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Declaration

I hereby declare that the thesis entitled **A Study of Horizontal Education Inequalities in Bodoland Territorial Area Districts of Assam** is my original research work carried out in the Department of Humanities and Social Sciences, Indian Institute of Technology Guwahati, India, under the supervision of Rajshree Bedamatta, Associate Professor of Economics, Department of Humanities and Social Sciences, IIT Guwahati.

In keeping with the general practice of reporting observations, due acknowledgement has been made wherever the work described is based on the findings of other investigations.

(RUPAN BORO)

December, 2016

Certificate

This is to certify that the thesis entitled "**A Study of Horizontal Education Inequalities in Bodoland Territorial Area Districts of Assam**" submitted by Rupan Boro for the degree of Doctor of Philosophy in Economics in the Department of Humanities and Social Sciences, Indian Institute of Technology Guwahati, embodies bonafide record of research work carried out under my supervision. The collection of materials from the secondary and primary sources has been done by Mr. Rupan Boro himself. All assistance received has been duly acknowledged. The present thesis or any part thereof has not been submitted to any University/Institute for any degree or diploma.

Dr. Rajshree Bedamatta

Supervisor

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LIST OF TABLES

LIST OF MAPS AND FIGURE

LIST OF APPENDIX TABLE

LIST OF ABBREVIATIONS USED IN THE THESIS

ABMSU	All Bodoland Minority Students' Union
ABSU	All Bodo Students' Union
AMSU	All Minority Students' Union
ANOVA	Analysis of variance
ASSU	All Assam Students' Union
BAC	Bodoland Autonomous Council
Bd. SF	Bodo Security Force
BLT	Bodo Liberation Tigers
BPF	Bodoland People's Front
BPPF	Bodoland People's Progressive Front
BTAD	Bodoland Territorial Area Districts
BTC	Bodoland Territorial Council
DISE	District Information System for Education
FSUs	First stage Units
GCV	Group Coefficient of Variation
GER	Gross Enrolment Ratio
GGini	Group Gini Index
HEI	Horizontal Education Inequality
HIs	Horizontal Inequalities
HPI	Horizontal Political Inequality
HSI	Horizontal Social Inequality
JUM	Janagastia Uikyo Mancha
MPCE	Monthly Per Capita Consumption Expenditure
NDFB	National Democratic Front of Bodoland
NER	Net Enrolment Ratio

NSSO	National Sample Survey Organisation
OSS	Oboro Suruksa Samiti
PTCA	Plain Tribal Council of Assam
PTR	Pupil Teacher Ratio
SJSS	Sanmalita Janagastia Sangram Samiti
VIs	Vertical Inequalities

Abstract

This thesis studies educational attainments of different socio-religious groups of population in a particularly political conflicts affected region of Bodoland Territorial Area Districts of Assam. While at the outset the focus is on educational attainments of different socio-religious groups of population in the BTAD, it is however investigated within the context of recurrent political (often violent) conflicts recorded in this region over a period of time. Motivation for taking up this research is two-fold. First BTAD of Assam has been at the center of discussion with respect to violent political conflicts between two or more socio-religious groups of population and the researcher being a Bodo himself had particular interest in studying this region. Secondly the human development achievements (including education) of BTAD are one of the lowest in Assam. While low human development achievements can be the result of various processes of underdevelopment, a region such as BTAD has an additional deterrent of being conflict prone.

The development economics literature and in the recent times, the human development paradigm has dealt with the issue of horizontal inequalities or group based inequalities in specific socio-economic settings. The linkages between political dimensions and other socio-economic dimensions of human development are of great research interest. We have taken help of this literature to understand the two way relationship between political conflicts and underdevelopment. While this thesis does not explicitly focus on the role of political conflicts, it does investigate the presence of horizontal education inequalities in the backdrop of an ethnically torn region.

We are asking whether there are significant horizontal education inequalities among the different socio-religious groups of population in BTAD; and in view of the recurrent conflicts and ensuing political unrests in the region, is there an effect on educational outcomes of specific social groups of population. With the help of a probit model, we are

also enquiring what are the factors influencing school attendance of children in conflict affected and not affected regions. The sources of information we rely on are the District Information System for Education (DISE), Indian National Sample Survey Organization's unit level data and primary data collected from the households in two villages of BTAD (one conflict affected and another not-affected).

Analyzing DISE data we found that the conflict prone BTAD region is highly underdeveloped in terms of educational attainments. Over a period of time, the quality of learning achievements of children has deteriorated besides high drop outs beyond the lower primary level. Our estimations based on NSSO unit level data show evidence of significant horizontal education inequalities in all the district categories and its level was the highest in BTAD. Based on a socio-religious group classification, educational attainments of the Muslim and ST categories were found to be lower than the rest. Cross section data at the household level showed conflicts have had a significantly negative impact on the overall educational attainments of the people of the region. The levels of educational attainment and the current attendance rates of children among the conflict affected groups were found to be significantly lower than other groups. Horizontal education inequality in the conflict afflicted village was significantly high. These provide evidence and hence a possibility of inter-generational effects in the form of intense competition for resources in the long run.

Chapter 1

Introduction and review of literature

This thesis is framed in the larger context of the state of primary education in Assam. Assam is one of the worst performing Indian states in terms of human development. Educational attainments of the people of Assam are far behind the people of other parts of the country. Apart from the general educational deprivations that the people of Assam face, certain geographically demarcated regions are also some of the worst sufferers of ethno-political and secessionist conflicts. The Bodoland Territorial Area Districts (BTAD) and the districts surrounding BTAD are one of the most conflict prone regions of Assam. These districts have seen "massacres" as well as intense "group-based conflicts" since the 1990s, besides the secessionist Bodoland movement launched by the indigenous Bodo population since the 1960s. The ever expanding literature on human development has focused on the effects of conflicts on various socio-economic dimensions of development. Primary education is one of the most crucial drivers of development. This thesis investigates the role of political conflicts on the educational attainments of the people in western Assam in general and BTAD in particular.[1] It also enquires into the presence of horizontal inequalities (group based inequality) between the different socio-religious groups of population. Since the focus is on primary education, horizontal education inequalities have been probed in detail.

1.1 *Background of the study*

The state of Assam represents a diverse society comprising various ethno-linguistic groups. There is evidence of strong aspirations among various groups, of preserving their distinct identities, improving socio-economic and political position, including cultural status. Such aspirations have led to intense competition over accessing resources and political power (Pathak, 2013; Mahanta, 2013; Motiram and Sarma, 2014). Secessionist and ethno-political

[1] Chapter 2 discusses in detail why western Assam as a geographical entity has been considered for the sake of my study.

conflicts have marred the fabric of Assamese society for a long period of time (Xaxa, 2008 and Pathak, 2013). Some such secessionist conflicts has been seen in the context of Bodoland movement, resulting in ethnic clashes between Bodo-Muslim, Bodo-Santhal and Rabha-Non-Rabha groups in the Western Plains region of Assam. Such conflicts have caused large numbers of deaths and massive internal displacement of population coupled with considerable loss of property.

Bodoland Territorial Area Districts (BTAD) and the districts surrounding BTAD in western Assam are some of the most conflict prone regions of Assam. The group based conflicts since the 1990s, and its recurrence over the past few years, present a case of intense "ethno-linguistic fractionalization" (Motiram and Sarma, 2014). For example, the conflict between the Bodo and Muslim groups has been very intense in the recent decades, as well as a more recurrent one. Motiram and Sarma (2014) based on a study of differences in monthly per capita consumption expenditure among the Muslim and Bodo of BTAD, have concluded that group based inequalities in this region is likely to grow in the coming years.

Studies on the Bodoland secessionist movement by Das, (1982), Goswami and Mukherjee (1982), Gohain (1989), Misra (1989), George (1994), Xaxa (2008), and Basumatary (2012) have highlighted issues surrounding group discrimination, in-migration of non-tribals to tribal areas, alienation of land, and domination of 'alien' language and culture. However a systematic study of group based inequalities based on socio-economic sample surveys have been lacking.

In the economic literature group based inequalities or estimation of inequalities among the groups, have been referred as horizontal inequalities. This is in contrast to vertical inequalities that highlight inequalities at an intra-group level. The literature on civil and political conflicts has highlighted a two way relationship between conflicts and

underdevelopment. While conflicts are identified as a primary source of persistent underdevelopment, extreme low levels of development are also seen leading to conflict situations. This thesis seeks to address this two way relationship through its emphasis on civil conflicts and educational attainments.

1.1.1 *Indian educational attainments*

Indian education achievements and outcomes at the level of primary schooling, though increasing has been very slow. Some of the rapidly developing and developed Asian countries had increased school attendance and enrolment ratios much earlier than India due to the policy of compulsory education. For example Japan introduced compulsory education in 1872 and had increased elementary school attendance from 28 per cent in 1873 to 94 per cent in 1903 (Sen, 1998). South Korea had universalized primary schooling by the 1970s. In 1979, China had an enrolment ratio of 93 per cent in primary school as compared to 25 per cent in 1949 when it introduced compulsory education policy (ibid). What the above countries achieved in terms of education attainments by the 1960s and 1970s, India seems to have reached the stage only recently. The NSSO 64th round of 2007-08 shows India's net attendance ratio and enrolment ratio to be 88 per cent and 91.2 per cent respectively (Government of India, 2010).

Another serious problem that India has been facing for long is that most children, who enter school, drop out before completion of primary education. The World Development Report 2007 shows that in India, of the total number of enrolled children, only 89 per cent completed primary education (World Bank, 2007). In Sri Lanka the primary school completion rate among children is as high as 97 per cent. The East-Asian countries like Indonesia, Vietnam, and Korea have already achieved 100 per cent primary education completion rate in 2004 (ibid, 2007). World Bank (2007) also shows that most of the South Asian countries including India have very low rates of literacy. The Indian adult literacy rate

increased from 40 percent in 1961 to 61 per cent in 2001. Although adult literacy rate in India is ahead of Nepal (49 per cent) and Pakistan (50 per cent) it is well behind Sri Lanka (91 per cent) and other East Asian countries like China (91 per cent), Indonesia (90 per cent) and Malaysia (89 per cent). In India, though the overall literacy rate has increased from 28 per cent in 1960 to 74 per cent in 2011, the absolute numbers of illiterate persons still remained as high as 272 million.

The UNDP (2011) puts India in 134th position among 187 countries based on human development index (HDI). In terms of human development indicators, India ranks behind even many countries which have much lower per capita incomes. For example, Vietnam ranks 128 in spite of having lower per capita income (2805 PPP) than India (4934 PPP). An average Vietnamese's mean year of schooling is 5.5 years compared to 4.4 in India. Similarly, overall human development index ranks, Sri Lanka 97th and China 101st against India's 134th position (UNDP, 2011).

1.1.2 *State level education achievements*

At the sub-national level, the national Human Development Report of India (2001) reports vast variations in human development achievements as measured by HDI across the states. The state of Kerala has consistently maintained the first rank during the last two decades (1981-2001), although considerably well behind the other states in terms of economic growth. Assam is one of the worst performer Indian states in terms of human development. It can be grouped with other worst performing states of Bihar, Madhya Pradesh, Rajasthan and Uttar Pradesh in this respect. It ranks 14 among 15 major states when ordered in the descending order of HDI (Planning Commission, 2001).

The NSSO 64th round estimates on school participation and expenditure shows that school enrolment and attendance are quite low in many parts of the country. Close to 9 per cent of

children in India in the age group 6-10 'never enrolled' in any educational institution. The states of Bihar, Uttar Pradesh, and Arunachal Pradesh have never enrolled children as high as 22.5 per cent, 11.8 per cent and 14 per cent respectively. The percentage of children 'never enrolled' in Assam is 5.1. Only the states of Kerala, Tamil Nadu, and Mizoram show almost 100 per cent school enrolment rates. The net attendance ratios of Tamil Nadu, Kerala and Himachal Pradesh are higher than 98 per cent while the figures for Bihar and Uttar Pradesh are 76.8 per cent and 82.4 per cent respectively. The state of Assam with net attendance ratio of 91.2 per cent is ahead of Bihar, Uttar Pradesh, and the other North Eastern states of Meghalaya (79.3 per cent), Nagaland (87.8 per cent) and Arunachal Pradesh (84.3 per cent) but, it is considerably behind the other advanced states.

Indian census estimates of 2011 shows that the state of Kerala has the highest literacy rate (93.9 per cent) followed by Lakshadweep (92.3 per cent) and Mizoram (91.6 per cent). On the other extreme, Bihar's literacy rate is 63.8 per cent and is ranked lowest amongst all states of India. The literacy rates of other educationally backward states like Arunachal Pradesh, Rajasthan and Jharkhand are as low as 66.9 per cent, 67.1 per cent and 67 per cent respectively. Although the state of Assam is ahead of Bihar, Uttar Pradesh and Rajasthan with the literacy rate of 73.2 per cent, it is far behind the states of Kerala, Himachal Pradesh and Lakshadweep along with all the North-Eastern states except Arunachal Pradesh.

1.1.3 *Inter district variations in educational attainments in Assam*

In Assam, there are inter district variations in educational attainments. The district of Jorhat has the highest literacy rate of 83.4 per cent, followed by Sibsagar (81.4 per cent), Dibrugarh (76 per cent) and Cachar (80.2 per cent). In sharp contrast, Dhubri district has the lowest literacy rate with just 59.4 per cent. Other districts with low literacy rates are Darrang (64.6 per cent), Barpeta (65 per cent), and Goalpara (68.5 per cent). Under the Sixth Scheduled of the Constitution of India, Assam has three autonomous councils namely Karbi Anglong

Autonomous Councils (KAAC), North Cachar Hills Autonomous Council (NCAC) and Bodoland Territorial Council (BTC) set up in April 1952, June 1952 and February, 2003 respectively. The jurisdiction of the former two districts was confined to the districts of Karbi Anglong and Dima Hasao (erstwhile North Cachar Hills), while that of BTC was extended to the district of Kokrajhar and three newly formed districts of Baksa, Chirang and Udalguri by carving out some *Bodo* tribe inhabited areas of Dhubri, Kokrajhar, Barpeta, Bongaigaon, Nalbari, Kamrup, Darrang and Sonitpur. The primary objective behind this administrative division was to provide smooth and speedy development of the areas mostly inhabited by the tribal population and thereby improve their socio-economic conditions especially with regard to education and economic well-being.

For the development of the marginalized sections of the society, the Sixth Schedule of the Constitution of India provides separate provisions for administration of tribal inhabited areas by identifying and designating as autonomous districts or regions endowed with legislative, judicial, executive and financial powers. The districts under territorial councils have much lower literacy rates compared to Jorhat, Dibrugarh, Sibsagar, Cachar and other educationally advanced districts. The literacy rate of Karbi Anglong is 73.5 per cent, Dima Hasao 78.99 per cent, Baksa 70.53 per cent, Chirang 64.71 per cent, Udalguri 64.71 per cent and Kokrajhar 66.71 per cent. Therefore, BTAD districts have literacy rates lower than not only educationally advanced districts but also lower than the other two autonomous councils of Assam.

The Assam Human Development Report (2003) documents the inter districts variations in human development attainment in the state. It shows that the districts that were carved to form BTAD have lower level of development with respect to human development indicators in comparison to the other advanced districts and also the state average. It shows that all these districts, except Kamrup, have the value of human development index (HDI)

lower than the state average (0.407). The districts of Dhubri, Darrang and Bongaigaon were the worst among the districts which were placed at bottom in the ranking of the districts based on HDI with 23rd, 22nd, and 21stranks respectively among the 23 districts of Assam. On the other hand, the districts with higher level of HDI value are Jorhat (0.650), Golaghat (0.540), and Karbi-Anglong (0.494) which are much ahead of the districts parts of which are included in BTAD.

In terms of educational attainment also these districts of BTAD other than Kamrup and Nalbari are lagging behind not just the educationally advanced districts but also the state average which is 0.595. The educational index of the districts of Kokrajhar (0.474) Darrang (0.514) and Barpeta (0.527), Bongaigaon (0.557), Sonitpur (0.552) Dhubri (0.454) are lower than that of Jorhat (0.722), Sibsagar (0.702) and Lakhimpur (0.657). In fact these districts are placed at bottom in the raking of the districts of the state based on educational attainment (ibid.).

Basumatary (2010) measured human development index for the Bodos in BTAD in 2008 and compared it with the human development index of Assam of 2003. He finds that the HDI for Bodos 0.426 has marginally seen improvement over the HDI value for state (0.407) after a period of five years from calculation of HDI for Assam. The income index (0.426) and health index (0.436) for the Bodos are improvement over the income index (0.286) and health index (0.343) for the state. However, education index for Bodos (0.475) is still lower than the state education index (0.595). This means that though the human development index among the Bodos in BTAD is higher than the state average, their educational attainment lags far behind the state even in comparison to the state's educational attainment of 2003. He argues that this acute imbalance in the expansion of economic opportunities and human development between the Bodo inhabitant and the other regions of the state is responsible factor for the frustration among the Bodos and subsequently led to the social

unrest and movement for separate state. Gohain (1989) also says besides negligible growth of the education and literacy in Bodo dominant areas, the educated Bodos who gained education with grim determination failed to get government jobs; contract and other public benefits due to steep competition from the politically strong Assamese people. This resulted in frustration among the educated youths which is one of the primary reasons of the resentment and unrest in the Bodo inhabitant areas.

1.2 *The Bodoland movement of Assam*

1.2.1 *The language conflict*

The tribal community named Bodos and also known as Kacharis are some of the earliest inhabitants of Assam. They are believed to have migrated from the Central Asian region of China, Mongolia, Tibet and Siberia to the northeastern part of India at about 5000 BC and established the kingdom of Kamrupa in the lower part of Assam. With the passage of time the Bodos moved to the eastern part of Assam in the 4th century and established their new kingdom on the Bank of river Dhansiri and built capital at Dimapur (Soppit, 1885 and Basumatary, 2012). Thaosen (1962) claims that the Bodos established their capital of Dimapur at about 1086 AD and ruled over Assam for about 450 years until they were driven out by the Ahoms in the year 1536.

Historically, the Ahoms and the Kacharis are said to have ruled the kingdom of Ahom without any significant hostilities (Endle, 1911 and Bordoloi, 1984). But in 1409, the war between these two kingdoms took place and persisted for several years. The Ahoms defeated the Kacharis and forced them to shift their capital to the Maibong of the North Cachar Hills in 1536. The Kacharis, even in their new kingdom, had to face a number of aggressive attacks not only from the Ahoms but also from the Jaintia King. Once again after being defeated by the Ahoms they fled to Kaspur of Cachar and ruled over the Kachari kingdom till assassination of their last king Gabinda Chandra in 1830. After assassination of

the king, their kingdom was annexed by the British in their territory and the Kachari rule came to an end (Bordoloi, 1984).

Today, the large Bodo group is widely scattered and are known by different names in different places. In Assam they are known as Bodo or Bodo-Kacharis, Sarania, Fulgarias, Mahalias, Solanimias and Koch. On the south bank of the river Brahmaputra, they are known as Dimasa, Barman, Hajai, Hajong, Lalung, Garo and Rabha. In upper Assam they are known by the names of Deori, Sonowal Kachari, Chutiya and Maran. The Bodo tribes are also found outside the state of Assam. The Meches of North- Bengal, Koch Bihar and Nepal, Triperah of Tripura and the Garos of Garo Hills of Meghalaya are considered to have emerged from the larger Bodo group (Endle, 1911, Bordoloi, 1984 and Bordoloi, Thakur and Saikia, 1987). Today, majority of sub-tribe Bodos as we know them are settled in the northern part of Brahmaputra Valley of Assam, mainly in the districts of Kokrajhar, Chirang, Baksa, and Udalguri. Of the total scheduled tribe (ST) population of Assam, the Bodo group constitutes more than 67 per cent as per Census of 2001. Of them, the sub-tribe Bodo or Bodo-Kachari represents nearly half (40.9 per cent) of the total ST population. Mising and Mikir/Karbi tribes other than the Bodo Group represent 17.8 per cent and 10.7 per cent respectively. In the states of West Bengal and Meghalaya the total number of Mech/ Bodo-Kachari is very negligible as they are representing only 0.2 per cent and 0.13 per cent of total population respectively based on census, 2001.

In 2001, the literacy rate among the STs in the state of Assam was 62.5 per cent, which is well above the national average for STs (47.1 per cent). The male and female literacy rate of 72.3 per cent and 52.4 per cent respectively show that women are lagging behind by 20 percentage points. Kachari (Sonowal) with 81.4 per cent literacy rate are well ahead of others. On the other hand it is lowest among Mikir/Karbi (53.7 per cent). The Dimasa and

Bodo with their literacy rate of 59.6 per cent and 60.3 per cent respectively show that they are lagging behind the state average literacy rate for STs.

Bodos or Bodo-Kacharis have their own distinct culture, language and customs. Like any other ethnic community, they have genuine aspirations of preserving their distinct ethnic identity. The formation of the Bodo Chatra Sanmilani in 1919 to create literature in their language bears evidence of this. During the British rule, there was a spate of migration of the Assamese and Bengali speaking population into the Bodo dominated areas. In-migration of the non-Bodo population eventually also had its effects on land ownership. Xaxa (2008) shows that large scale alienation of land from Bodos to non-tribal continued for nearly a century. This affected not just the demographic but also the cultural pattern of the region. The Assamese and Bengali languages were gradually adopted and assimilated into Hinduism (Xaxa, 2008). The Bodos fight with the Assamese and the Bengalis for cultural space during the British rule, also coincided with the Assamese struggle with the Bengali middle class' political and cultural hegemony. The dream of Assamese was to turn Assam into a homogeneous society imposing the Assamese way of life and the Assamese language over the tribals which generated resentment and resistance among the non- Assamese tribes who were very eager to preserve their own culture and language (Gohain, 1989).

The Bodos began to feel that they had no chance of preserving their own cultural heritage. The fear of losing their distinct language, culture and custom on account of domination of alien language and culture provoked the autonomy movement in Assam (Chaube, 1973, Das, 1989, Goswami and Mukherjee, 1982 and Xaxa, 2008). This cultural dimension, especially the issue of language and script, remained at the heart of the resistance among the Bodos (Mukherjee and Mukherjee 1982, Mukherjee and Sing, 1982).

The Bodo Sahitya Sabha (Bodo Literary Society), since its formation in November, 1952 worked strongly to unite the Bodos on language basis and for the development of their language. They raised the demand for introduction of Bodo language as medium of instruction in educational institutions in Bodo dominated areas. The demand was recognized for primary education in 1963 and secondary level in 1968. Bodo language was also introduced as Modern Indian Language (MIL) in the colleges affiliated to universities of Assam (Mukherjee, 1996 and Basumatary, 2012). Since the Bodos do not have their own script they used the Assamese script. However, during 1973-74 they launched a movement for the use of Roman script instead of the Assamese script which led to a series of protests and conflicts. The movement for a non-Assamese script later came to an end after the adoption of Devanagri script (Gohain, 1989).

The first organized demand by the Bodos for a separate homeland can be traced back to the British colonial period. The Bodo Chatra Sonmiloni (the Bodo Students' Society) was formed in the year 1919, whose objective was to create literature in their own-spoken language. Gurudev Kalicharan Brahma, who launched a socio-religious movement known as *Brahma Movement* for the development of education, culture and political consciousness along with bringing changes in the socio religious life of the Bodos, was a Bodo himself. He, along with his friends, submitted a memorandum to the Simon Commission in 1928-29 demanding reservation of seats in the state legislature and government services, and later, demanded a separate electorate for the Bodos (Mukherjee, 1996 and Brahma, 2001).

1.2.2 *Formation and Reorganization of the state of Assam*

In 1945, while deliberating the future Indian political system, the Cabinet Mission suggested for formation of an Advisory Committee on the rights of citizens, minorities, and tribal and excluded areas. Subsequently, "the North-East Frontier Tribal and Excluded Areas Committee" was formed in 1947, with Gopinath Bordoloi as its chairman. The committee

recommended classification of the hill districts into autonomous and non-autonomous districts. The Drafting Committee of the Indian Constitution, on the basis of recommendations of the Advisory Committee, formulated the autonomous districts of Khasi Hills, Jaintia Hills, Garo Hills, North-Cachar Hills and Mikir Hills. Now, Mikir Hills and North Cachar Hills are known as Karbi Anglong district and Dima Hasao district. When India gained independence in 1947, the state of Assam became a full-fledged state of the Indian union comprising the princely states of Manipur, Tripura and the North-Eastern Frontier Agency (Hussain, 1998).

The state of Assam is full of diversity and heterogeneity in terms of race, language and culture. These diverse groups have their own culture and identities and therefore, they want to preserve their own identities. However, the greater Assamese, instead of integrating the linguistic minority, endeavored to assimilate them by imposing their own language over them (Hussain, 1998). For example, in 1960, the Assam Official Language Bill of 1960 was passed to introduce Assamese as official language in Assam. Again in February 1986, a circular was issued by the Secondary Board of Education in Assam making Assamese a compulsory language in all schools of Assam. Such language policies went against the language aspiration of the Bodos and other non-Assamese communities in the State. This was strongly opposed by not only the Bengali speaking people of the Barak valley of Assam but also all political parties of the Hills region including the Bodo leaders. They considered it as a threat to their language, culture and identity which further propelled the demand for separate state that would give shape to a distinct Bodo identity (Gohain, 1989, Das, 1989, Misra, 1996 and Agnihotri, 1996).

The process of reorganization of the state of Assam began when the Naga Hills District and part of the Tuensang area of North East Frontier Agency (NEFA) became the state of Nagaland in 1963. In 1967, the then prime Minister Indira Gandhi, went for restructuring of

Assam on the basis of a federal structure for preserving the unity of Assam. The proposed form of government would have a regional Assembly from the Autonomous Districts with certain powers. There was also provision for a Statutory State Council for planning and allocation of funds sanctioned by the government for the development of the hills areas. In addition, a provision would be there for a committee in charge of the Cabinet Minister of Hills Affairs comprising the members of Assam Legislative Assembly from the Hills areas for scrutinizing legislation before its extension to the Hills areas (Mukherjee, 1969 and Agnihotri, 1996). The Bodo political leaders welcomed the decision of the Centre to reorganize Assam on a federal basis. As a response to this announcement, All Bodo Students' Union (ABSU) was formed in February 1967 followed by the formation of Plains Tribal Council of Assam (PTCA) in the same month.

The PTCA, for the first time, in May 1967, submitted a memorandum to Zakir Hussain the then President of India for the creation of an autonomous region for plains tribal people of Assam. Gradually, there was a wave of demand for Autonomous Region for the plain tribes. By January 1973, the Bodo political leaders had started demanding union territory status for the plains tribals by the name of Udayanchal (George, 1994, Mukherjee, 1996, and Basumatary, 2012). The ABSU also extended its support to PTCA in demanding union territory status. In 1977, the PTCA entered into an electoral alliance with the Janata government and came to political power. The PTCA then gave up the demand for union territory status and pressed for autonomy, calling for an autonomous region for the Bodos within the state of Assam (George, 1994). This change of stand of the PTCA resulted in a split between the ABSU and PTCA, following which ABSU withdrew its support to the electoral alliance in 1979.

1.2.3 *Militancy and Bodoland movement*

In the1980s, a mass movement was launched in Assam by the All Assam Students' Union (AASU) and the All Assam Gana Sangram Parishad (AAGSP) for detection and eviction of 'foreign nationals' from the state and granting greater autonomy to the state of Assam. This movement was marked by mass gathering, closures, road, rail and air transport blockage, hunger strikes and so on (George, 1994 and Hussain, 1998). The ABSU workers and the other independent Bodo youth organizations also supported AASU in this movement. However, this movement spearheaded by the AASU, ended with the signing of Assam Accord in 1985, and the subsequent election following the Accord, enabled the erstwhile AASU leaders to form a new government called the Asom Gana Parisad (AGP) government in 1986. Since the ABSU had so far supported the AASU in its cause, the formation of the AGP government, raised the hopes of Bodos for fulfillment of their long standing demand. However, soon the ABSU got disillusioned with the AGP government, and pushed its agenda independent of either the AGP or the PTCA. It launched a movement for greater autonomy on March 2, 1987, demanding creation of a full-fledged state of Bodoland outside of Assam.

The ABSU brought out a list of 92 demands but over time, these were reduced to three main political issues viz. (a) formation of a separate state named Bodoland on the north bank of the river Brahmaputra (b) establishment of autonomous district councils in the tribal dominant areas on the south bank of the Brahmaputra and (c) incorporation of the Bodo Kacharis of Karbi Anglong district council of Assam into the Scheduled Tribe (hills) list (Misra, 1989, George, 1994 and Basumatary, 2012). In February 1993, an agreement was signed in Guwahati between the State Government and the Bodo leaders for a Bodoland Autonomous Council (BAC).

1.2.4 *The Bodoland Autonomous Council (BAC)*

The Bodoland Autonomous Council Act, 1993 was enacted by signing the peace agreement between the movement leaders of ABSU/BPAC and the Assam State Government in the presence of representative of the Central Government in February 1993. It provides for the establishment of an Administrative Authority known as Bodoland Autonomous Council (BAC) within the State of Assam to granting maximum autonomy within the framework of the India Constitution. It proposed that there shall be an Autonomous Council which will comprise 40 members, 35 of whom are to be elected on the basis of adult franchise and 5 are to be nominated by the State Government. The BAC comprises contiguous geographical areas between the river Sankosh in the west, Mazbat/ the river Pasnoi in the east and Bhutan in the north. It comprised 2,750 villages, several small towns, and 25 tea plantations. A benchmark for the inclusion of areas in the BAC was that tribal should constitute 50 per cent or more of a village's population. However, villages with lesser tribal populations have also been included to ensure territorial contiguity. The legislative power was vested to council for social, economic, educational, ethnic and cultural advancement of the Bodos residing therein. However, the police, law, finance and other authority remained with the State Government. It is noteworthy that all the rights of nontribal living in the BAC area were to be protected, and their language, culture, and land kept intact.

The BAC was created under a state Act (the Bodoland Autonomous Council Act, 1993) and thus all the powers are vested in the state government. The administrative formation of BAC did not have any legislative power, police power, financial power, executive and administrative control power. Disillusionment of the Bodos due to lack of actual powers, led to the rejection of the Bodo Accord. Thereafter, ABSU and its allied organizations launched another phase of the Bodoland Movement for fulfillment of all political demands

till 2003 which led to a second Bodo Accord signed between the Central Government, State Government and the Bodo Liberation Tigers (BLT) in February 2003.

1.2.5 *Principal causes of demand for separate state of Bodoland*

Some of the principal causes of demand for a separate state of Bodoland can be summarized under three heads: a) Livelihood and economics (b) Ethnic identity or the language movement and (c) Political or administrative autonomy.

Livelihood and economics

The economic causes behind the demand for separate state of Bodoland can be traced back to the changing demography of the Bodo tribes in Assam since India gained independence from the British in 1947. Between 1951and 1971, the percentage of tribal had dropped from 43.19 per cent of the total population to 40.11 per cent. Some of the important reasons for this change in the demographic structure could be attributed to internal and external migration, and the reorganization of the state of greater Assam into various smaller states (George, 1994 and Basumatary, 2012). The regular entry of migrants from neighboring Bangladesh also created a situation of livelihood security, particularly in terms of ownership and access to land titles (ibid).

Land is the main source of the Bodo economy as 90 per cent of them and other tribal depend upon agriculture for their livelihood. However, majority of them become landless today due to indebtedness, poverty, and above all the entry of outsiders into tribal areas. The process had been helped by the fact that during the colonial times they were not granted permanent land rights, partly as they were migratory cultivators. Originally it was not a problem as Assam still had large areas of thinly populated areas. However, the tremendous growth of population because of both natural growth and migrant population

created desperate situations. The coming in of the migrant population, it is alleged, has led to a situation of dispossession of land among the tribal population (Gohain, 1989).

In 1950 the government of Assam established several tribal blocks and belts exclusively for Scheduled Tribes (ST) and Scheduled Castes (SC), but despite this action, the various settlement policies implemented by successive Assam governments increased the number of non-tribal in these areas. Bodo leaders also note that the state government appropriated 6, 00,000 acres of land for government projects. During the Assam movement both the AASU and ABSU demanded the eviction of all non-tribals from tribal belts. Consequently, Clause 10 of the Assam Accord stipulated that "it will be ensured that relevant laws for prevention of encroachment of government lands and lands in tribal belts and blocks are strictly enforced and unauthorized encroachers evicted as laid down under such laws." Loss of land and properties resulted by poor economic conditions compelled the poor tribal to shift into the forests. However, since the AGP government had promulgated a law to evict unauthorized occupants of forest reserves and lands, which again impinged mostly the tribal (Das, 1989, George, 1994 and Basumatary, 2012).

Unemployment is also a major problem confronting the tribal people. Only 10 per cent of the government jobs are reserved for plains tribal, including the Bodos in state of Assam. In addition to that the growth of literacy and education among the plains tribes is negligible. The few Bodo youths who received higher education at great sacrifice and with grim determination facing difficulty in getting good jobs by competing with the politically and economically powerful non-tribes left them feeling frustrated and discriminated against (Gohain, 1989). Moreover, the statutory requirement of knowledge of the Assamese language to obtain a government job in the state is a further barrier to employment opportunities for Bodo youth.

Ethnicity and language issues

A large part of the Bodoland movement has been a movement of securing a separate ethnic identity. Language has been a major cause of alienation of the Bodos and other plain as well as hill tribes of the state. The Assamese, with the dream to form a homogeneous society, tried to impose the Assamese way of life and the Assamese language over the tribal. Very naturally it generated resentment and resistance among the tribes of both hills and plains who have aspiration to preserve their own culture and language and identity (Gohain, 1989). For example, the Assam Official Language Bill of 1960 was enacted to introduce the Assamese as official language of the state of Assam. Since language is a major unifying factor, this created a wedge between the Assamese and the non-Assamese speaking domiciles of the state. It was strongly opposed not only by the Bengali speaking people of the Barak Valley of Assam but also the hill tribes including Bodos. In the1960s, large scale efforts were directed towards imposing the Assamese language and the Assamese script on all the people of Assam, including the Bodos. This was also the period during which there were concerted efforts toward establishing Assamese as a medium of instruction in all the educational institutions of Assam at all levels of education.

The medium of instruction fuelled the already existing insecurity of the tribes regarding fear of losing their own language, heritage and culture. To counter the imposition of the Assamese medium of instruction dictate, the Bodo Sahitya Sabha, established in 1952, supported the ABSU's political demand of federal structure, along with the demand for including the Bodo language in the Eighth Schedule of the Constitution.

The language movement is thus closely linked to the urge of preserving the Bodo identity, and thus runs counter to the 'effort of the Assamese to Assamize Assam' (Mukherjee, 1996). The undivided Assam, comprising the north eastern region of India was and still is home to varied tribes and communities, each replete with its own culturally specific language, beliefs

and practices. However it has been alleged that the successive governments of Assam, including the AGP administration, which came to power based on a mandate that supported identity issues, pursued policies of complete 'assimilation rather than integration', and thus brought in a feeling of exclusion of the Bodos and other plain tribes. However, it has also been discussed that the other hill tribes that separated from the state of Assam, as well as the two hill districts of Assam, Karbi Anglong and North-Cachar Hills made remarkable progress than the plain tribes. This propelled the feeling being left out in the lurch for the Bodos (George, 1994).

Political or administrative autonomy

Access to land rights, ethnic identity and language movement, shaped and perhaps also gave a reason to the Bodo people for launching a political demand for administrative autonomy. The policies pursued by the Indian government during the 1960s and 1970s leading to the creation of separate tribal states for populations smaller than the Bodos made the demand for separate state of Bodoland seem more legitimate (Agnihotri, 1996). Separate state demands carried out by various tribal communities and secessionist groups and the subsequent accords signed by the Indian government, for example with the Mizo National Front (MNF) in 1986, the insurgent Tripura National Volunteers (TNV) in 1988, and the Darjeeling Gorkha Hill Council Pact with the Gorkha National Liberation Front (GNLF) of West Bengal in 1988 increased the hopes and aspirations of the Bodos for a Bodoland state (George, 1994).

Moreover, the India's parliamentary system, based on the majority principle, makes it almost impossible for tribals to get majority seats in the Assam Assembly even by securing 100 per cent of their constituents' votes. The tribal compact areas have been carved into several portions and tagged into the non-tribal constituencies which make the tribal minorities not

only in non-reserved constituencies but also slightly more than the 30 per cent of the total voters even in the reserved constituencies for tribals (George, 1994 and Basumatary, 2012).

1.2.6 *Phases of the Bodoland Movement*

The first phase of the Bodoland movement led by ABSU/BPAC, which continued for six years (1987-1993) passed through many stages and phases. The movement was marked by prolonged periods of blockades, closures, disruption of rail and road links to and from Assam and the rest of the northeastern region with other parts of India. The movement leaders also carried out hunger strike, rallies on national and state highways and public roads and other means of agitation. This movement has had an unprecedented history of human rights violation. Initially, the movement for separate Bodoland was a peaceful movement. Later it turned into violence which has already claimed more than a hundred lives. The movement leaders claim that their peaceful and non-violent movement turned into violence on account of terrible police atrocities like indiscriminate and brutal attack on Bodos, repeated rapes of Bodo women, and even poisoning of wells and water pools that already claimed (Gohain, 1989). Before the Bodoland movement had acquired a momentum, the honourable Guwahati High Court itself took cognizance of a mass rape at a Bodo village called Bhumka in 1988 in the district of Kokrajhar and severely condemned the police authorities for suppressing the truth about police brutalities against Bodo people (ibid). Brahma (2001) claimed that by 1993, as many as 1135 supporters of movement had lost their lives and thousands of Bodo women sexually assaulted and molested by the state police force.

Further, many Bodo villages were burnt down resulting in conflict ridden displacement and relief camps. Government property worth millions of rupees was also destroyed with no sense of normal conditions of living and livelihood in the conflict affected regions. The agitation also saw extortion and harassment of the non-tribal, non-Bodo school teachers,

and clerks, foresters posted in tribal areas, and tea plantation managers and employees. Such treatment also was extended to the Bodo people who did not associate themselves with the ABSU/BPAC political line (Gohain, 1989 and George, 1994). The chief ministers of the affected six northeastern states urged the movement leaders, the Assam government, and the Central government to move quickly toward a settlement. However, the deadlock between the Assam government, Central Government and movement leaders continued for a long period of time until the Bodo Accord was signed at Guwahati between the State Government and the leaders of the movement on 20th February, 1993 and Bodoland Autonomous Council (BAC) was created.

Post-Accord Developments

It was thought that the Bodoland movement had come to an end after the signing of the Bodo Accord in 1993, and peace was restored in Assam. However, the developments post 1993 has been far from peaceful. Nevertheless, the government of Assam released the notification of creation of the BAC on December 17, 1993 and it unilaterally demarcated and declared the boundaries of the BAC. The geographical boundaries of the BAC were the Sankosh River on the west, the Mazbat/Pasnoi River on the east and the Bhutan on the north bank. However, the more complex southern border of the BAC, often impinging on non-tribal areas, appears to have been left unspecified.

But, most Bodo leaders rejected the BAC, terming it anti-democratic and anti-Bodo. The militant group of Bodo dominant areas called Bodo Security Force (Bd.SF) formed in 1986 now known as the National Democratic Front of Bodoland (NDFB) also opposed the accord and committed itself to an armed struggle for a separate Bodoland. They threatened to terminate the accord and renew the movement if 515 "contentious villages" were not incorporated into the BAC arrangement. However, the government of Assam contended that it could not incorporate the 515 villages into the BAC, as a large number of non-tribals

have been long resident in these villages. Rejecting this contention, several extremist activities leading to ethnic cleansing continued in 515 villages of Kokrajhar and Bongaigaon districts between September and October 1993. A second major outburst erupted in several villages around Kokrajhar District in May 1994, leaving many dead, and homeless. Two months later in July 1994, violence broke out in seven districts on the north bank of the Brahmaputra, claiming lives. The most serious incident occurred on July, 1994 at Basbari in undivided Barpeta District close to the Manas Wild Life Sanctuary in which, according to official estimates, 68 persons lost their lives and hundreds of houses were destroyed by militants. In all, about 70,000 people have been displaced and are seeking refuge in crowded relief camps (Hussain, 2006).

In July 1994, ABSU launched an agitation against the non-implementation of the Accord and in 1996, and it revived its demand for a separate state. The Bodo Liberation Tigers (BLT) was formed in 1996 for an armed struggle for the creation of a separate state of Bodoland. Due to its organizational strength and armed struggle, the BLT has gradually taken leadership of the Bodo movement. And in July 1999, the process of talk between the central government and the BLT started after the outfit declared a unilateral cease-fire in June 1999; following a series of negotiations a ceasefire agreement was signed with the Central Government in March 2000 (Singh, 2004).

New Bodo Accord

After ten years of revival movement, a memorandum of understanding was signed among the Central Government, State Government and the BLT on February 10, 2003 which gave the Bodoland Territorial Council (BTC) under the Sixth Schedule of the Constitution. The sixth Schedule to the Constitution (Amendment) Act, 2003 was passed by the parliament and the BTC was constituted as per provision of sixth schedule to administer Bodoland Territorial Area Districts (BTAD). The BTAD was constituted taking all total of 2890

villages within the geographical areas of 8821.68 sq. km which about 11.4 per cent of the total geographical areas of Assam. There are four newly created districts namely- Baksa, Chirang, Kokrajhar and Udalguri under the council which are formed by carving out of eight existing districts of Dhubri, Kokrajhar, Bongaigaon, Barpeta, Nalbari, Kamrup, Darrang and Sonitpur. There are ten sub-Divisions including district headquarter, 25 Development Blocks and 415 Village Council Development Committee (VCDC).

The new accord is different from the former accord in many respects. The new accord is tripartite involvement of the Central Government, the State Government and the agitating insurgent group signed in New Delhi. On other hand, the BAC Accord was a strictly bipartite affair between the government of Assam and the leaders of the ABSU/BPAC combine signed in Guwahati. The BTC was created under the provision of the Sixth Schedule to the constitution of India and passed by the parliament; in contrast the BAC was not created under such provision. The actual territory of the BAC was not clearly defined as it spoke only of contiguous geographical areas between the western, northern and eastern boundaries, but spoke nothing about the southern boundary, which would have direct impinges on areas occupied mostly by non tribals. It also did not alter the existing administrative division. Whereas the new accord was not left any unspecific in terms of geographical boundaries as it was formed by creating new four districts carving Bodo dominant areas of existing districts.

1.3 *Education and human development*

The considerable dissatisfaction with economic growth as an indicator of well-being led to a shift in the discourse on development, from income-based approach to a people centric approach. Morris (1979, cited in Hirway and Mahadevia, 1996) developed the Physical Quality of Life Index (PQLI) based on the indicators of infant mortality rate, life expectancy at birth and basic literacy. The Basic needs group, Haq and his associates (1981) attempted

to measure development in terms of opportunity to access basic needs of the people. This approach focuses on formation of human capital to raise productivity and earning capacity and thereby eradicate poverty through provision of basic needs like primary education, basic health care, clean drinking water, adequate sanitation and basic shelter. The United Nations Development Programme (UNDP, 1990) in its first human development report (HDR) introduced the concept of human development index (HDI) and its measurement. It is a comprehensive measure of longevity, knowledge and decent standard of living. Adult literacy rate and enrolment in school are included in education dimension of human development. Haq (1995) argues that the human development paradigm covers all aspects of development as it calls for economic growth, social investment, empowerment of people, provision of basic needs and social safety nets, political and cultural freedoms and so on. He says that the human development paradigm is a holistic development model that tries to put "people at the center of the development processes". Sen (2000) stressed on the capability approach in which he emphasized on enhancement of capabilities that lead to functionings. He defines development as "the process of expanding real freedom that people enjoy for their economic well-being, social opportunities and political right".

> Expansion of freedom is viewed as both (1) the *primary end* and (2) the *principal means* of development. They can be called respectively the "constitutive role" and the "instrumental role" of freedom in development. The constitutive role of freedom relates to the importance of substantive freedom in enriching human life. The substantive freedoms include elementary capabilities like being able to avoid deprivations as starvation, undernourishment, escapable morbidity and premature mortality, as well as the freedom that are associated with being literate and numerate, enjoy political participation and uncensored speech and so on. In this constitutive perspective, development involves expansion of these and other basic freedoms (Sen, 2000, p. 36).

1.3.1 *Role of education in growth and development*

Basic education plays an instrumental role[2] in elimination of ignorance, ill-health and other forms of deprivation in the society. Elimination of such deprivation leads to enhancement of elementary capabilities that expand our freedom. Basic education, good health, and other human attainments are ingredients of a good quality of life. Improvements in education outcomes have important bearing on the development of valuable capabilities and reaching higher levels of human development (Sen, 1995, Dreze and Sen, 1998).

Many of the developed and developing countries of the world regard education as a legal *duty*, and not merely as a matter of *right* (Weiner, 1991). For example countries like Australia, Scotland, and Sweden made education compulsory in the late 1980s and Japan and Korea in the early 19th century. Basic education is found to have played a crucial role in some of the fastest growing economies such as that of South Korea, Hong Kong, Singapore, Taiwan, China and Thailand (Sen, 1998). These countries had been able to achieve very high levels of elementary education at the time when they went for rapid economic growth and greater integration with the world economy (ibid, 1998).

The economic growth literature is replete with arguments that primary education contributes to raising income by influencing the earning capabilities of individuals (Romer, 1986 and 1990). Investment in education results in rise in farms' efficiency in resource allocation, which in turn results in increase in farms productivity and profits (Haffman, 1977, Romer, 1986, Judson, 1998 and Tilak, 2002). Empirical research has shown that education, particularly primary education has a positive linkage with development. Studies

[2] Instrumental role and intrinsic role of education: role of education, health and elementary freedoms in making individuals more productive and helping them to generate more outputs and income and thus promoting more economic growth is the instrumental role of education. The attainment of education, good health and elementary capabilities are the constituent elements of a good quality of life that are important to leading a valuable life. Thus, these capabilities have intrinsic importance (Sen, 2000).

have also shown that among all educational levels, the returns to primary education are the highest (Psacharopoulos and Woodhall, 1985, cited in Weiner, 1991).

Exactly as primary education is seen to have a positive and long lasting effect on material income of individuals; it is also seen to have an effect on the overall health outcomes of people. For example, maternal education is said to be a single most significant determinant of declining fertility and child mortality rates (Cochrane, 1979 and Caldwell, 1979 cited in Weiner, 1991). In India, estimates from the National Family Health Survey, 2005-06 shows that the total fertility rates and infant mortality rate are higher in the case of illiterate women than those who completed primary education (NFHS, 2005-06). Indian state Kerala has been cited as an example for achievement of higher levels of social development through expansion of education (Kerala HDR, Planning Commission, 2005). Among major states of India, Kerala's infant mortality is the lowest (NFHS, 2005-06). Low infant mortality ranks the state first position in terms of life expectancy at birth (Kerala HDR, Planning Commission, 2005). This report documents that widespread education accessible to all sections of the society is the central feature of Kerala's development achievements. In fact, education played an important role in utilization of basic health care services, and thereby reducing mortality and raising life expectancy, helping to postpone the age of marriage of girls and changing their attitude towards family size (Ramachandran, 1998, Dreze and Sen, 1998 and Kerala HDR, Planning Commission, 2005). Paul (1981) explicitly explains the correlation between education and health status as follows:

> Education influences health status in at least two distinct ways- Education and knowledge of hygienic practices improve health. In particular, mother's education improves the health of their children. Again education raises the productivity and thereby increases the resources available for meeting basic needs and improving health status. Healthy person, especially children have greater capacity for learning which reinforce the impact of education on health and productivity.

Basic education also plays a key role in the democratic process, as literacy leads directly to the improvement in depth and quality of public opinion and thereby enables to participate actively in decision making. Thus education enables the individuals to resist oppression and to organize politically, and hence enhance social justice. Basic education therefore plays a key role in the working of democratic processes (Haq and Haq, 1998).

Basic education, thus, improves the level of human well-being through raising income, improving health and nutrition status of children, enhancing social justice, community participation and thereby leading to higher levels of human development. It enables individuals to resist oppression through improvement in depth and quality of public opinion as well as more active participation of poor in decision making.

1.4 *Public policies on elementary education in India*

In India various major initiatives have been taken in the education sector. The adoption of World Declaration of Education for All, Jomtien in 1990 and the deadline set to achieve the goals by 2000 lent unprecedented momentum in India. The 1990s became the most proactive period for elementary education in India. Since then government of India has been launching various policies and programmes with the objective to bring out of school children into educational main stream and to improve retention and quality of learning in schools and teaching competency. However, before that initiatives were also taken under National Educational Policy, 1986. The only addition is involvement of NGOs and civil societies in delivering Universal Elementary Education (UEE).

Among the policies and programmes launched by the government of India, state specific programmes like Andhra Pradesh Primary Project (1980), Rajasthan Shiksha Karmi Project (1987), Total Literacy Campaign (1988), Mahila Samakhya in Karnataka, Uttar Pradesh and Gujarat (1988), Bihar Education Project (1991), Rajasthan Lok Jumbish (1992), Uttar

Pradesh Basic Education Project (1992) and revised national programmes like District Primary Education Programme (DPEP), 1994, National Programme for Nutritional Support (NPNSP) or Mid-day-meal Programme, 1995 and Sarva Shiksha Abhiyan (SSA), 2001, are largely implemented. Right of Children to Free and Compulsory Education Act, (2009) is the most recent development elementary education policy in a similar fashion. The Sixth Schedule of the Constitution of India made provisions for association of the local bodies in administration of primary education through creation of autonomous administrative unit in tribal dominated regions for imparting quality primary education for tribal people.

Right of Children to Free and Compulsory Education Act

The 86th Amendment of the Constitution has inserted the free and compulsory elementary education for children as a fundamental right into the Article 21 of the constitution of India in 2002. This became an Act in 2009 and came into force since April, 2010. Today, each and every child in the age group of 6-14 years has right to access and complete first eight years of schooling. Now, the state is under compulsion to ensure compulsory admission, attendance and completion of elementary education for all children. Therefore, children of the inhabitants not served by school education are to be provided schooling facilities while non-enrolled or dropped out children are to be readmitted in to the age appropriate classes. The unaided private primary schools also must provide free education to 25 per cent of their class strength to the children from economically weaker sections in the society. As per norms of the Act, the government has to provide an all-weather school building consisting of at least one class room for each teacher and one room as office cum store-room. The government must provide separate toilet for girls and boys, safe and adequate drinking water, a kitchen for preparation of mid-day meal including library in each school. There should be one teacher for each 30 students and one for each 40 cum one head teacher if admitted students are up to 120 and more.

1.5 *Development policy versus ethnic conflicts: a two-way relationship*?

The poverty literature spanning over the last few decades have highlighted on the multidimensional nature of poverty of the developing countries. The issue of underdevelopment of developing countries is no longer contained to economic policies but also spills over to institutional failures leading to political, ethnic, caste and class related conflicts (Bardhan, 2005). Scholars of political economy have often emphasized on the role and importance of institutions in economic development. In the context of developing countries, there is a sizeable attention on government failures as well as market failures (ibid). Bardhan refers to 'distributive conflicts' and 'asymmetries in bargaining power' as the cause of political conflicts. For example, in certain political and economic setups, ethnicity becomes an important factor of economic competition for resources. Two broad strains emerge from the literature on ethnic conflicts related to development processes. The first strain identifies ethnic conflicts as the primary source of persistent underdevelopment while the second strain looks at the disinterest generated from economic policies leading to political or ethnic conflicts (Abeyratne, 2004; Bardhan, 1997, 2005; Alva, Murrugarra and Paci, 2002).

1.5.1 *Impact of violence/political conflicts on development*

The World Bank, through its Word Development Report 2011 came out with a thematic report on 'Conflict, Security and Development' in which there has been an in-depth discussion on the two-way relationship of ethnic conflicts versus development. Countries that have experienced inter-generational conflicts reflect poor human development achievements, including the fulfillment of millennium development goals (MDGs). People in conflict affected countries are found relatively more deprived in terms of socio-economic opportunities. They are more likely to be impoverished, lack access to safe drinking water, basic health care services and schooling. The numbers of undernourished and out of school

children as well as basic health outcomes of infant mortality rate are also very high. Therefore conflict does not merely hinder development opportunities but also creates a wedge between those affected by conflicts and those not.

Literature on economic and political conflicts have shown that exposure to violent conflicts in early childhood can have persistent, long lasting and strong negative impact on education and health outcomes of children. Such negative impacts may affect long term earnings and well-being in their adulthood. For example, Ichino and Winter-Ebmer (2004) document the effects of 2nd World War on educational attainments of children born during 1920-40 in four European countries of Austria, Germany, Sweden and Switzerland. It was found that the average year of school completion of the cohort born in 1930s who reached age 10 in 1939 was much less in Austria and Germany that actively engaged in war whereas in Sweden and Switzerland, such educational loss was not observed. Further the study also pointed that the small loss of education had substantial impact on their lifetime earnings, which in turn have affected GDP growth rates of the respective countries. Destruction of schooling and health infrastructures significantly affected educational attainments and health outcomes of German children who were of school going age during the war (Akbuluk-Yuksel, 2009).

Similarly, Guatemala's 36 yearlong armed conflicts, resulted in loss of education among the school age rural Mayan children during conflict and post conflict days compared to their older cohorts as well as non-Mayan children (Chamarbagwala and Moran, 2011). Studies on armed conflict during 1992-98 in Tajikistan by Shemyakina (2011) and Israeli-Palestinian violent conflict by Maio and Nandi (2013) documented loss of schooling and thereby rising child labour due to the conflicts. It is argued that the deep-rooted poverty created by war through destruction of private properties, houses and means of earning, loss of parents, school infrastructure and forced displacement were the possible factors of such deterioration in schooling outcomes.

1.5.2 *Lack of development leads to violence/political conflicts*

Many scholars attribute the relative deprivation of a group or a region to economic policies that form the basis of disintegration (Gurr, 1968 and Freeman, 2005). Socio-economic deprivation occur within an ethnic group or a region, when they are excluded from political processes for a prolonged period of time, as also being denied the political right and power to control and administrate economic resources. Economic factors along with institutional failures are the basis of relative deprivation of a group or region subsequently resulting in ethnic strives (Bardhan, 1997 and World Bank, 2011). The inter-ethnic or inter-regional competition in access to resources, failed economic policies and impact of market expansion are among the economic factors. Ethnic competition in access to economic resources may take place at various levels, such as, within the working classes, between middlemen and their customers, within the professional elite, among producers, between regions and so on (Bardhan, 1997 and 2005).

Competitions among workers from different groups or regions turn into ethnic/political conflicts if there have been rampant and prolonged periods of unemployment and job insecurity. The conflict between the Mossi immigrants and the locals in Ivory Coast, between the Bangladeshi immigrants and locals in some parts of India in recent years some examples (Bardhan, 1997). Bardhan also highlights the case of government services which have very high security of tenure and incomes. In a situation where there is competition for scarce economic resources, the 'elite from disadvantaged communities' and the 'elites of other advanced groups' often engage in conflicts with each other. The government services in this case do not merely provide security but also is symbolic of ethnic pride and prestige. Many such instances of ethnic strife are highlighted by Bardhan (1997), in Malaysia, Sri Lanka, Nigeria, Mauritania, Sudan, and Northern Chad and so on. There are many ethnic conflicts that originate from disputes owing to sharing of land, forest, water, mineral and

other natural resources. The conflicts between the tribal people and the migrants and settlers from other communities in Assam, Tripura, Mizoram and the Chittagong Hills eastern India are some examples of such conflicts (Shingh, 1982, Bardhan, 1997 and Xaxa, 2008). The conflicts between Palestinians and Israelis, between Jat Sikhs in Punjab and Jats in Haryana and Rajasthan in North India have taken place due to water sharing disputes (Bardhan, 1997).

Inter-regional and inter-ethnic disparity in access to economic opportunities is a pervasive fact of life. The individuals of the disadvantaged ethnic groups or backward regions usually complain of unfair treatment and discrimination by the government against them in jobs, education, and subsidies. Under such circumstances, the educated elite of the backward groups, who have remained underprivileged, are motivated to launch movements either for greater autonomy or separate state to generate new opportunities in civil service jobs and in businesses, even though a smaller and poorer one. Southern Sudanese in Karens, Burma Muslims in Philippines, Muslims in Chad, Kurds in Iraq, Nagas and Mizos in India, Muslims in Thailand, Bengalis in Pakistan and many disadvantaged ethnic groups have launched such movements in recent years (Bardhan, 1997). On the other hand, the secessionist movements launched in many countries like Ibos in Nigeria in the 1960s and the Tamils in Sri Lanka, Basques in Spain, and Sikhs of Punjab in India are examples of movements launched by the advanced groups of backward regions on account of discrimination and violence against them for long years (ibid).

In the recent years, due to structural adjustment programmes and neo-liberal policies, the market economic system argument has also become very strong in the case of political conflicts. The market economic system increases private economic opportunities by reducing the role of the government. Bardhan (1997) discusses that market systems reduce the ability of the government to ensure economic benefits to the underprivileged groups in

reallocation processes. Reallocation of resources rewards only the more enterprising and the more efficient groups, leaving other individuals and groups behind. The disadvantaged groups are mostly those with low human development outcomes, such as human capital, capacity to access credit, information and capacity to adjust with new technologies. Thus market expansion leads to horizontal inequality and social fragmentation in the society which in turn accentuates ethnic conflicts. The conflict between the Mauritanian Arab and black Africans in Africa that began in 1989 is a recent example which took place as a consequence of the massive Senegal River Valley project. The project resulted in land price rise in the river valley, which accompanied by new laws on land ownership passed by the Mauritania elite, denied Africans from their traditional communal rights on land (ibid).

The economic literature on violence and development calls for strong accountability from institutional mechanisms, both at the local and national levels. World Bank (2011) recommends that strong institutions and political, social, and economic inclusion can ensure representation of each group in decision making processes thus protecting their rights. In a multi ethnic society, democracy and institutions play a vital role in coordinating and integrating the ethnic groups (Sen, 2000). Democratic systems based on electoral politics makes provisions for inter-ethnic compromises. Under such system the elected party and the institution acts as a mediator between civil society and government by moderating and regulating them. However, a lack of legitimacy of such social institutions may result in group tensions, agitation politics, and ethnic violence (Bardhan, 1997, World Bank, 2011, Coyne and Pellillo, undated).

Poor political and legal institutions result in inter-ethnic or inter-regional competition for resources and leave the disadvantaged group without adequate economic opportunities (Coyne and Pellillo, undated). Putting this under a framework, World Bank (2011) identifies lack of social justice as one of the reasons for internal conflicts among ethnic, religious or

other regional groups. Such economic and political exclusions are a matter of social injustice thus creating horizontal inequalities (inequalities between identity groups based on religion, caste, ethnicity, or region). Many scholars assert that the mixture of the socioeconomic and political inequalities appear as important factors of conflicts experienced by most of the countries in the world today (World Bank, 2011). For example, the enactment of the 1956 Official Languages Act to make Sinhalese the only official language of Sri Lanka and the 1972 constitutional amendment which gave Buddhism 'foremost status' in the country are the policy of political and social exclusion of the Tamil minority which in turn has provoked the demands for greater autonomy for Tamil and later led to the armed violent conflict. The secessionist movement between the Protestants and Catholics in Northern Ireland and others are such conflicts that have taken place on account of the inequalities in access to political power and economic opportunities (Bardhan, 1997).

1.5.3 *Horizontal Inequalities versus Vertical Inequalities*

The civil conflict literature has been rising since the 1990s. Quantitative and econometric approaches to understanding the nexus between ethnicity, inequality and violent conflicts have also been attempted (for example, Dixon, 2009; Fearon and Laitin, 2003; Collier and Hoeffler, 2004; and Lindquist, 2012). While many studies have concluded that although theoretically the link between economic inequality and civil (and ethnic) conflicts can be established, empirical evidences do not support a significant cause and effect relationship. For example, the works of Fearon and Laitin (2003) and Collier and Hoeffler (2004) calculated Gini coefficients for income inequality and regress it on ethnic conflicts as the independent variable. They hypothesized a negative relationship between levels of ethnic diversity and propensity for civil conflicts, but empirical investigation did not conclude significant results between 'ethnic fractionalization' and 'ethnic civil conflict' (see Lindquist, 2012 for a detailed discussion).

One of the reasons for no conclusive evidence on an empirical relationship between inequalities and ethnic conflicts, it is claimed, could be due to the measure of inequality that is chosen. There is now a sizeable economic literature that focuses on the differences between horizontal inequality and vertical inequality. While vertical inequality it is said captures the differences between individuals in a society through gini coefficients and Lorenz ratios, horizontal inequality captures the differences in socio-economic conditions between groups sharing a common identity (Stewart, 2000; Ostby, 2010 and Lindquist, 2012). Unlike VIs, HIs are therefore multifaceted and include socio-economic, political and cultural status dimensions.

Horizontal Economic Inequality (HEI) incorporates inequalities in access to and ownership of assets like financial, livestock, human, and social and also in employment opportunities and incomes. HIs in social dimension (HSI) encompasses the variation in access to a range of social services such as education, health care, sanitation, and housing and human outcomes from such services. Horizontal Political Inequality (HPI) occurs when there is inequality in distribution of political opportunities and power for example lack of representation of specific groups at the level of cabinet, parliament, bureaucracy, local government and administration. The cultural status horizontal inequality (HCI) reflects the variations in recognition of cultural practices like- language, dress, religion and way of living (ibid). Based on this difference in measure of inequality, economists have sought to inquire the motives behind group mobilizations leading to violence.

1.5.4 *Horizontal Inequalities as cause of ethnic conflicts*

Studies on violent ethnic or political conflicts have strong pointers to HIs as primary cause of conflicts. Differential treatment of people based on language, religion and religious observation, and culture results in identity formation and cleavages among the groups (Langer, 2005 and 2010, Tiwari, 2008, and Stewart, 2010). Giving priority to the language or

religion of one group by recognizing as official one, leave others feel undermined and humiliated. This results in deep sense of alienation and frustration among the underprivileged groups which lead to mobilization along cultural lines for improvement of their own status (Bardhan, 1997, Brown, 2005 and Langer and Brown, 2010). In a society with unequal distribution of political power and opportunities among the elites, the sharp socio-economic inequalities along the cultural differences are often placed in national political sphere. HIs in such a society provide strong incentive to both the leaders and people of deprived groups for political mobilization. Thus, the coexistence of socio-economic and political inequalities along with cultural differences create extremely explosive and volatile socio-political situations, as a leader, in such a society, has not only strong incentive for political mobilization but also can gain easy support from the group members sharing a similar cultural identity (Langer, 2010, Langer and Brown, 2010 and Stewart, 2010). In fact, HPI is more likely to motivate the leaders of the excluded groups for agitation. If they fail to fulfill their aspiration through agitation or protests, they eventually choose violence.

Stewart (2010) in her study of political mobilization among the Blacks in South Africa compares the GDP per capita and educational attainment of the whites and blacks. She argues that white minority which had acquired political power through colonial rule used both political power and economic resources to entrench itself politically and enhance its socio-economic conditions. It resulted in sharp socio-economic inequalities between the groups. For instance, GDP per capita for Black was just 8 percent of white's GDP per capita in 1980. Moreover, relatively much higher expenditure on schooling and health care services on each white child compared to the black resulted in poor education and health outcomes among the blacks compare to the whites. She documents that socio-economic HIs are the major cause of political mobilization among the blacks in South Africa.

Similarly, Ostby (2007) in her study of civil conflicts in 55 developing countries during 1986-2004 measures HIs in terms of three alternative group identifiers like ethnicity, religion and region. She measures HEI based on variation in household assets while HSI on educational attainments among the groups. HIs in both dimensions are found to have positive effect on the probability of conflict.

Mancini (2010) also draws same inference for conflicts in Indonesia. He measures HIs in terms of education, land ownership, public sector employment and child mortality rates to test their link with conflicts. He finds that the HIs in all dimensions have positive association and with a likelihood of resulting in deadly conflicts. Among these four dimensions, HIs in child mortality rates is found to have strongest impact on conflicts. He argues that group differences in child mortality rates reflect inequalities in other socio-economic conditions like, household wealth, levels of education, housing conditions and so on. Other studies on ethnic or separatist conflicts break-out in different countries, for instance studies and conflicts in Indonesia, Philippines and Cote d'Ivoire by Brown (2010) have also shown positive association of HIs with violent conflicts.

As already said horizontal inequalities are multifaceted and include socio-economic, political and cultural status dimensions. However not all form of horizontal inequalities can be measured. While horizontal economic inequalities have been widely measured and shown to play significant role in predicting civil conflicts, social and cultural dimensions largely go unmeasured. The works of Stewart (2000) and Ostby (2007) highlight political and social welfare as important factors in generating grievances. Lindquist (2012) shows education as one of the components in dimension of social welfare, which is crucial in predicting groups' grievances and subsequent conflicts. Education dimension has been seen resulting in more visible and systematic discrimination leading to even asset inequality. It is argued that unequal provision of education opportunities leave children of subordinate groups feeling

undermined and humiliated, or convinced that the majority groups consider them inferior. They are forced to leave schooling with a deep sense of distrust of state funded institutions. Further low levels and poor quality of education received by the children of subordinate groups make them more vulnerable in violent situations (Bush and Saltarelli, 2000).

Studies by Murshed and Gates (2005), Ostby (2005 and 2007) and Mancini (2010) find that horizontal inequalities including education, is significant in predicting ethnic conflicts. Similarly, Malik (2009) finds relative backwardness of Punjab province and federally administered tribal areas (FATA) in Pakistan especially with respect to education and employment has been major reason of continued unrest and conflicts. He argues that educational backwardness along with high unemployment and incidence of poverty are important factors leading to frustration among youth and being recruited into extremist groups (ibid).

The perceptions of people on group identity and their impact on access to public amenities and services and on favoritism and discriminatory attitude of the government also play significant role in escalating such ethnic or separatist conflicts (Langer and Ukiwo, 2010 and Stewart et al., 2010). Langer and Ukiwo (2010) in their comparative study of Ghana and Nigeria find that perception has played a significant role in escalating severe ethno-communal and religious conflicts. While in Ghana majority of the people regard occupation and nationality as important identity of people, in Nigeria the ethnicity/ language, religion and region are regarded important. Relatively larger proportions of people in Nigeria than Ghana perceive that the ethnic or religious background affects access to government amenities and services. This difference in perception of people in Nigeria and Ghana is shown as an important reason, of why Nigeria has been facing recurrent ethno-communal and religious conflicts, while Ghana is able to avoid such conflicts despite both the countries facing similar measured socio-economic inequalities including political exclusion among the

groups (Langer and Ukiwo, 2010). Prevalence and rising HIs both perceived and measured HIs provide strong grievances to the deprived groups for political mobilization, protest and agitation against the government or advanced groups.

1.6 *Ethno-political conflicts in Assam*

In India, Assam is one of the most secessionist and group-based conflict affected North-East India states. Besides the secessionist movements, it has seen several group based conflicts like conflicts between Bodo-Muslim, Bodo-Santhal and Rabha and Non-Rabha in western plans and between Hmar and Dimasa, and Karbi and non- Karbi tribes in two hills districts of Assam. In the case of Bodoland secessionist movement in BTAD region, recurrent group based conflicts between the Bodo and other ethnic and religious groups have been seen since the 1990s.

The recent Bodo-Muslim conflicts, 2012 in that region is one of the largest grouped-based conflicts in India which claimed 65 people and caused one of the largest internally displacements and considerable loss of properties in post-independence India by affecting 5780 villages (Chirang and Kokrajhar district administrations, 2015). Besides, the Bodoland secessionist movement claimed 1607 lives in Assam out of which more than 80 person were inhabitant of BTAD districts over a period of 16 years from 1987 to 2003 (BTC, 2013). The structural flow of the BTAD with changing in demographic, severe mistrust among the ethno-religious groups and insecurity are likely to escalate further instability and conflicts (Motiram and Sarma, 2014). However, such conflicts have been dealt with very sparsely in the economic literature of inequality related studies. Other studies on the Bodoland movement by Das, (1989), Goswami and Mukherjee (1982), Gohain (1989), George (1994) Misra (1989), Xaxa (2008), and Basumatary (2012) highlight that discrimination against the Bodos, in-migration of non-tribals in to tribal areas, alienation of lands, domination of alien

language and culture threatened their distinct language, culture and identity which resulted in aspiration for preservation and upliftment of their distinct identity.

The BTAD region is inhabited by various ethno-linguistic and religious groups. As per Indian census of 2011, BTAD consist of 31.5 lakh population out of which 34 per cent are STs and SCs and others constitute 6 per cent and 60 per cent respectively. According to 2001 census, Bodos account around 75 per cent of the total STs in the districts carved to form BTAD and other are Rabhas, Garo, Sarania Kacharis, and other generic tribes. The non-tribals constitute Bengalis, Rajbangsis, Santhal, Muslims, Nepalese and other Assamese speaking people. It is said that various Bodo Accords left the non-Bodo people with fear of losing legitimate democratic rights and of being deprived from socio-economic opportunities (Mahanta, 2013). Gradually it resulted in cleavages between the Bodos and non-Bodos people in BTAD region. Formation of the Sanmalita Janagastia Sangram Samiti (SJSS: United Ethnic People's Struggle Committee) and Oboro Surakshya Samiti (Non-Bodos Protection Committee) bear evidences of Bodo and non-Bodo rift (ibid). The leaders of the non-Bodo organizations have the perceptions that BTC government is favoritism of Bodos only. They also claim that all the educational institutions, hospitals, government departments are set up only in the Bodo dominated areas apart from disproportionate representation of the Bodos in employment and administrative sector (ibid). Thus there has been perception of unequal distributions of the socio-economic opportunities among the different socio-religious groups.

1.7 *Research objectives and questions*

The human development paradigm, as conceptualized by Sen and followed by the UNDP human development reports, shifted the focus of development economics from national income accounting to people centered policies (Haq, 1995). Sen's concept of well-being was forwarded as a theoretical framework for designing public policies. However, Sen did not

specify his set of functionings or capabilities. Over a period of time, the human development paradigm has spread its focus towards agency aspects of development, and one such focus area that has received increasing attention in the recent years is that of political participation or political empowerment.

Within the broader ambit of the human development paradigm, we focus on the linkages between how political dimensions get interlinked with other socio-economic dimensions of human development. At a regional level, the Bodoland Movement which began peacefully in the 1960s, and gradually became violent from the 1980s onward, provides us a background to investigate the human development outcomes of people of this region. We propose two research objectives:

1. To study the state of elementary education of western Assam, which is one of the most underdeveloped regions of Assam in terms of human development.
2. To examine whether ethnic conflict induced political unrests can lead to differential educational outcomes among different social groups of population.

The research questions are:

1. What are the levels of overall educational attainments in the districts of western Assam?
2. Are there significant horizontal inequalities among different social groups of population in the BTAD?
3. In the context of Bodo-Muslim conflicts, and the ensuing political unrests in BTAD, is there an effect on the educational outcomes of specific social groups of population?
4. What are the different factors influencing school attendance of children in conflict affected and not affected regions?

1.8 *Data source and chapter outline*

This study is based on both secondary and primary data. The important sources of secondary information we rely on are the Registrar General of Census of India, District Information System for Education (DISE), Annual Status of Education Report (ASER) and National Sample Survey organization (NSSO) unit level data based on the 61st and 66th quinquennial round reports of Consumer Expenditure and Employment Unemployment.

Household level cross section data have been collected through detailed survey of two villages (one conflict affected and another not affected) from the worst affected Kokrajhar district of BTAD. Both the villages were identified based on personal interaction and interviews with the BTC government officials and media reports. While measuring horizontal inequalities we have used population weighted group Gini (GGini). A difference-in-differences estimator and probit regression analysis have been carried out for measuring the effects of conflicts on education attainments.

Chapter outline

The thesis is arranged into seven chapters. They are:

Chapter 2 The state of primary education in western Assam: This chapter enquires into the state of primary education in the districts of western Assam for the period of 2004-05 to 2014-15.

Chapter 3 Methodology of the study: This chapter explains the NSSO unit level data used in measurement of the horizontal inequalities. It also provides explanation of the background of the village selection and sampling design for household survey conducted in these villages.

Chapter 4 Description of the study villages: In this chapter, general socio-economic characteristics of the study villages as well as profile of the households based on key indicators have been analyzed.

Chapter 5 Horizontal inequalities in Assam: *Based on NSSO unit level and household level cross section data:* The chapter analyses the group based inequalities in the economic and education dimensions in Assam based on NSSO unit level data. It also analyses education inequalities across the ethno-religious groups based on household level cross section data.

Chapter 6 Effect of political unrest on educational attainments: *A cross sectional analysis:* This chapter studies the effects of the group based conflicts induced political unrests on the educational attainments of the people in the study villages.

Chapter 7 Summary and conclusion: This chapter summarizes the main findings of the thesis and provides a policy framework.

Chapter 2

The state of elementary education in western Assam

This chapter enquires into the state of primary[3] education in western Assam. Our focus is on western Assam because the Bodoland Territorial Area Districts or BTAD forms a large part of this geography. As already discussed in Chapter 1, western Assam comprises a heterogeneous territory from which districts were carved out to form BTAD (see section 1.2.6). Compiling data for BTAD as a composite whole is not possible from the existing data sources because the geographical territory of BTAD overlaps across various districts. In addition the entire data sources we rely on do not have separate information for BTAD. Although some recent information from 2011-12 can be obtained, information for larger time period is not available. However what we can produce is the data for western Assam, of which BTAD forms a major part. The estimates for western Assam can be considered representative of BTAD. We have estimated weighted average for western Assam by information of individual districts from which BTAD has been carved out. Reference to western Assam as a geographical entity can also be found in Motiram and Sarma (2014) and NSSO (2010).

For assessing the state of primary education, the focus of this chapter is on the following. Section 2.1 states sources of information used in this chapter. Section 2.2 discusses the policy attention provided to primary education in Assam in general and western Assam in particular. Section 2.3 analyses the availability of schooling facilities, followed by enrolment and participation of children in the school education system. Section 2.4 shifts attention to teaching competency and learning outcomes and section 2.5 concludes.

[3] Elementary education is classified into lower primary and upper primary levels we used the term elementary and primary interchangeably.

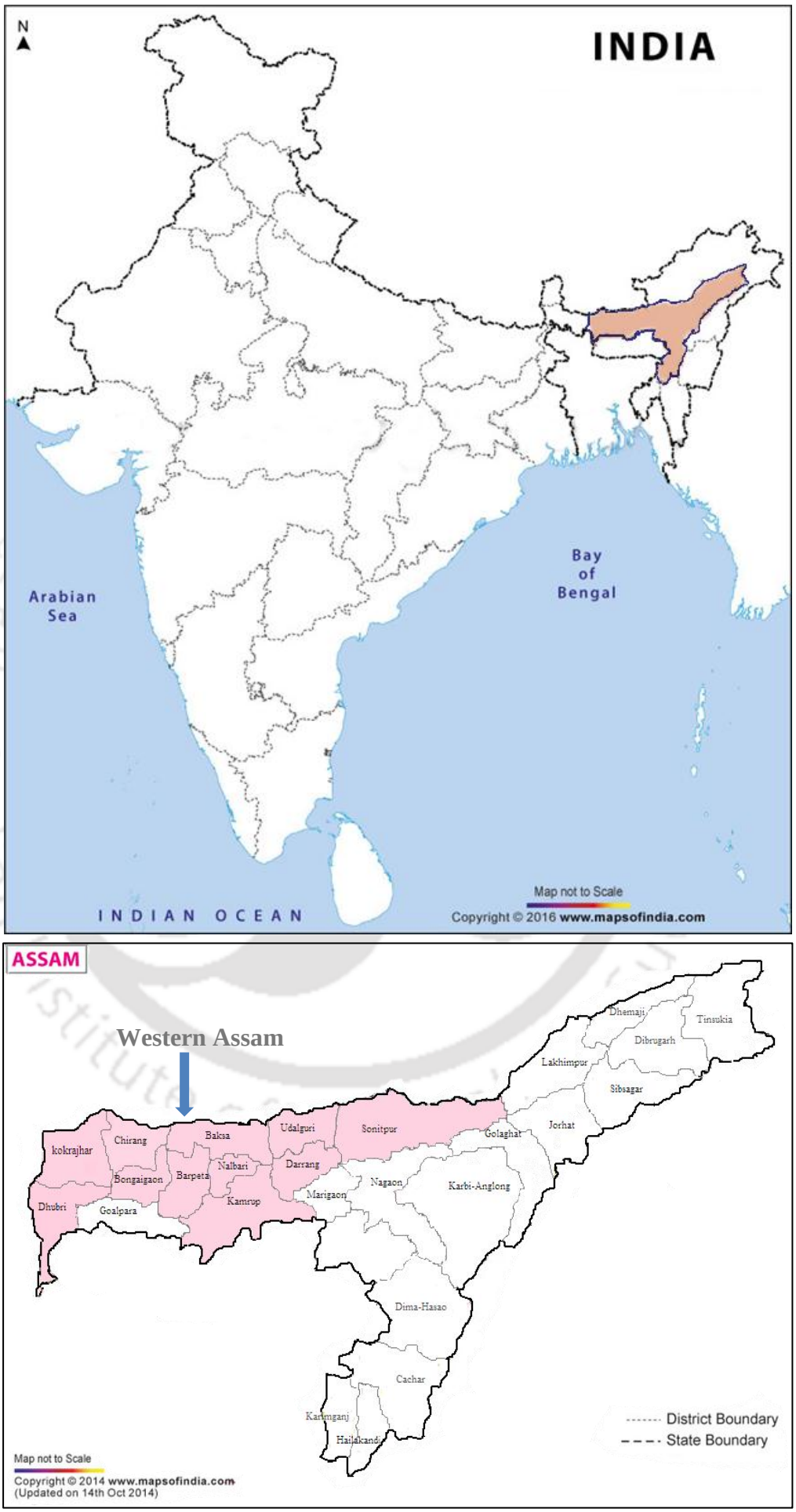
2.1 *Sources of data*

The sources of information we rely on for this chapter are district information system for education (DISE), Census of India, Annual Status of Education Report (ASER) and National Sample Survey Organization (NSSO). The time period under consideration is the most recent ten years (i.e. 2005-06 to 2014-15). This time period is selected for three reasons: first BTAD was formed in 2003 and since then the provision of primary education is the responsibility of BTC government. Second major civil conflicts between the ethnic groups erupted during the 2000s. Lastly relevant information for western Assam particularly from DISE could be obtained for this time period.

DISE is prepared by National University of Education Planning and Administration (NUEPA) with support from Government of India which provides information on key indicators like number of schools, enrolment and other school related facilities. Initially it covered only 42 districts across seven states of Indian union where district primary education programme (DPEP) was implemented. Since 2005-06 DISE covers all districts. From DISE we have compiled information on number of schools, enrolments, dropout rates, and pupil-teacher ratio.

From the Registrar General of Census of India we have collected information on literacy attainments and current attendance rate of school going children. From NSSO we used the availability of schooling facilities for households within a convenient walking distance. ASER is prepared and published annually by Pratham, a non-government organization since 2005. Based on large rural sample it provides information on learning achievements of children with respect to ability to read simple text and do basic arithmetic. Initially it provided information at state level but since 2013 information on some district level indicators are also available. Form ASER, we used information on ability to read the text of lower standards, simple English sentences, and solve simple arithmetic problems.

Map 1 *Map of India and Assam*



2.2 *Public policies on elementary education in Assam*

India had a constitutional commitment to providing free and compulsory education to all children in the age group of 6 to 14 years nearly 70 years ago. With the objective to achieve universal completion of eight years of primary schooling, number of initiatives had been undertaken by the government of India over the years. Among the policies and programmes initiated by the government of India and largely implemented in Assam including western Assam are District Primary Education Programme (DPEP), 1994, National Programme for Nutritional Support (NPNSP) or Mid-day-meal Programme, 1995, Sarva Shiksha Abhiyan Mission (SSA), 2001, and Right to Education Act, 2009. Besides, the state of Assam had implemented many state specific programmes for the improvement of primary education scenario in the state.

Short after independence, government of Assam passed the Assam Primary Education Act, 1947 to make primary education free and compulsory. Through this act the responsibility for introducing free and compulsory primary education was shifted from local and municipal boards to sub-divisional school boards created under this provision (Vaidya, 2005). It was repealed in 1954 by the Assam Basic Education Act, 1954. The new Act was enacted for the development, expansion, management and control of basic education. The Act also aimed at gradual introduction of free and compulsory education for all children. The Assam Basic Education Act was again repealed in 1962 and then in 1968. The Assam Elementary Education Act, 1968 was passed to provide free and compulsory education in the state. With the objective of achieving this goal, the State Board for Elementary Education was constituted and assigned responsibility of management, improvement and expansion of primary education. However, these powers and responsibilities were brought back under the state government in 1975 through the Assam Elementary Education Act, 1974.

The National Policy on Education, 1986 recommended formulation and implementation of nationwide programmes for universal enrolment and retention of children up to 14 years of age and also for improving quality of primary education. Following the recommendations, state of Assam introduced Operation Black Board (OBB) in 1987 through which many teachers were recruited in primary schools that faced teacher shortages. Later the District Primary Education Programme (DPEP) was introduced in 1994. All the districts in western Assam, except Kamrup were benefited by this scheme. Other districts of Assam in which the DPEP was introduced were Goalpara, Morigaon and Karbi-Anglong (Rahaman, 2012). The National Programme of Nutritional Support to Primary Education (NPNSP) was implemented in the state in 1995 with a view to increase enrolment and regular attendance, reduce dropout rate, sustain retention and improve quality of learning achievement of children through nutrition support. The Sarva Shiksha Abhiyan (SSA) which was launched by the central government to provide elementary education to all children in the age group of 6-14 years was also implemented in the state of Assam in 2001. The most recent education policy, the Right to Education Act (RTE) became effective in Assam since 2010.

2.3 *Elementary schooling facilities*

2.3.1 *Government elementary schools*

The NSSO (2010) in its thematic report "Education in India: Participation and Expenditure" documents that in 2007-08 99 per cent of households in both rural and urban sectors of Assam have access to lower primary schools within a distance of less than 2 kilometers. Similarly, for upper primary level 76 per cent of rural households and 97 per cent of urban households have access to educational institutions within that distance.

DISE gives district wise account on number of schools imparting primary education. These schools include primary or upper primary and their integration with higher levels of schooling like secondary and higher secondary. Generally the DISE covers recognized

schools that include government managed as well as private aided or unaided. However, in some states it covers unrecognized schools too[4]. In Assam, unrecognized schools have been covered since 2010-11. According to DISE estimates, total number of schools irrespective of structure, imparting primary or elementary education in Assam was 40,215 in 2005-06. This number rose to 65,141 in 2014-15. With rise in number of educational institutions within convenient walking distance, there seems to be a rise in schooling facilities in the state of Assam.

Table 2.1 *Government primary schools, western Assam,* 2005-06 to 2014-15, in per cent

Districts	*05-06*	*06-07*	*07-08*	*08-09*	*09-10*	*10-11*	*11-12*	*12-13*	*13-14*	*14-15*
Barpeta	92	84	79	87	80	66	66	65	72	76
Bongaigaon	90	84	82	87	87	63	62	63	77	77
Darrang	99	77	76	89	75	68	72	71	82	82
Dhubri	90	74	71	84	74	50	51	50	64	65
Kamrup	96	84	78	88	83	69	70	70	81	79
Nalbari	100	77	76	83	80	69	85	74	85	82
Sonitpur	92	91	91	91	87	72	89	74	81	78
Kokrajhar	90	74	72	89	84	63	63	63	85	69
Baksa	-	-	-	-	-	-	65	65	86	83
Chirang	-	-	-	-	-	-	67	68	78	79
Udalguri	-	-	-	-	-	-	69	70	83	83
W. Assam	**94**	**80**	**78**	**87**	**81**	**65**	**67**	**65**	**78**	**76**
Assam	**95**	**83**	**81**	**88**	**83**	**69**	**70**	**70**	**78**	**77**
India	**83**	**81**	**80**	**81**	**80**	**78**	**76**	**76**	**76**	**75**

Source: District Information System for Education, GOI, various issues, (retrieved from www.dise.in)

In Assam, besides the schools run and managed by the government, private managed and unrecognized schools are imparting primary education. Table 2.1 depicts the share of government managed schools in total schools imparting primary education during the period of 2005-06 to 2014-15. It is seen that the government managed schools were

[4]Private-aided schools are those which are run and managed by the private authority with government supervision and financial support. On the other hand Private-unaided schools are run independent of financial assistance and government supervision. The unrecognized schools which includes both private or venture schools are those that fail to meet minimum norms like adequate and qualified teachers, minimum salaries of the staff, basic infrastructure norms like playgrounds, toilet facilities and drinking water. Venture schools are established by the community with aspire to be provincialised by the government i.e. receiving funds from the state government budget to meet the expenditure on staff salaries and constructions of school infrastructure (Aggrawal, 1997 and Vaidya, 2005).

predominant among all the categories of school. In 2014-15, it was 77 per cent in Assam and 76 per cent in western Assam compared to 75 per cent in India as a whole.

The share of primary schools managed by the government was relatively higher in the state of Assam when compared nationally during the entire reference period, except in 2010-11, 2011-12 and 2012-13. However in western Assam, percentage of government schools imparting primary education has always been lower than that of Assam throughout the years. The share has been falling over the years both in western Assam, Assam and India as a whole. However, in the years 2008-09 and 2013-14 these shares in both western Assam and Assam increased. During 2007-08 to 2008-09, it rose from 81 per cent to 88 per cent in Assam while from 78 per cent to 87 per cent in western Assam. One of the primary reasons for this is either under-coverage or closing down of private schools. The number of private schools in Assam was 12,777 in 2007-08 while it was reported as 8,395 in 2008-09 (DISE, 2009-10). Similarly, between 2012-13 and 2013-14, the share of government managed schools increased to 78 per cent in both western Assam and Assam from 65 per cent in the former and 70 per cent in the later. Provincialisation of many venture schools through the amendment of The Assam Venture Educational Institutions (Provincialisation of Services) [5] Act, 2011 in 2012 which raised the number of government schools, is the reason of rise in share of government schools in that year.

But, the share of government schools fell sharply in both western Assam (from 81 per cent to 65 per cent) and whole Assam (83 per cent to 69 per cent) during 2009-10 to 2010-11. In 2010-11, the unrecognized schools imparting primary education were also covered for the first time in DISE's accounts which constituted 17 per cent (10794) of total schools in Assam. This resulted in sharp fall in share of government managed schools in that year.

[5]Bringing the venture schools set-up by the communities with aspires to be provincialised, under government management and control is called provincialisation. After provincialisation, such schools become eligible to get funds from the budget of the state government to meet the expenditure on staff salaries and construction of school infrastructure (Vaidya, 2005).

Therefore a large number of private unrecognized primary schools are also imparting primary education in Assam. Total number of unrecognized primary schools was 8034 which constituted 12.33 per cent of total primary schools as per DISE's estimates of 2014-15. These schools are set-up by individuals or community with a view to provide education to the children of un-served habitations in educationally backward regions and also to generate employment opportunity to the educated youth in and around their areas (Aggarwal, 1997). These schools have aspirations to be provincialsed by the government. These schools largely fail to fulfill the minimum required norms such well trained and adequate teachers, basic infrastructure and teaching equipment besides irregularities in teacher attendance. Accessing education from such schools with lack of minimum school infrastructures and less qualified teachers has therefore impinges in quality of educational attainments of the people.

Among the districts in western Assam, Dhubri and Kokrajhar had always relatively lower percentage of government schools when compared to western Assam as well as whole Assam. In recent years, districts of Bongaigaon, Kamrup, Nalbari, Sonitpur, Baksa, Chirang and Udalguri had percentage of government schools higher than both Assam and western Assam. Numbers of unrecognized or venture schools of these districts were brought under the government management through provincialisation of these schools in 2012. This resulted in rise in the share of government primary schools in these districts

It is worth noting that the share of government schools as a whole for the country is falling continuously throughout the years. Unlike the continuous fall in India, it is fluctuating in Assam and western Assam due to inconsistency in coverage of private and unrecognized schools coupled with provincialisation of venture primary schools. But interesting point is that the number of government schools in the state of Assam rose from 38,000 in 2005-06 to 50,000 in 2014-15, while its share fell from 95 per cent to 77 per cent during that period.

In sharp contrast, percentage of private managed schools rose by more than two times from 5 per cent in 2005-06 to 11 per cent in 2014-15. Private schooling rate has surpassed the rate of government schools in these areas. This also gives us a clue that there is an increased privatization of primary schooling in both rural and urban Assam. In response to better schooling infrastructure, better quality of teaching, regularity of classes, teacher attendance and care offered by private managed schools, preference of private schools over the government schools has been increasing in the recent times(Government of Assam, 2015). However for the poor households educating their children in private schools is out of imagination particularly for households in conflict affected regions. Because the conflicts by creating deep rooted poverty through destruction of properties and means of livelihood leaves little space for conflict affected households for quality education through privatized primary schooling.

2.3.2 *Student enrolment in the schools imparting primary education*

The government managed schools have been main provider of primary education not just in terms of number but also in terms of enrolled students. The number of enrolled students in government schools imparting primary education had increased from 3.95 million in 2005-06 to 5.85 million in 2014-15 in the state of Assam. In Assam proportion of enrolment in government schools has always been higher than the national figure. But in western Assam, it was always lower than the figure for state. Thus, in western Assam larger proportions of children are being educated either in private or unrecognized schools.

Inconsistency in coverage of the private and unrecognized schools and resultant fluctuations in proportion of government schools is also reflected in students' enrolment. In Assam the proportion of enrolment in government school fell from 94 per cent in 2005-06 to 81 per cent in 2007-08. It had risen to 84 per cent in 2008-09. This proportion again fell in the next year and remained unchanged up to 2012-13. With corresponding rise in share of

government managed schools after provincialisation of venture schools in 2013-14, proportion of enrolment in government schools rose from 71 per cent in 2012-13 to 86 per cent in 2013-14. This trend in western Assam has been same, falling during the reference period with an exception in the years 2008-09 and 2013-14. Across the districts in western Assam Kokrajhar (70 per cent), Chirang (76 per cent) and Dhubri (72 per cent) had lower proportion of enrolment in government schools compare to 77 per cent of both whole Assam and in western Assam (77 per cent) in the recent year. The districts of Bongaigaon, Darrang, Sonitpur, Baksa and Udalguri had relatively higher proportion of enrolments in government schools when compared to Assam and western Assam.

Table 2.2 *Enrolment in government primary schools, western Assam,* 2005-06 to 2014-15, in per cent

Districts	*05-06*	*06-07*	*07-08*	*08-09*	*09-10*	*10-11*	*11-12*	*12-13*	*13-14*	*14-15*
Barpeta	87	86	81	82	80	66	76	71	76	77
Bongaigaon	92	84	82	83	81	68	71	71	80	80
Darrang	98	80	82	85	80	69	75	74	80	83
Dhubri	94	80	77	83	79	63	65	60	71	72
Kamrup	96	85	81	84	83	72	73	71	79	77
Nalbari	100	78	75	79	78	69	75	72	82	79
Sonitpur	94	88	88	85	84	73	76	73	83	80
Kokrajhar	89	76	76	82	79	62	61	61	83	70
Baksa	-	-	-	-	-	-	68	66	87	81
Chirang	-	-	-	-	-	-	70	65	77	76
Udalguri	-	-	-	-	-	-	69	72	84	84
W. Assam	**94**	**82**	**80**	**83**	**80**	**68**	**70**	**68**	**79**	**77**
Assam	**94**	**84**	**81**	**84**	**81**	**70**	**72**	**71**	**86**	**77**
India	**73**	**72**	**72**	**80**	**70**	**67**	**65**	**63**	**81**	**60**

Source: District Information System for Education, GOI, various issues

During the reference period, the proportion of enrolment in government schools fell by 17 per cent, from 94 per cent in 2005-06 to 77 per cent in 2014-15, in both western Assam and Assam. Contrary to that enrolment in private schools rose from 5 per cent (0.22 million) to 15 per cent (0.88 million) in Assam during the same period. Fall in proportion of government schools and its enrolment in spite of rise in absolute number (both schools and enrolment) indicates a significant increase in access to education from private primary schools.

Enrolment ratios

Enrolment ratios for the age group of 6 to 14 years are improving in the recent years. The gross enrolment ratio and net enrolment ratio for both lower primary and upper primary levels as estimated by DISE indicate that the state of Assam is nearing achievement of universal enrolment. Gross enrolment ratio (GER) is defined as the total number of enrolled students in specific grades of schooling, regardless of age, expressed as percentage of school age population corresponding to that grades of schooling. By definition, GER therefore may be greater than 100 as there is possibility of both under-age and over-age enrolment in the grade for which GER is estimated. Age appropriate enrolment ratio as denoted by net enrolment ratio (NER) is on the other hand defined as enrolment of children in a certain level of schooling by corresponding age group expressed as a percentage of the population in that age group.

Table 2.3 *Gross enrolment ratio at lower primary level, western Assam*, 2005-06 to 2014-15

District	*05-06*	*06-07*	*07-08*	*08-09*	*09-10*	*10-11*	*12-13*	*13-14*	*14-15*
Barpeta	104	142	145	146	120	142	104	112	112
Bongaigaon	92	126	128	135	120	148	111	114	118
Darrang	79	140	141	141	119	136	107	109	114
Dhubri	127	-	175	175	157	175	132	133	130
Kamrup	61	93	95	97	81	94	103	105	108
Nalbari	79	117	122	102	102	119	106	105	110
Sonitpur	39	103	107	110	101	116	99	98	104
Kokrajhar	71	122	128	136	129	158	122	128	135
Baksa	-	-	-	-	-	-	113	117	118
Chirang	-	-	-	-	-	-	124	127	128
Udalguri	-	-	-	-	-	-	104	105	110
W. Assam	**88**	**95**	**136**	**136**	**119**	**140**	**114**	**117**	**119**
Assam	**97**	**97**	**129**	**132**	**134**	**115**	**-**	**113**	**115**
India	**104**	**111**	**114**	**115**	**116**	**119**	**106**	**101**	**100**

Source: District Information System for Education, GOI, various issues

It is seen in table 2.3 that between 2005-06 and 2006-07, GER in Assam was lower than the national average. Later, it became reverse during 2007-08 to 2014-15. In western Assam, GER was lower than that of state during 2005-06 to 2006-07 and also in 2009-10. In other

years GER in western Assam were higher than that of both state and nation. GER greater than 100 indicate inappropriate age enrolment either under-age or over-age enrolment in corresponding grade. Over-age enrolment attributes to both entry into schooling later than appropriate age and the incidence of repetition in same class.

Table 2.4 *Net enrolment ratio at lower primary level, western Assam,* 2005-06 to 2013-14

Districts	*05-06*	*06-07*	*07-08*	*08-09*	*09-10*	*10-11*	*12-13*	*13-14*
Barpeta	100	100	100	100	100	100	98	100
Bongaigaon	94	100	100	100	100	100	99	100
Darang	89	100	100	100	100	100	97	100
Dhubri	100	-	-	100	100	100	100	100
Kamrup	65	82	85	86	73	86	98	94
Nalbari	82	100	100	100	92	100	100	100
Sonitpur	71	83	95	97	91	100	91	91
Kokrajhar	92	100	100	92	100	100	100	100
Baksa	-	-	-	-	-	-	98	100
Chirang	-	-	-	-	-	-	100	100
Udalguri	-	-	-	-	-	-	100	100
W. Assam	**88**	**95**	**97**	**97**	**95**	**98**	**99**	**99**
Assam	**89**	**89**	**89**	**89**	**-**	**-**	**-**	**-**
India	**85**	**93**	**96**	**99**	**98**	**100**	**91**	**88**

Source: District Information System for Education, GOI, various issues

Problem of inappropriate age enrolment is more pronounced in western Assam. However, it has been falling in the recent years. Among the districts in western Assam Kokrajhar, Dhubri, Barpeta and Bongaigaon have GER higher than the figure for western Assam and Assam throughout the years. In the recent year three districts of Baksa, Chirang and Kokrajhar of BTAD along with Dhubri and Bongaigaon have exceptionally higher rates of GER, even when compared to Assam and India. Age appropriate enrolment ratio for the age of 6 to 10 years show significant improvement throughout the years (table 2.4).

However, both GER and NER in upper primary level were not satisfactory although they were improving. The GER in upper primary schools of Assam has always been higher than the Indian average. As far as the districts in western Assam are concerned, GER was higher

than Assam and India during 2005-06 to 2009-10, lowering subsequently in the succeeding years. In the recent years districts other than Chirang and Dhubri have GER lower than Assam average.

Table 2.5 *Gross enrolment ratio at upper primary level, western Assam*, 2005-06 to 2014-15

Districts	*05-06*	*06-07*	*07-08*	*08-09*	*09-10*	*10-11*	*12-13*	*13-14*	*14-15*
Barpeta	69	62	82	95	95	97	86	87	87
Bongaigaon	69	62	79	92	90	94	84	88	88
Darrang	57	61	70	77	75	84	74	73	73
Dhubri	59	60	81	102	96	105	96	96	96
Kamrup	59	60	67	76	71	76	91	89	89
Nalbari	80	77	89	95	94	96	91	86	86
Sonitpur	37	42	63	72	70	74	-	73	73
Kokrajhar	66	57	76	84	94	97	97	89	89
Baksa	-	-	-	-	-	-	98	94	94
Chirang	-	-	-	-	-	-	92	98	98
Udalguri	-	-	-	-	-	-	78	77	77
W. Assam	**60**	**76**	**88**	**86**	**91**	**87**	**86**	**86**	**87**
Assam	**61**	**76**	**86**	**84**	**90**	**90**	**93**	**93**	**96**
India	**59**	**65**	**70**	**74**	**76**	**81**	**83**	**89**	**91**

Source: District Information System for Education, GOI, various issues

Table 2.6 *Net enrolment ratio at upper primary level, western Assam,* 2005-06 to 2014-15

District	*05-06*	*06-07*	*07-08*	*08-09*	*09-10*	*10-11*	*12-13*	*13-14*	*14-15*
Barpeta	39	54	72	82	78	84	71	73	72
Bongaigaon	37	51	66	74	73	78	66	68	66
Darang	35	52	63	66	66	71	61	65	64
Dhubri	28	47	67	82	77	85	74	76	71
Kamrup	34	49	58	64	62	66	77	71	77
Nalbari	47	63	69	79	80	81	78	78	79
Sonitpur	28	33	51	61	59	63	69	58	57
Kokrajhar	36	47	62	66	75	75	77	77	67
Baksa	-	-	-	-	-	-	76	80	71
Chirang	-	-	-	-	-	-	71	75	79
Udalguri	-	-	-	-	-	-	57	68	61
W. Assam	**36**	**50**	**64**	**73**	**72**	**76**	**70**	**71**	**69**
Assam	**35**	**50**	**63**	**72**	**70**	**75**	**70**	**76**	**80**
India	**43**	**48**	**53**	**56**	**58**	**62**	**64**	**70**	**72**

Source: District Information System for Education, GOI, various issues

Similarly it is observed in the table 2.6 that the state of Assam has NER higher than the national average during the reference period. NER in western Assam was higher than that

of Assam during 2005-06 to 2010-11. Between 2013-14 and 2014-15, NER in western Assam was however lower when compared to the state. Among the districts in western Assam Bongaigaon, Darrang and Sonitpur had lower NER compare to this figure for the state during the reference period. In 2014-15, all the BTAD districts have NER comparatively lower than the state. The low NER in upper primary schools across the districts indicates that the many children drop from the school before completion of 8 years of schooling.

Low enrolment is therefore not problem at lower primary level, while it remained as a serious problem at upper primary level particularly in western Assam. Relatively low enrolment ratio at upper primary level despite universal enrolment at lower primary level implies that many children could not continue their schooling beyond the lower primary level. Therefore, the realization of universal enrolment in and completion of primary education still remained dismal in nation and this is more pronounced in western Assam.

2.3.3 *Out of school children*

High proportion of non-enrolment in the age group of 11 to 14 years is seen in low current attendance rate among compulsory schooling children. Based on census, 2011 high proportion of children were found not currently attending in educational institution (table 2.7). In Assam, this percentage was 19 per cent compared to 12 per cent for India as a whole. Currently not attending rate for western Assam was 26 per cent and thus higher than the figure for both the state and nation. Other than Barpeta and Baksa all the districts in western Assam have higher proportion of children in the age of 6 to 14 years who are not currently attending compared to the state and national average. However, much variation between the genders in terms of current attendance is not observed.

Table 2.7 *Current attendance rate among age 6 to 14 years, western Assam*, 2011

District	*Person*	*Male*	*Female*
Barpeta	72	71	73
Bongaigaon	77	76	78
Darrang	69	67	71
Dhubri	66	64	68
Kamrup	80	79	80
Nalbari	81	81	81
Sonitpur	74	75	74
Baksa	81	81	80
Chirang	78	78	78
Kokrajhar	75	75	75
Udalguri	76	76	76
W. Assam	**74**	**73**	**75**
Assam	**81**	**80**	**82**
India	**82**	**83**	**81**

Source: Registrar General and Census Commissioner, Government of India, 2011

Table 2.8 *Dropout rates at primary level (I-V), western Assam,* 2005-06 to 2014-15

Districts	*05-06*	*07-08*	*08-09*	*09-10*	*10-11*	*11-12*	*12-13*	*13-14*	*14-15*
Barpeta	8	12	12	24	7	16	3	3	9
Bongaigaon	8	10	9	19	8	7	10	5	8
Darang	9	18	18	27	14	11	15	12	11
Dhubri	13	18	20	32	13	18	12	13	14
Kamrup	5	9	9	21	5	13	5	4	5
Nalbari	2	7	13	19	5	15	5	10	7
Sonitpur	47	8	9	17	11	8	9	9	4
Kokrajhar	7	9	8	14	8	14	12	6	6
Baksa	-	-	-	-	-	-	9	8	5
Chirang	-	-	-	-	-	-	12	8	10
Udalguri	-	-	-	-	-	-	15	8	4
W. Assam	**10**	**12**	**13**	**23**	**9**	**14**	**9**	**8**	**8**
Assam	**11**	**13**	**13**	**10**	**9**	**12**	**10**	**6**	**7**
India	**10**	**9**	**8**	**9**	**7**	**7**	**6**	**5**	**4**

Source: District Information System for Education, GOI, various issues

Besides high proportion of non-attending children in compulsory schooling age, incidence of dropout rate remained as serious problem though it is reducing in the recent years. Table 2.8 depicts that the incidence of dropout rates in western Assam, Assam and India have been declining in the recent years. It is seen in the table that the dropout rate of Assam was higher than that of the country during the reference period. On the other hand it was higher

in western Assam compare to state average dropout rate with exception in 2012-13. In 2014-15, dropout rate of western Assam was 8 percent compared to 7 per cent and 4 per cent in the state of Assam and India respectively. Thus, relatively larger proportion of schooling children in western Assam drops from schooling before completion of five years of schooling.

Among the districts in western Assam, Dhubri, Darrang and Sonitpur had relatively higher dropout rates compared to average dropout rate for Assam throughout the years. However, the recent estimates of 2014-15 show that the districts of Sonitpur and Udalguri had lowest dropout rate with 4 per cent each in 2014-15. The districts of Barpeta, Bongaigaon, Chirang, Darrang, Dhubri and Nalbari had relatively larger dropout rate compared to Assam and India.

2.4 *Teaching competency and learning outcomes*

2.4.1 *Availability of teacher*

It is widely acknowledged that the adequate number of motivated and well trained teachers play a pivotal role in development of quality education. They can play important role in ensuring regular attendance, active participation of children in teaching learning activities and in improving quality of their learning achievements. Thus, just expansion of school buildings and rise in number of enrolled students are not enough to indicate development of quality education. Comfortable pupil-teacher ratio (PTR) or adequate teacher in schools is therefore important for learning achievements of children. There has been rise in number of teacher in government managed primary schools with corresponding rise in number of schools as well as appointment of teacher through various teacher recruitment policies of the state government in the recent years. It increased from 0.15 million in 2005-06 to 0.21 million in 2014-15, giving comfortable PTR. However variations across the districts with respect to PTR and single teacher schools remained as serious concerned.

People-teacher ratio (PTR)

Table 2.9 depicts pupil-teacher ratio (PTR) of government managed primary schools. PTR in Assam is lower than that of nation throughout the years. But in western Assam, PTR is always higher than Assam. During 2012-13, the government of Assam employed a good number of teachers in the primary schools through the teacher eligibility test (TET). As a consequence, number of teacher in government primary schools had gone up to 0.18 million in 2012-13 from 0.14 million in 2011-12. On the other hand there is fall in proportion of enrolment of students in the government primary school in the recent years. Rise in number of teachers on the one hand and fall in enrolment in government schools on the other hand resulted in fall in PTR. It fell from 29 in 2011-12 to 22 in 2012-13 in Assam and from 32 to 25 in western Assam.

Table 2.9 *Pupil-Teacher ratio in government Primary Schools, western Assam,* 2005-06 to 2014-15

District	*05-06*	*06-07*	*07-08*	*08-09*	*09-10*	*10-11*	*11-12*	*12-13*	*13-14*	*14-15*
Barpeta	36	34	33	30	30	30	36	26	25	25
Bongaigaon	33	27	27	26	25	25	32	25	26	24
Darang	28	30	39	27	28	28	34	25	25	25
Dhubri	59	53	54	47	51	56	62	36	38	36
Kamrup	24	24	25	22	23	22	24	22	19	20
Nalbari	27	28	27	26	28	27	28	22	23	23
Sonitpur	19	18	18	18	19	19	18	15	15	15
Kokrajhar	20	28	29	27	28	26	33	25	25	25
Baksa	-	-	-	-	-	-	26	24	25	19
Chirang	-	-	-	-	-	-	26	24	23	23
Udalguri	-	-	-	-	-	-	28	24	22	24
W. Assam	**29**	**29**	**31**	**27**	**28**	**28**	**32**	**25**	**25**	**24**
Assam	**25**	**27**	**26**	**25**	**25**	**25**	**29**	**22**	**22**	**22**
India	**34**	**36**	**34**	**34**	**33**	**31**	**30**	**27**	**27**	**26**

Source: District Information System for Education, GOI, various issues

Across the districts of western Assam, Dhubri and Kokrajhar (with exception of 2005-06) had relatively higher PTR than both state and national average. During 2014-15, all the districts other than Baksa and Kamrup of western Assam had higher PTR compared to state average.

Single-teacher schools

Employment of adequate teacher and resultant improvement in PTR are reflected in fall in percentage of schools with single teacher (table 2.10). The proportion of only primary schools with single teacher, irrespective of management in Assam was relatively higher than this figure for India till 2011-12, while in succeeding years the trend became reverse. Lower primary school with single teacher in Assam was 22 per cent in 2005-06 and it fell to 3 per cent in 2014-15. But, absolute number of lower primary schools with single teacher remained as high as 1308 in 2014-15. Thus the state of Assam has a large number of schools with only one teacher for entire classes though it has been enjoying comfortable and improved pupil-teacher ratio. This figure for western Assam was seen relatively lower compared to state average. However, it became reverse in 2014-15 when the percentage of lower primary schools with single teacher was 8 per cent in western Assam compared to just 3 per cent in Assam. In 2014-15, four districts of BTAD Baksa (14 per cent), Chirang (10 per cent), Kokrajhar (16 per cent) and Udalguri (8 per cent) have percentage of single teacher schools higher than average percentage of both Assam and India as a whole.

Table 2.10 *Lower Primary Schools with single teacher, western Assam,* 2005-06 to 2014-15

Districts	*05-06*	*06-07*	*07-08*	*08-09*	*09-10*	*10-11*	*11-12*	*12-13*	*13-14*	*14-15*
Barpeta	24	37	35	34	10	22	21	3	2	0
Bongaigaon	18	27	25	34	12	13	22	2	4	0
Darrang	17	29	27	33	10	15	7	7	4	4
Dhubri	32	53	48	45	12	25	25	5	10	10
Kamrup	13	29	27	26	11	16	18	5	13	13
Nalbari	12	27	19	18	19	21	7	2	1	1
Sonitpur	16	41	38	38	17	16	23	6	7	7
Kokrajhar	21	33	29	31	18	20	20	12	16	16
Baksa	-	-	-	-	-	-	26	28	18	14
Chirang	-	-	-	-	-	-	16	10	10	10
Udalguri	-	-	-	-	-	-	19	5	8	8
W. Assam	**19**	**36**	**32**	**33**	**13**	**19**	**20**	**8**	**9**	**8**
Assam	**23**	**37**	**35**	**33**	**16**	**21**	**21**	**10**	**11**	**3**
India	**17**	**16**	**14**	**13**	**12**	**12**	**11**	**12**	**11**	**11**

Source: District Information System for Education, GOI, various issues

Other districts with higher percentage of single teacher schools compared to the figures for state and nation were Dhubri (10 per cent), Kamrup (13 per cent), Sonitpur (7 per cent) and Darrang (4 per cent). Prevalence of large number of single teacher schools in four districts of BTAD and districts surrounding BTAD remained as serious constraint in provision of quality education. Because, such schools have to remain closed when the teacher is on leave, engaged with other official works or attending trainings.

2.4.2 *Learning outcomes of the school children*

Improvement in primary education with respect to expansion of accessible schooling facilities and rise in adequate number of teachers, improved retention and enrolment have been observed in the preceding sections. However, just expansion of educational facilities, enrolment and participation may not guarantee the learning achievements of children. Pratham, based on large rural sample assessed learning outcomes in language and mathematics for rural children in primary levels. Their estimations show disheartening low quality of learning achievements among the children. Majority of children who are going to complete 8 years of schooling were found to be unable to read the text and solve simple mathematical problems taught in lower grades which they had successfully completed.

Table 2.11 depicts children reading in class V (five) who could not read the text of standard or class II and divide three digits by single digit. In rural Assam, 41 per cent of children reading in class V in government school could not read the text of standard II in 2006. It was continuously rising and became as high as 69 per cent in 2014. This percentage for India rose from 49 per cent to 58 during that period. Proportion of such children in Assam was lower than that of nation in 2006, but it became larger by 11 per cent in 2014. Private schools also show no improvement in learning achievements of children. In Assam, 41 per cent of children reading in class V in private schools were found to be unable to read

the text of standard II in 2006 and it rose to 48 per cent in 2014. In India on the other hand it fell slightly from 39 per cent to 38 per cent during that period.

Table 2.11 *Levels of learning achievement by children in standard V, rural Assam,* in per cent

Year	*% of children who cannot read std. II text*				*% of children who cannot do division*			
	Government		*Private*		*Government*		*Private*	
	Assam	*India*	*Assam*	*India*	*Assam*	*India*	*Assam*	*India*
2006	41	49	41	39	-	-	-	-
2007	47	43	49	31	72	59	69	51
2008	59	47	40	32	85	66	65	53
2009	60	50	53	37	78	64	66	54
2010	57	49	43	36	77	66	63	56
2011	66	56	52	37	88	76	75	62
2012	67	58	47	39	91	80	73	62
2013	69	59	47	37	92	79	73	61
2014	69	58	48	38	91	79	70	61

Source: Annual school education report (ASER), various issues

Arithmetic ability of the children is also found falling in the recent years. In rural Assam, percentage of children reading in class V who could not divide three digits by a single digit was 72 per cent in 2007 and it rose to 91 per cent in 2014. This figure for India as a whole rose from 59 per cent to 69 per cent during that period. In private school on the other hand it increased from 69 per cent to 70 per cent in Assam and from 51 per cent to 61 per cent in India.

Table 2.12 C*hildren in standard VII unable to read English sentence, rural Assam,* in per cent

Year	*Government*		*Private*	
	Assam	*India*	*Assam*	*India*
2007	40	49	41	36
2009	48	54	38	41
2012	63	66	41	44
2014	69	69	44	42

Source: Annual school education report (ASER), various issues

Similarly, percentage of children who could not read simple English sentences even after completion of six years of schooling (i.e. students reading in grade VII) increased from 40

per cent in 2007 to 69 per cent in 2014 per cent in Assam (table 2.12). This figure for India increased from 49 per cent to 69 per cent during that period. In private schools, percentage of children who could not read simple English sentences increased from 41 per cent to 44 per cent in Assam. While in India it increased from 36 per cent to 42 per cent during the period of 2007 to 2014.

Thus in Assam larger proportion of the children were found that they could not read text of lower grades and solve division problems compared to such children in India as a whole. Moreover proportion of such children is rising in the recent years, showing deterioration in quality of learning outcomes. The deterioration in government schools was higher than that in private schools.

At the district level, vast variation in learning achievements has been observed in the table given below (Table 2.13). Percentage of children reading in class I-II who could not read the letter, word or more in Assam was as high as 36 per cent in 2013 and it rose to 38 per cent in 2014. Similarly, proportion of children reading in grade III-V who could not read the text of standard I (one) was 54 per cent in both 2013 and 2014.

Likewise proportion of children reading in class I-II who could not recognize number had gone up from 29 per cent in 2013 to 32 per cent in 2014. Again 70 per cent of children in class III-V could not solve subtraction problem. All the districts in western Assam except Kamrup and Kokrajhar had larger proportion of children reading in class I-II who could not read or recognize both letter and number compared to proportion of such children of Assam in 2014. Proportion of children reading in class III-V who could not read the text of standard I (one) in all the districts of western Assam other than Kamrup, Nalbari and Darrang was higher compared to Assam in 2014. Percentage of children who could not

solve subtraction problem in spite of reading in class III-V was higher in the districts of Bongaigaon, Darrang, and Sonitpur compared to the figure of Assam in 2014.

Table 2.13 *Levels of learning achievement at primary level, rural western Assam,* 2013 to 2014

District	*Children (%) who cannot read*				*Children (%) can't recognize number*			
	2013		*2014*		*2013*		*2014*	
	I - II	*III-V*	*I - II*	*III-V*	*I - II*	*III-V*	*I - II*	*III-V*
Kokrajhar	44	67	30	66	37	68	29	66
Barpeta	36	43	41	55	28	72	36	69
Bongaigaon	-	-	48	60	-	-	45	86
Darrang	44	46	52	49	36	72	41	71
Dhubri	51	62	45	65	44	76	39	76
Kamrup	24	41	30	29	27	56	25	63
Nalbari	27	38	39	33	23	60	36	63
Sonitpur	36	69	53	70	32	79	40	81
Assam	**36**	**54**	**38**	**54**	**29**	**70**	**32**	**70**

Source: Annual school education report (ASER), 2013, 2014

2.5 *Conclusion*

The substantive initiatives undertaken by the government seems to have resulted in significant improvement in primary schooling facilities in the recent years. There seems to be a rise in number of educational institutions with comfortable pupil teacher ratio. Enrolment of the students in both lower and upper primary levels is rising as indicated by the improved enrolment ratios. However, many of the enrolled students could not continue their schooling beyond the lower primary levels which is indicated by lower enrolment ratios at upper primary level, dropout rates and higher proportion of children in compulsory schooling age who are not currently attending. Thus, the problem of inability to retain the enrolled students remains a serious problem. A large number of students have dropped out of schooling before completion of first 8 years of schooling. Moreover, deterioration in quality of learning achievements of the retained students is a serious concern.

Chapter 3

Methodology of the study

This chapter is arranged into five sections. Section 3.1 reviews the methodological frameworks used to measure horizontal inequalities (HIs) in the literature. Section 3.2 explains the framework developed by Mancini, Stewart and Brown (2010) to calculate HIs in Indonesia, South Africa and United States considering four different indigenous groups of population in each of these countries. We extend this framework to apply it to the context of Assam and the BTAD districts. Section 3.3 of this chapter describes the demographic characteristics of Assam and section 3.4 explains the unit level data of National Sample Survey Organisation (NSSO) used to calculate HIs. Section 3.5 explains the methodology used for selection of study area.

3.1 *Measuring horizontal inequalities*

The literature on economic inequalities more often discusses inequality among individuals in a society. For measuring economic inequalities there is an extensive use of Lorenz ratio and Gini-coefficient confined to variables such as income, consumption expenditure or other wealth indicators. Such measurements are referred to as vertical inequalities. They capture the differences between individuals in a society where people are grouped based on a geographical location or on variable(s) for which inequality is measured. For example, to measure income inequality people are classified into groups based on geographical location or certain level of income irrespective of their social and ethnic identities. Therefore such measurements fail to capture inequality between groups based on specific identity which has hitherto been largely neglected in the development discourse (Stewart, 2000 and 2002, Ostby, 2008, Mancini, Stewart and Brown, 2010and Lindquist, 2012).

It is argued that measuring vertical inequalities do not reveal the differences between groups sharing similar identities. Therefore there is a need to move beyond the economic variables

and focus on measurement of horizontal inequalities (HI). However, information of group behavior along ethnic or cultural lines are not easily collected and shared; most countries do not include them in large scale surveys as they are politically sensitive. A dearth of consistent and systematic data on such non-economic variables makes economists unenthusiastic in measuring HIs. However, recent literature has made significant methodological contributions and advancements in measuring HIs; they are being empirically tested and used to establish causal connection with violent conflicts (see for e.g. Stewart, 2000, Ostby, 2005 and Mancini et al, 2010).

A ratio of average achievements of two groups in any dimension is the most straight forward measure of horizontal inequality. Some researchers like Ostby (2005) measured inequality among groups by selecting two largest groups comparing their average achievements. However, such measure is applicable only in societies where there are just two or a few groups of population. Measuring inequalities in distribution of resources among groups in a society that is largely multi-ethnic in nature requires a measure which is able to capture the differences across all the groups into a single measure.

3.2 *Framework for the measurement of horizontal inequalities*

Mancini, Stewart and Brown (2010) have discussed the use of coefficient of variation (CV), Gini coefficient and Theil index as appropriate for measurement of horizontal inequalities. However the CV and Theil measure differences of each group from mean but do not measure differences of one group from other. Moreover, Theil index is more often used to divide overall inequality into inequality due to between groups (BG) and that due to within groups (WG). Unlike the CV and Theil, Gini measures variation in performance of each group with every other group where observations are grouped based on variable for which inequality is measured (Ray, 2010).

However the Gini also has limitations, as it gives relatively more weight to the middle of the distribution. Moreover, all three measures give equal weight to redistribution at different income levels which reveals that each group would get equal weight in measuring group inequalities. But, the number of individuals/individual observations is not same for all the groups. Hence, un-weighted measurement would attach equal weight to all groups and thus the changes in position of a very small group would have the same effect as a large group (Mancini, Stewart and Brown 2010). Therefore, population weighted measurement is desirable so that more weight can be attached to the groups with larger share in population and vice-versa. Among the three measures, we use group Gini (GGini) coefficient based on Mancini, Stewart and Brown (2010). We have adapted the framework used by Mancini Stewart and Brown (2010) for this study. We group the individuals based on religion and caste to measure socio-economic inequalities among them and name such Gini as group Gini coefficient.

Method for measurement of HIs:

$$\text{Group Gini} = \frac{1}{2\overline{Y}} \sum_{r}^{R} \sum_{s}^{S} P_r P_s \left| \overline{Y}_r - \overline{Y}_s \right|$$

$\overline{Y}$ = mean of variable (say average MPCE of all groups)

R= population size of R^{th} group (Say population size of Muslims or STs)

$\overline{Y}_r$ = mean of variable for group R say MPCE of STs

$\overline{Y}_s$ = mean of variable for group S say MPCE of Muslims

P_r= share in total population of group R or STs

P_s= share in total population of group S or Muslims

3.3 *Demographic composition of Assam*

Since a sizeable part of this research work is based on the NSSO unit level data, it is important to understand the categories of population used in the NSSO. As the unit level

data pertains to the state of Assam, the demographic composition of the state needs some discussion at this stage. Between 2001 and 2011 Assam's population has risen from 26.6 million to 31.2 million in 2011. However, the rate of growth has declined from 1.75 percent in 1991- 2001decade to 1.60 percent in 2001-2011.Following the social group classification followed in rest of the country, population in the state of Assam may also be broadly classified into general caste, scheduled caste (SC), scheduled tribe (ST) and other backward classes (OBC) households. Among them, non ST and non-SC population form the majority speaking Assamese, Bengali and a mix of other languages.

Table 3.1 *Population by social groups, Assam,* 1991 to 2011

Tribe	*Population*			*Percentage of total STs*		
	1991	*2001*	*2011*	*1991*	*2001*	*2011*
ST	2874421	3308570	3884321	13	12	12
SC	1659412	1825949	2231321	7	7	7
Other	17880459	21521009	25089934	80	81	81
All	**22414292**	**26655528**	**31205576**	**100**	**100**	**100**

Source: Registrar General and Census Commissioner, Government of India, 1991, 2001 and 2011

Table 3.2 *Population by tribes, Assam,* 1991 to 2011

Tribe	*Population*			*Percentage of total STs*		
	1991	*2001*	*2011*	*1991*	*2001*	*2011*
Bodo	1184569	1352771	-	41	41	-
Mising	381562	587310	-	13	18	-
Karbi	355032	353513	-	12	11	-
Rabha	135905	277517	-	5	8	-
Kachari	114779	235881	-	4	7	-
Lalung	112424	170622	-	4	5	-
Dimasa	84654	110976	-	3	3	-
Deori	32633	41161	-	1	1	-
Other	472863	289795	-	16	6	-
Total ST	**2874421**	**3308570**	**3884321**	**13**	**12**	**12**

Source: Registrar General and Census Commissioner, Government of India, 1991, 2001 and 2011

Based on the census of 2011 ST and SC population of Assam constitute 12 per cent and 7 per cent respectively of the entire population. There are 23 notified tribes such as Bodo, Mising, Karbi, Rabha, Deori, Naga, Khasi etc. who speak their own dialects. Similarly, the SCs consist of 16 groups of people like Bansphor, Banya, Dhupi, Hira, Kaibarttra, Nasundra

etc. Among the tribal population, Bodos constitute a numerically large group, representing nearly a quarter (41 percent) followed by Mising (18 percent) and Karbi (11 percent) as per census of India, 2001 (Table 3.2).

Table 3.3 *Bodo population, western Assam,* 2001

	Population	*ST*	*Bodo*	*Percentage, ST*	*Percentage Bodo in total ST*
Kokrajhar	905764	304985	287268	34	94
Dhubri	1637344	32523	22208	2	68
Bongaigaon	904835	110696	102610	12	93
Barpeta	1647201	123266	117120	7	95
Nalbari	1148824	202577	176576	18	87
Kamrup	2522324	250393	140023	10	56
Darrang	1504320	249861	207878	17	83
Sonitpur	1681513	195083	140293	12	72
W. Assam	**11952125**	**1469384**	**1193976**	**12**	**72**
Assam	**26655528**	**3308570**	**1352771**	**12**	**41**

Source: Authors' calculation from Registrar General and Census Commissioner, Government of India, 2001

In western Assam, tribal people constitute 12 per cent of which 72 per cent were Bodos as per census, 2001.[6] Among the districts we considered, Barpeta had highest percentage of Bodo population with 95 per cent while Kamrup had lowest 56 per cent out of total tribal population of respective districts.

The people of Assam have also been classified into six major religion groups: Buddhist, Christian, Hindu, Jain, Muslim and Sikh (table A3.1). Among them, the Hindus with 61 percent are majority followed by Muslim (34 per cent) and Christian (4 per cent) based on census 2011. Population belongs to Jain, Buddhist, and Sikh constitute less than one per cent of the total state population. In western Assam, Hindu constitutes 71 per cent while Muslim and Christian represent 19 percent and 9 per cent respectively.

[6] Classification of population by social groups is available in census of 2011 however tribe wise clarification is not available. Therefore we use tribe wise data from census, 2001.

3.4 *Sources of data*

For measurement of horizontal inequalities and to assess effects of political unrests on educational attainments in BTAD, we have used both secondary and primary data. The sources of secondary data we rely on for this study are Census of India, National Sample Survey Organisation (NSSO), and Directorate of Economics and Statistics (DES). We have used the information on literate person, sex ratio and population by social groups from 1991, 2001 and 2011 census. Census data are available on school attendance of individuals, occupational distribution, and household amenities. However the data cannot be disaggregated by social groups and therefore group based inequalities based on the above indicators cannot be measured. The Census of India clubs all STs into one group and so on. Therefore specific tribe wise information is not available. Thus census data are not enough to fulfill our research objective.

The NSSO, though it collects nationally representative large sample for estimating important socio-economic parameters, it furnishes information merely at state level. Since our objective is to measure HIs in the BTAD, we have used unit level data of NSS. The NSSO 61st (2004-05) and 66th (2009-10) Consumer Expenditure and, Employment and Unemployment round data have been used to calculate the population weighted group Gini coefficients.

3.4.1 *NSSO unit level data*

National Sample Survey Organization (NSSO) collects data from large sample surveys conducted throughout the country and provides important information on various socio-economic aspects which are relied on by policy makers, researchers, and planning agencies. The NSSO classifies each state into numbers of sub-state or region[7](called NSS regions) to select first stage unit (FSU) i.e. sample villages in rural and blocks in urban sectors from

[7] NSSO classified Assam into three regions in 61st round and four regions in 66th round of surveys based on census districts for selecting sample. Therefore a group of census districts form NSS region.

which sample households are surveyed. Sample villages are selected in rural areas taking district as strata while the sample blocks in urban areas are selected from a sub-region or strata which are formed based on the size class of town (Chaudhuri and Gupta, 2009). Thus, the surveys allow reliable estimate at NSS region level but not at Census district level. NSS region level estimation could be made for the purpose of our study if our concerned districts fell into mutually exclusive categories. But the districts we have considered are spread across different NSS regions. For example, in 56th round survey, Assam has been classified into three NSS regions: Plains eastern, Plains western and Hills. The districts of western Assam Bongaigaon, Barpeta and Nalbari were included in Plains eastern, Kokrajhar in Hills region while Darrang, Dhubri and Kamrup in Plains western. Therefore, NSS region level classification also poses limitations in measurement of HIs for BTAD.

However, there have been shifts in sampling design since the 61st round (2004-05). The new sampling design defined district as strata where both the rural and urban sectors are considered for selection of sample, thus allowing estimation at district level too. Since the sampling procedure used in the surveys prior to 61st round did not allow either district level estimation nor NSS region level estimation, we have used the quinquennial surveys of 61st and 66th rounds on "Consumer Expenditure" and "Employment and Unemployment" covering about a period of 10 years from 2004-05 to 2009-10 at the district level.

Categorization of districts for the study

The unit level data provides small sample size for individual districts. Therefore for convenience and keeping the objective of our study in mind, we grouped districts of BTAD with their original districts and rename it as western Assam. In 61st round survey, information was collected for 23 districts. In 66th round survey on the other hand information were collected for all the 27 districts. Thus, western Assam comprises eight districts of Barpeta, Bongaigaon, Darang, Dhubri, Kamrup, Kokrajhar, Nalbari and Sonitpur

based on 61st round survey while 11 districts including new districts of Baksa, Chirang, and Udalguri in the 66th round survey.

Categorization of social groups for the study

Group formations are different across societies, such that while religion is an important group boundary for some societies; ethnicity, or language, or place of birth is important for others. Being socially defined, group boundaries may be overlapping in most of the societies. Group identities may also change over time and space. In Assam, for example, a person belonging to the religion group of Muslim may identify herself as an ST or SC. Most of the markers of groups are therefore where people position themselves in (Stewart, 2009). The importance of group formation in measurement of horizontal inequalities is to capture the groups which have cleavages in many aspects. In India inequalities across broad categories of social groups such as STs, SCs and others have been measured in various contexts. However, such general forms of group classifications, and inequality measurement, fail to capture inequalities between groups that have cleavages on various aspects including political or cultural aspects.

NSSO collected information by classifying population broadly in to four groups: scheduled tribes (STs), scheduled castes (SCs), other backward classes (OBC) and General. The NSSO surveys do not have separate information for Bodo ethnic group. However, the Bodo are numerically large in number among the STs in BTAD districts as they constitute more than 70 per cent of total ST population based on census of 2001 (Table 3.2). Therefore, socio-economic status of the STs can largely be treated as representative of the Bodo in this case.

The surveys have extensive religion wise information as the information was collected classifying people into eight major religion groups. NSSO's socio-religious classification of the households is mutually exclusive and thus it is possible to identify a household of any

religious group and which social category that household belongs to. For example, a Muslim household can be identified as belonging to ST or other category. Therefore we can separate household of a religious group from other social group category such as SC, ST, OBC, and others. We have excluded Muslims from all social categories (STs, SC, OBC and General) and categorized them as a separate group for the sake of our study. Therefore categories for which we have measured HIs are *Muslim, ST, SC, OBC and General*. They are all mutually exclusive categories.

Sample households of NSSO unit level data

In Assam, information was collected from 4250 sample households in 61st round survey on "consumption expenditure". Among them ST household constituted 18 per cent; SC households 10 per cent, OBC households 19 per cent and General households consist of 53 per cent. In 66th round consumer expenditure survey a total of 3448 households were selected as sample for collecting information on consumption expenditure and other socio-economic characteristics of the households. In this round of survey also share of households belonging to general category was the highest followed by OBC, ST and SC (table 3.4).

Table 3.4 *Distribution of households by socio-religious groups, Assam,* in number and per cent

Social group	*Number*		*Share*	
	2004-05	*2009-10*	*2004-05*	*2009-10*
ST	784	572	18	17
SC	407	457	10	13
OBC	807	901	19	26
General	2252	1518	53	44
All	**4250**	**3448**	**100**	**100**

Source: NSSO's 61st and 66th round unit level surveys on Consumer Expenditure

If Muslim households are separated from all social categories and formed as a separate group, they constitute 28 per cent and 25 per cent of total sample households in 61st and 66th round surveys respectively. Since majority of Muslims households fall under general

category, the percentage of households belong to general category fall from 53 per cent to 25 per cent in 61st round survey after their deduction. Similarly it fell from 44 per cent to 20 per cent in 66th round survey. The households belonging to ST, SC and OBC categories on the other hand did not change much.

Table 3.5 *Distribution of households by socio-religious groups, Assam,* in number and per cent

Social group	*Number*		*Share*	
	2004-05	*2009-10*	*2004-05*	*2009-10*
ST	780	566	18	16
SC	405	449	10	13
OBC	799	869	19	25
General	1075	688	25	20
Muslim	1191	876	28	25
All	**4250**	**3448**	**100**	**100**

Source: NSSO's 61st and 66th round unit level surveys on Consumer Expenditure

The employment and unemployment round survey carried out in 2004-05 (61st round) collected information from 4249 sample households while that carried in 2009-10 collected information from 3448 households. In both the rounds, the households of general category constituted majority followed by OBC, ST and SC households (table 3.6).

Table 3.6 *Distribution of households by socio-religious groups, Assam,* in number and per cent

Social group	*Number*		*Share*	
	2004-05	*2009-10*	*2004-05*	*2009-10*
ST	785	557	18	16
SC	445	427	10	12
OBC	815	892	19	26
General	2204	1572	52	46
All	**4249**	**3448**	**100**	**100**

Source: NSSO's 61st and 66th round unit level surveys on Employment and Unemployment

Muslim households constituted 28 per cent and 26 per cent of total sample households in the surveys carried in 2004-05 and 2009-10 respectively in the employment and unemployment rounds (table 3.7). After separation of Muslim households the shares of households belong to general category fell to 28 per cent and 26 per cent in 2004-05 and

2009-10 round surveys respectively. Share of other households on the other hand remained largely unchanged.

Table 3.7 *Distribution of households by socio-religious groups, Assam,* in number and per cent

Social group	*Number*		*Share*	
	2004-05	*2009-10*	*2004-05*	*2009-10*
ST	782	553	18	16
SC	431	418	10	12
OBC	800	858	19	25
General	1043	734	25	21
Muslim	1193	885	28	26
All	**4249**	**3448**	**100**	**100**

Source: NSSO's 61st and 66th round Employment and Unemployment

3.5 *Selection of the study area*

3.5.1 *Background of village selection*

Bodoland Territorial Area Districts (BTAD) and the districts surrounding BTAD in western Assam is one of the most conflict prone regions of Assam. It has seen severe massacres and group-based conflicts since the 1990s, besides the secessionist Bodoland movement launched by the indigenous Bodo people since 1960s. The militant groups that have strong base in the BTAD and its neighboring districts (NDFB and or BLT) carried massacre over the Bengali speaking Muslim in Barpeta, Bongaigaon and Kokrajhar districts of western Assam in 1994. The armed militants also carried massacres over the tea tribes (Santhal, Adivasi and Orao ethnic groups) in 1996 and 1998 in Bongaigaon and Kokrajhar districts (Hussain, 2006). Such massacres resulted in target of common Bodo people as retaliation and subsequently led to participation of common people of both the groups in conflicts. The conflict between the Bodo and Muslim is recurrent and the recent conflict of 2012 is the largest one. Its effects were even worse than that of widely discussed case of Gujarat riot in 2002 (Motiram and Sarma, 2014). People from Northeastern origin were targeted in Pune, Bangalore, Mumbai and other parts of the countries as retaliation of this conflict.

Besides, the Bodoland secessionist movement claimed 1607 lives in Assam over a period of 16 years from 1987 to 2003. Among them more than 80 per cent were inhabitants of districts that were carved to form BTAD (BTC, 2013). Given the backdrop of the conflicts, BTAD is chosen for present study with the objective to measure horizontal inequalities among different social groups of BAD and to inquire their impacts on the status of educational attainments of the people.

Table 3.8 *Timeline of group based conflicts,BTAD,*1990s

Year	*Communities involved*	*Districts involved*	*Person killed*	*Persons in relieved camp*
1993	Bodo-Muslim*	Undivided Bongaigaon(B) and Kokrajhar(K)	61	-
1994	Bodo-Muslim*	Undivided B & K	113	-
1996	Bodo-Adivasi*	Undivided B & K	198	-
1998	Bodo-Adivasi	Undivided B & K	186	
2008	Bodo-Muslim**	Darrang& Udalguri	64	0.20 million
2012	Bodo-Muslim	Chirang, Kokrajhar and Dhubri	109	0.45 million
2014	Bodo, Muslim & Adivasi*	Baksa and Kokrajhar	46	498

Source: Department of Home Affairs, Government of Assam cited in Saikia (2015)

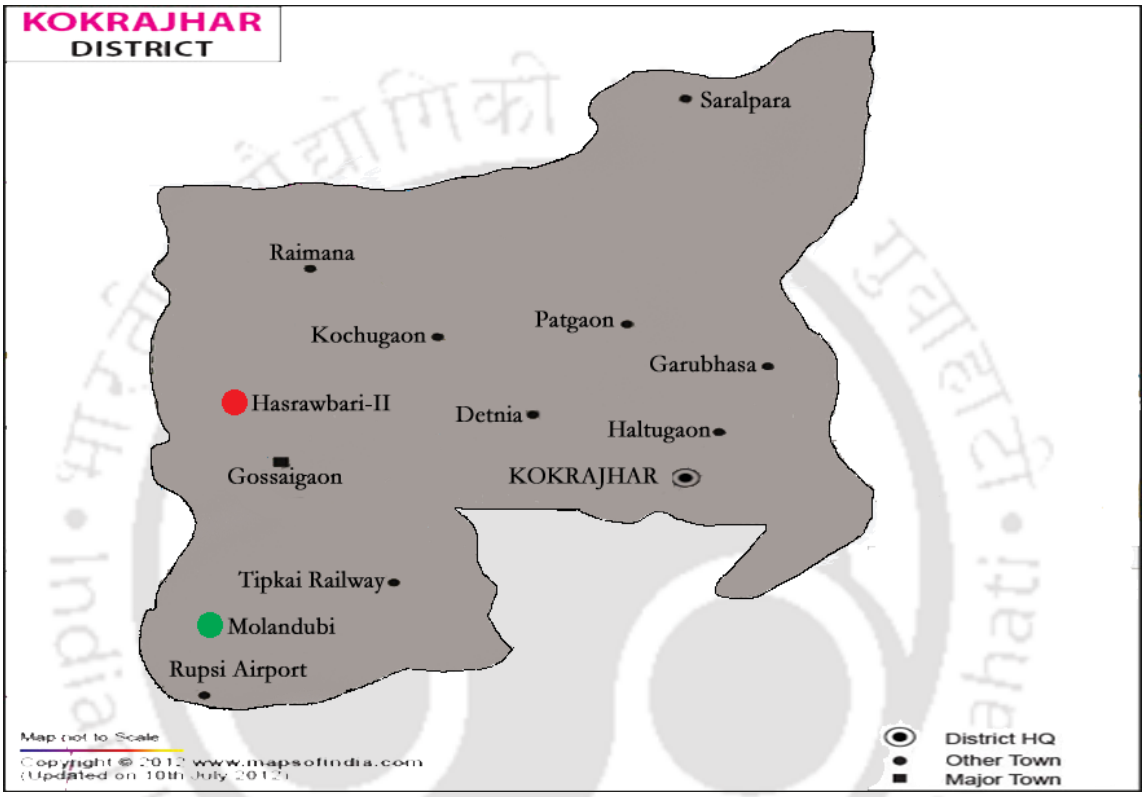
Note: * Massacre over Muslim or Adivasi by militant group(like Bodo Liberation Tigers or National Democratic Front of Bodoland)
** group based conflicts between the Muslims and other ethnic groups like Garo, Rabha, and other Assamese speaking people including Bodo

3.5.2 *Village selection*

Since the district of Kokrajhar had seen all the conflicts other than 2008 conflict, it is purposively selected for our study. Two villages inhabited by at least three ethnic groups including Bodo and Muslim within the district have been selected. Between them one is conflict affected while another is not affected village. Within the districts, villages under the Sapkata Police Outpost of the Kochugaon Development Block in Gossaigaon sub-division have been affected by recurrent conflicts. Major conflicts are Adivasi and Bodo conflict in 1996 and 1998 and recent one between Bodo and Muslim in 2012. Consulting with the government officials of Kochugaon Development Block, Titaguri Development Block and Gossaigaon Development Block and also with the workers of ABSU and other social

organizations of Kokrajhar, revenue village Hasrawbari-II was identified as conflict affected village while Molandubi revenue village was identified as not affected village. Hasrawbari-II village had been affected by the conflicts in 1996 as well as in 2012 while Molandubi could avoid all such conflicts in spite of having similar ethnic composition.

Map 2 *Map of Kokrajhar district*

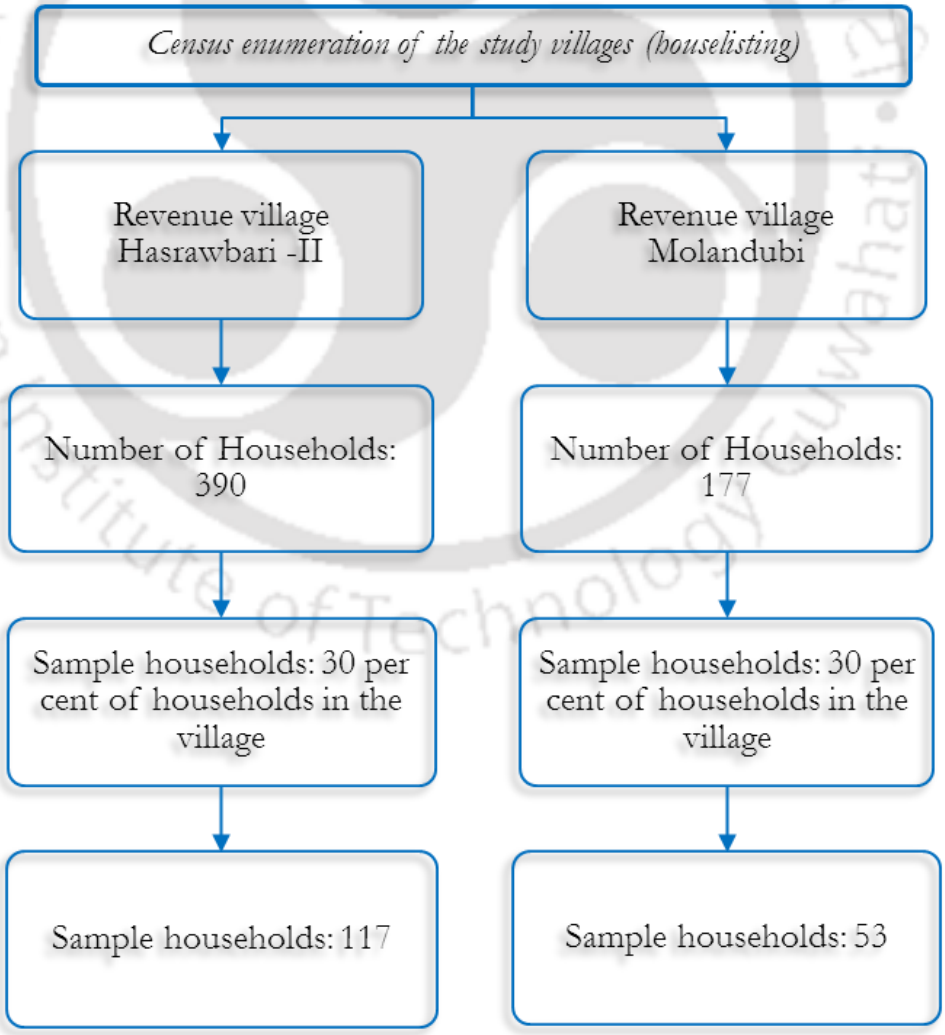


3.5.3 *Selection of sample household*

Unit of analysis for study of village is a revenue village. A census type survey was undertaken in Hasrawbari-II and Molandubi villages in the month of December, 2015. A houselisting schedule containing queries regarding general socio-economic characteristics of households, entitlement of land ownership, general characteristics of household members, and their educational attainments and school attendance was used for survey. In revenue village Hasrawbari-II, a total number of 390 households were enumerated. In the village, Bengali speaking people were found identifying themselves based on religion. Bengali respondents who followed Hinduism identified themselves as Bengali Hindu while those

following Islam identified themselves as Muslim. On the other hand all Bengali speaking people in revenue village Molandubi are followers of Islam and they identified themselves as Muslim. We therefore classified Bengali speaking respondents into Bengali (Hindu) and Muslim in our sample categorization. The other respondents identified themselves based on their ethnicity or spoken dialects. They are Bodo, Rabha, and Rajbangsi. The Rajbangsi group identified themselves as Assamese also. Therefore households were classified into four groups based on ethnicity and religion. After that 30 per cent of households of each ethnic group were randomly selected as sample. The number of sample households in Hasrawbari-II was 117.

Figure 3.1 *Sample size and unit*



A similar technique was followed in Molandubi village. There were 186 households as per census, 2011 but only 177 households had been counted as many households had migrated in to the nearest village, Silthoka and other places. The total of sample households in this village was 53.

A detailed household questionnaire on state of education and perception of people regarding education and conflicts was used to collect information from the sample households. We collected detailed information on status of school attendance and loss of schooling and properties during conflicts. Information was also collected on perception of the households regarding their present living conditions and how they were optimistic about their future lives and properties, and role of political and other social organizations like students, religious and other non-government organizations during and after the conflicts. Data are collected for the period of 2015 and thus in the subsequent chapter reference period is 2015.

Type of schedule used for the study

1. **Houselisting schedule for the census type survey:** includes information such as name of the head of the household, place of birth, caste/tribe, religion, gender, and marital status, relation with household head, educational level, literacy status and school attendance status including land ownership.

2. **Household schedule for the sample survey:** includes details of school attendance and expenditure on education, school missed, household displacement, role of media and local political organization, loss of property and household assets during the conflict, perception of the households on overall living conditions, present household amenities and assets holding.

Chapter -4

Description of the study villages

This chapter describes the general socio-economic characteristics of the study villages as well as profile of the households based on key indicators. Household level cross section data was collected to study the levels of horizontal education inequalities and to examine the effects of conflict on educational attainments of the different ethno-religious groups of population in BTAD. For the variables like school attendance, level of educational completion, age and sex individual residents are considered as unit for studying. On the other hand households are considered as unit of study for land, household occupation, levels of parents' educational attainments, ethnicity, and household dwelling damaged. A census enumeration was carried out in the revenue village Hasrawbari-II and Molandubi in the month of December, 2015. In this study, individuals are defined as member of the household if they shared same kitchen for food based on the reliability of the response of the head of household. Therefore, the members who shared the same house and agricultural land but had separate kitchen are defined as members of separate households.

4.1 *Profile of revenue village Hasrawbari-II*

Geographical location and general characteristics

Revenue village Hasrawbari-II is a part of Gossaigaon sub-division in the district of Kokrajhar, Assam. Total geographical area of the district is 3296 sq. km. Kokrajhar district lies roughly within 90°38' East and 26°54' North Latitude. The district has a population size of 887142 with a density of 296 inhabitants per square kilometer. Sex ratio was 959 female per 1000 male population. Decadal growth rate of population in the district was 5.17 per cent during 2001-2011 compared with 17.07 per cent in the state of Assam as a whole. The size of urban population in Kokrajhar is very less, rural population constitute 94 per cent. The ST and SC population constitute 31.41 per cent and 3.33 per cent of total population

(Census 2011). Overall literacy rate was 65.22 per cent, male and female literacy rates were 71.89 per cent and 58.27 per cent respectively in 2011. The Census 2011 estimates also show that the total workforce population is 38.45 percent. Work participation rate of female is 24.14 per cent compared to 52.18 per cent males counterparts. The total main worker population is 74 per cent and marginal workers are 26 per cent. Cultivator and agricultural labour households constitute 54.95 per cent and 16.51 per cent of the total workers respectively.

Revenue village Hasrawbari-II is situated in the western part of Kokrajhar bordering West Bengal in India. Gossaigaon is the nearest town of the village situated at a distance of about approximately 7 kilometers. The graveled approach road towards the Bhutan from No 31 national highway is running through the middle of village. The people can have access to transport facility within the village as there is regular running of auto and other public carrying light vehicles. The people of this village have to travel around 9 kilometers for the train station situated at Gossaigaon town. Most of the households have their own tube well which constitute major source of drinking water. However not all households in the village have access to electricity.

During our house listing survey, a total of 390 households were found in revenue village Hasrawbari-II compared with 383 households based on census estimates, 2011. Many households reported that their households separated recently while many other households were found having left the village after eruption of the conflict. Total population in the village as per houselisting survey was 2055 of which 53 percent were male and 47 per cent were female. Census estimates for the village show that the total population was 1970 in 2011 with 51 per cent male and 49 per cent female population. Overall literacy rate in the village was 52 per cent based upon our houselisting survey against 45 per cent estimated based on census, 2011. Male and female literacy rates were 54 per cent and 50 per cent

respectively in 2015. Although the literacy rate in Hasrawbari-II has shown an improvement by 7 per cent in 2015, it has been much lower than the average literacy rates of Kokrajhar (65 per cent) and Assam (72 per cent).

Table 4.1 *Profile of revenue village Hasrawbari-II*

Indicator	*2011*	*2015*
Total number of households	383	390
Total population	1970	2055
Male population (in per cent)	51	53
Female population (in per cent)	49	47
Literacy rate	45	52
Male literacy rate	50	54
female literacy rate	41	50
Sex ratio	960	893
Juvenile Sex Ratio (0-6 years)	873	870

Source: Census, 2011 and survey data, 2015

Sex ratio was 960 female populations for every 1000 male populations in 2011 while we found 893 during our houselisting survey. The juvenile sex ratio (0-6 years) on the other hand was found to be 870 in 2015 compared with 873 in 2011. Thus sex ratio for both the adults and children were lower than state average as well as declining.

As already said in the previous chapter, respondents in the village identified themselves based on different group identities. Based upon their own identifications, we classified households into four ethno-religious groups: *Bodo, Bengali Hindu (H), Rajbangsi and Muslim*. Classifying people based on the group affiliations in the study village, Muslim were found to be predominant with 90 per cent of total village population. The ethnic group Bodo and Rajbangsi represent 4 per cent and 5 per cent respectively while Bengali (H) represents just 1 per cent of village population. While all Muslim and Bengali (H) fall under general category, Rajbangsi and Bodo fall under OBC and ST respectively in terms of social group classification followed by the government of India. Based on religious classification, all these ethnic groups other than Muslim are followers of Hinduism in this village.

The respondents of the village said that entire geographical area of the village was grazing land which falls under the Gossaigaon Tribal Belt and Block[8]. That is why majority of the households do not have land registered in their name, which they called Kash land (unregistered). Bengali (H) who came from the then East-Pakistan or present Bangladesh settled first in the village in 1959. After their settlement, the Bodo from the nearest revenue villages Panowari and Malaguri came to settle in this village about 30 to 40 years back from the date of survey. Three Bodo households reported they came from a village of Srirampur area at the border of West Bengal and settled in this village in 1996; after their houses were set on fire during the Bodo and Santhal conflict of 1996. Majority of the Muslim households reported that they came from Dhubri, Goalpara and Barpeta districts about 40-50 years ago. A few Muslim households reported that they came from other parts of Kokrajhar district itself. The Rajbangsi households informed that most of them came from different parts of Kokrajhar district while a few households came from West Bengal.

Table 4.2 *Distribution of households by ethno-religious groups, Hasrawbari-II*, in number and percent

	Number		*Per cent*	
	Household	*Person*	*Household*	*Person*
Muslim	347	1853	89	90
Bodo	20	88	5	4
Rajbangsi	19	93	5	5
Bengali (H)*	4	21	1	1
All	**390**	**2055**	**100**	**100**

Source: Survey data, 2015
*Bengali speaking people who are worship of Hinduism

Based on the responses of the head of the household, a specific occupation is defined as that household's principal occupation if working members of the households spend major

[8]Tribal Belt and Block was created by the government of Assam though the amendment of the Assam Land Revenue Regulation Act, 1886 in 1947 to prevent large scale encroachment of non-tribal population and to reserve certain areas exclusively for the triabls (Bordoloi, 1999). According to this provision, the people belonging to other than the tribal and other specified classes cannot settle within the belt and blocks. The other specified class includes tea tribes, Santhals, Nepali cultivators, Scheduled Castes and Rajbangsi. However, other than the protected groups who settled before the constitution of the belts and blocks have equal rights with the protected classes with respect to future settlement and transfer of land documents.

proportion of their working days in that occupation or if that occupation contributed a major share to total household income. Distribution of households by occupation categories shows that agriculture is the main occupation for majority of the households in Hasrawbari-II. As high as 27 per cent are cultivator households while 25 per cent were found laboring out in agriculture. Laboring out in agriculture mainly includes working as daily wage earner in agriculture activities such as ploughing, sowing and harvesting.

Table 4.3 *Distribution of households by primary occupation, Hasrawbari-II,* in number and percent

Occupation	*Number*	*Per cent*
Cultivator	107	27
Labouring out in agriculture	98	25
Labouring out in non-agriculture	49	13
Petty businessmen	90	23
Transport sector*	38	10
Regular salaried	8	2
All occupations	**390**	**100**

Source: Survey data, 2015

For 13 per cent households, any casual non-agricultural activities are main occupation. Non-agricultural activities include construction works, rickshaw pulling, carpentry, laboring out as manual workers in retail shops, small workshop including bicycle repairers etc. Other 23 per cent households in the village informed petty businesses as their main occupation. It included small businesses such as tea shop, small merchants, vegetable vendors, grocery store owners, meat and fish selling, and tailoring. Transport sector was the main occupation for 10 per cent of the households in Hasrawbari-II. It included drivers and other workers. Regular salaried individuals including both government and private sources constituted only 2 per cent of the households.

In Hasrawbari-II village, agriculture land is located in close proximity to habitation. Agriculture is completely rain dependent and therefore rice is sown only once in a year during June to October. Apart from paddy, other crops and vegetables grown are mustard, jute, grams and vegetables brinjal, potato, cabbage and cucumber.

Table 4.4 *Distribution of household by size class of operational land holding, Hasrawbari-II village, 2015,* in hectare

Size class (hectares)	*Number of household*	*Share*
0	252	65
>0 ≤1	54	13
>1 ≤2	78	20
>2	6	2
All	**390**	**100**

Source: Survey data, 2015

The details on operational holding of land were collected from all the households in the village. In this village, as high as 65 per cent households do not have operational holding of land, and this is true for all the ethnic groups. That is why many of the agricultural laborers were found engaged mostly in agricultural activities in the nearest revenue villages like Malaguri and Panowari. Among the rest of households, 13 per cent has less than or equal to one hectare of operational holding of land, 20 per cent has greater than one but less than 2 hectares and 2 per cent households has land greater than 2 hectares.

Education

Revenue village Hasrawbari-II has two government schools: one primary school and another upper primary school. Besides, there is another non-provincialised so called venture lower primary school in the village which was established in 1979. The teachers of this school are retiring after rendering services for more than thirty years without getting any remuneration. Assamese language is used as medium of instruction in these schools. There are also two private schools both established in 2013, one being Bodo medium and another Assamese medium. Students of secondary classes on the other hand have to travel about 4 kilometers for accessing education while for higher education they travel to Rabihaji Junior college or Gossaigaon College. The former is located at around 5 kilometers way from the village while the latter located at the head quarter of Gossaigaon sub-division which is around 7 kilometers away from the village. Bodo students, however, go to the government primary school located at the nearest revenue village Panowari at a distance of about one

kilometer from the village. For upper primary school they are required to travel about 3 kilometers to Malaguri while for secondary school they travel 7 kilometers to Gossaigaon. The students travel either by bicycle or other public carrying light vehicles.

Table 4.5 *Distribution of literate person age seven and above by ethnicity, Hasrawbari-II,*2015, in number and per cent

Ethnic group	*Literate person*			*Literacy rates*		
	Male	*Female*	*Person*	*Male*	*Female*	*Person*
Bodo	29	17	46	64	47	57
Muslim	433	364	797	50	31	42
Rajbangsi	23	11	34	53	51	52
Bengali (H)	13	4	17	100	67	89
All	**498**	**396**	**894**	**54**	**50**	**52**

Source: Survey data, 2015

Among the ethno-religious groups, the literacy rate of Bengali (H) (89 per cent) is the highest followed by Bodo (57 per cent), Rajbangsi (52 per cent) and Muslim (42 per cent). Literacy rates of the female population were lower than their male counterparts for all the ethno-religious groups. Literacy rates of both male and female belonging to Muslim group were relatively lower than all the other groups.

Table 4.6 *Average educational levels among age 15 years and above by ethnicity, Hasrawbari-II,* 2015

Ethnic group	*Male*	*Female*	*Person*
Bodo	4.82	2.9	3.81
Muslim	2.42	1.74	2.42
Rajbangsi	3.02	2.72	3.02
Bengali (H)	7.73	5.50	7.73
All	**3.43**	**2.9**	**3.09**

Source: Survey data, 2015

Mean year of education level completed was calculated for person's age 15 years and above (table 4.6). The mean year of levels of education completed for all ethnic groups was found to be 3.09. Mean years of education completed by males was 3.43 while that for females 2.90. Among the ethnic groups, average year of educational attainment of Bengali (H) was the highest (7.73) followed by Bodo (3.81), Rajbangsi (3.02) and Muslim (2.42).

Table 4.7 *Current attendance rates among age 6-14years by ethnicity, Hasrawbari-II,* 2015, in number and per cent

Ethnic group	*Attending*			*Share*		
	Male	*Female*	*Person*	*Male*	*Female*	*Person*
Bodo	15	5	20	83	83	83
Muslim	224	210	434	84	89	86
Rajbangsi	15	7	22	88	78	85
Bengali (H)	4	0	4	100	0	100
All	**258**	**222**	**480**	**84**	**89**	**86**

Source: Survey data, 2015

Current attendance rate of compulsory schooling age groups (age 6 to 14 years) was counted at 86 per cent for all the ethnic groups in the village. This proportion for male children was 84 while that for female children was 89. Thus, the female children are ahead of male children in terms of those currently attending schools. The Bodo children are ahead of Rajbangsi and Muslim with respect to literacy rates and average year of educational attainments. However they were at the bottom with respect to proportion of those currently attending.

4.2 *Profile of revenue village Molandubi*

Geographical location and general characteristics

Molandubi village is a part of Parbatjhora sub-division, a new sub-division of Kokrajhar district that came into existence after creation of BTAD in 2003. Before formation of the BTAD, this village fell under Dhubri district. The village lies at the south-western part of the district. Gauripur, a sub-divisional headquarters of Gauripur division under Dhubri district is the nearest town of the village at a distance of about 25 kilometers. Infrastructure facility in this village is also good. Similar to Hasrawbari-II, the approach road towards Gauripur from Gossaigaon town is running though middle of the village from which people have access to transport facility. However vehicles do not ply at regular intervals on this road. The people of this village therefore have to travel around 10 kilometers to Basbari for both the train and bus station. Major source of drinking water in Molandubi are also tube

wells and like in the case of the earlier village, not all households have access to electricity connection.

The village consists of 186 households as per census, 2011 while we found a total of 177 households during our houselisting survey. The reason for fall in number of households is that some households had shifted to nearest revenue village Silthoka, a village predominant of Rabha ethnic group. The households mostly belong to Rabha ethnic group have land owned that fall under Silthoka village, and hence once their households get expanded they shifted to that village. However for official purposes like election and buying rationed food through the public distribution system (PDS), these households identify themselves as inhabitants of village Molandubi.

Table 4.8 *Profile of the revenue village Molandubi*

Indicator	*2011*	*2015*
Total number of households	186	177
Total population	907	862
Male population (per cent)	51	52
Female population (per cent)	49	48
Literacy rate	70	84
Male literacy rate	78	89
Female literacy rate	61	79
Sex ratio	942	862
Juvenile sex ratio (0-6 years)	1070	998

Source: Census, 2011 and survey data, 2015

Total population in Molandubi village, as per census estimation was 907 in 2011. However, a total of 862 populations were counted during the census enumeration carried in the village in 2015. Among them 52 per cent is male and 48 per cent is women. Total literacy rate as per our estimation based on houselisting survey was 84 per cent; male literacy rate was 89 per cent while female literacy rate was 79 per cent. These literacy rates are higher than the literacy rates estimated based on the census data which was 70 per cent in 2011 with literacy rates 78 per cent and 61 per cent of male and female respectively. Sex ratio in the village was

942 female populations for each 1000 male populations in 2011. But in our houselisting survey we found 862 female populations for every 1000 male populations. Similarly juvenile sex ration was found to be 998 in 2015 against 1070 in 2011. Sex ratio is therefore found declined like in the previous village.

Table 4.9 *Distribution of households and population by ethno-religious groups, Molandubi,* 2015, in number and per cent

Ethnic group	*Number*		*Share*	
	Household	*Person*	*Household*	*Person*
Bodo	41	179	23	21
Muslim	42	246	24	29
Rajbangsi	59	285	33	33
Rabha	35	152	20	18
All	**177**	**862**	**100**	**100**

Source: Survey Data, 2015

Among the ethno-religious groups in the village (Table No 4.9) Rajbangsi with 59 households are highest followed by Muslim (42), Bodo (41) and Rabha (35). Accordingly, population belong to Rajbangsi (33 per cent) is the highest in the village followed by Muslim (29 per cent), Bodo (21 per cent) and Rabha (18 per cent). While both Bodo and Rabha fall under ST category, Rajbangsi are OBC and Muslim fall under general category. Religiously all Bodo, Rajbangsi and Rabha are follower of Hinduism. People of this village has been residing since immemorial time while few Muslim households informed that they came from the Southern bank of river Brahmaputra in Dhubri district and settled some twenty to thirty years back from that date of houselisting survey. The new settler households tolled that they came to this village after losing land due to soil erosion.

Households' distribution based upon occupation shows the village is primarily dependent on agriculture as it provides livelihood means to majority of the households. Cultivation is the main occupation for 54 per cent of the total households of the village. The households mainly depending upon salaried works and petty business constitute 13 per cent and 12 per cent respectively. For the other 11 percent households, the casual labour in agriculture is the

main occupation. Laboring out in non-agriculture is the main occupation for 8 per cent of the households while transport sector is the main occupation for another 2 per cent of households in the village.

Table 4.10 *Distribution of households by primary occupation, Molandubi,* in number and per cent

Occupation	*Number*	*Per cent*
Agriculture	96	54
Agriculture labour	20	11
Non-agricultural labour	13	8
Business including vendor	22	12
Transport sector	3	2
Salaried works	23	13
All occupations	**177**	**100**

Source: Survey data, 2015

Like the previous village, agriculture land of this village is rain-fed without perennial source of irrigation. As a result, rise was shown mostly in a year during June to October. However, A few households were found cultivated paddy during January to April with the help of pump set or boring. The cultivators reported that the productivity is around two quintals per hectare of land. Apart from the paddy, cash crops like Mustard, Jute, Grams and vegetables like Brinjal, Potato, cabbage, cucumbers and others are grown by a few agricultural households. Households with agriculture as primary occupation informed that unlike the previous village paddy contribute relatively higher than the cash crops for their livelihood.

Households were classified based on size class of operational holding in Molandubi village (Table 4.11). It is found that as high as 38 per cent of the households do not have operational holding of land, 31 per cent have land greater than zero but less than one hectare, 20 per cent have between one and two hectares of land and 11 per cent of households have land holding greater than 2 hectares.

Table 4.11 *Distribution of households by size class of operational land holding, Molandubi,* 2015, in hectare

Size class (Hectare)	*Number of household*	*Share*
0	68	38
>0 ≤1	55	31
>1 ≤2	35	20
>2	19	11
All	**177**	**100**

Source: Survey data, 2015

Education

Revenue village Molandubi has three government lower primary and one upper primary or middle schools. Medium of instruction in one lower primary school is Bodo language while, Assamese is medium of instruction in other two lower primary schools. In upper primary school on the other hand both the Assamese and Bodo language are used to instruct the students. Another venture or non-provincialised lower primary school is there in the middle of village which was established in 2013. Assamese is used as medium of instruction in this school also. Students of secondary classes have to travel by bicycle or on foot three kilometers away from the village. Institutions for higher education on the other hand are lying at far distance from the village. Junior college and higher secondary school lie at Basbari at a distance of 10 kilometers, while the degree colleges situate at a distance of 25 kilometers at Gauripur or 17 kilometers at Hatidura. The students travel either by auto or stay there for study. However, there is lack of transport facilities from the village and therefore it is very difficult for accessing higher education for the villager.

Among the ethnic groups, the literacy rate of Rabha with 87 per cent was the highest followed by Muslim (85 per cent), Rajbangsi (84 per cent) and Bodo (82 per cent). The literacy rates of all the ethnic groups in this village are impressive; however there is male female gap by about 10 per cent and it is true for all the groups.

Table 4.12 *Distribution of literate person among age seven years and above, Molandubi,* 2015, in number and per cent

Ethnicity	*Literate*			*Literacy rates*		
	Male	*Female*	*Person*	*Male*	*Female*	*Person*
Bodo	71	55	126	87	76	82
Muslim	98	77	175	89	79	85
Rajbangsi	125	93	218	88	78	84
Rabha	72	51	123	92	81	87
All	**336**	**276**	**642**	**89**	**79**	**84**

Source: Survey data, 2015

Mean year of schooling completion for the person age 15 years and above was 7.01 as a whole in the village (table 4.13). This figure for male is 7.64 as against 6.24 for female counterparts. Thus the womenfolk of this village are behind their male counterparts with respect to literacy status and levels of educational attainment. Among the ethnic groups, average year of educational attainments of Bodo with 8.16 was highest followed by Rabha (6.75), Muslim (6.70) and Rajbangsi (6.58). It is also found that average year of educational attainments of the female is relatively lower than their male counterparts across the groups.

Table 4.13 *Average educational levels among age 15 years and above by ethnicity, Molandubi,* 2015

Ethnicity	*Male*	*Female*	*Person*
Bodo	8.89	7.36	8.16
Muslim	7.26	6.09	6.70
Rajbangsi	7.16	5.89	6.58
Rabha	7.48	5.8	6.75
All	**7.64**	**6.28**	**7.01**

Source: Survey data, 2015

Table 4.14 *Current attendance rates among age 6 to 14 years by ethnicity, Molandubi,*2015,in number and per cent

Ethnicity	*Attending person*			*Share*		
	Male	*Female*	*Person*	*Male*	*Female*	*Person*
Bodo	8	3	11	100	100	100
Muslim	31	25	56	100	96	98
Rajbangsi	28	22	50	100	100	100
Rabha	12	12	24	92	100	96
All	**79**	**62**	**141**	**99**	**98**	**99**

Source: Survey data, 2015

Current attendance rate for age 6 to 14 years was counted as high as 99 per cent with 99 per cent of male and 98 per cent of female in the village as a whole. In this village except one Muslim girl (4 per cent) and one Rabha boy (8 per cent) in these age groups, all children are found attending educational institutions. Thus the state of education in village is better off in terms of all indicators compared to previous village.

Table 4.15 *A Comparison of socio-economic features of the households, study villages*

	Hasrawbari-II	*Molandubi*
Number of households	390	177
Population	2055	862
Sex ratio	893	862
Juvenile sex ratio	870	998
Nearest market	3 kilometers	7 kilometers
Bus stop	Within the Village	Basbari (10 km.)
Education institutions	5	5
Distance from nearest town	7 kilometers	25 kilometers
Overall literacy rate	52	84
Male literacy rate	54	89
Female literacy rate	50	79
Activity status in per cent among total workers		
Cultivator	26	43
Labouring out in agriculture	35	21
Labouring out in non-agriculture	13	6
Transport sector	15	9
Petty trades	8	2
Salaried workers	3	19
Operational holding of land in per cent		
Households with no operational land	65	38
Average operational holding of land	0.29 hectare	0.54 hectare
Major crops	Rice, mustard and jute	Paddy and mustard

Source: Survey data, 2015

Chapter-5

Presence of horizontal inequality in western Assam: Analysis based on NSSO unit level and household level cross section data

In an ethnically stratified society inequality in access to education and gainful employment through job opportunities, gives rise to a deeply unequal society. Benefits of education and subsequently better employment opportunities and economic positions enjoyed by the privileged groups enable them to train their next generation to attain better quality and higher levels of education. Subsequently the children of privileged groups become more capable of obtaining the desirable occupations (Shavit, 1990 and Bush and Saltarelli, 2000). Thus unequal distribution of educational opportunities results in a more systemic form of discrimination. Unequal distribution of resources and opportunities often cause incoordination and disintegration in a society. Socio-economic and political exclusion of specific groups for a prolonged period of time creates deep wedges resulting in social injustice.

This chapter enquires into presence of horizontal inequalities in western Assam in general and the BTAD districts in particular with reference to the whole of Assam. Horizontal inequality (HIs) have been estimated for two dimensions: economic and social. Although the literature on horizontal inequalities discusses a host of indicators that can be considered for measuring inequality in economic and social dimensions, in our thesis we are constrained by the limitations of data availability. Since the major source of information is the NSSO unit level data, we have considered select indicators to measure the horizontal inequalities in the concerned dimensions. For the measurement of horizontal economic inequalities consumption expenditure, land ownership and household type classified based upon primary source of income of the household are taken into account (see Section 5.1.3). Under the social dimension of horizontal inequalities, we have considered only the education

related indicators[9]. They are literacy rate, average year of school completion and current attendance rate.

This chapter is classified into three sections. Section 5.1 discusses economic condition of the various socio-religious groups based on the NSSO data. This is followed by the estimation of horizontal economic inequalities. Section 5.2 analyses the scenario of educational attainments among the different socio-religious groups of population and then measures horizontal education inequality. As already discussed in Chapter 3, the framework of Mancini, Stewart and Brown (2010) based on the group gini coefficient has been used to measure horizontal inequality. Section 5.3 concludes and summarizes the chapter.

5.1 *Economic conditions among the socio-religious groups*

Consumption expenditure, entitlement of land ownership and occupations are important indicators of economic status of people in a society. For example in rural sector, majority of households depend on agriculture and allied activities. Agricultural land therefore serves as means of livelihood for many households in rural areas in terms of gainful employment and earning opportunities. The variations in distribution of and access to these variables among the different groups of population therefore indicate economic inequalities in a society. Hence, we have taken monthly per capita consumption expenditure (MPCE), land ownership and occupation to measure HIs in economic dimension.

5.1.1 *Consumption expenditure*

NSSO defines monthly per capita consumption expenditure (MPCE) as ratio of the aggregate household consumption expenditure to household size. Consumption expenditure here refers to monetary value of goods and services consumed during a given reference period. The goods consumed may be purchased in cash or credit, from earlier stock, home

[9] Education is one of the crucial components in dimension of social welfare which has generational effects on other dimensions. Inequality in education is an important predictor of groups' grievances and subsequent conflicts (Lindquist, 2012).

produced including receipt in the form of exchange, gift and charity, and free collection. The home produced goods are counted at ex-farm or ex-factory rate (non-inclusion of taxes and other fees for handling and shipping). On the other hand free collection goods, goods and services received as gift or in exchange of goods are counted at prevalent local retail price.

Table 5.1 *Average monthly per capita consumption expenditure by socio-religious groups, Assam,* 2004-05 to 2009-10, in Rupees

Social group	*2004-05*		*2009-10*	
	Household share	*MPCE*	*Household share*	*MPCE*
		Assam		
Muslim	28	508	25	732
ST	18	571	15	890
SC	10	547	13	917
OBC	19	627	27	1080
General	25	715	19	1152
All	**100**	**591**	**100**	**933**
		Western Assam		
Muslim	34	497	32	726
ST	18	589	15	855
SC	09	604	13	879
OBC	14	585	22	894
General	25	714	18	941
All	**100**	**582**	**100**	**822**
		BTAD		
Muslim	-	-	16	575
ST	-	-	39	816
SC	-	-	13	845
OBC	-	-	23	722
General	-	-	8	748
All	**-**	**-**	**100**	**738**

Source: Authors' calculation from NSSO's 61st and 66th round surveys on Consumer Expenditure

Table 5.1 depicts consumption expenditure by socio-religious groups in different district categories of Assam. In Assam, average MPCE was Rs. 591 in 2004-05 and it rose to Rs. 933 in 2009-10. Looking at consumption expenditure in western Assam, it is seen in the table that its MPCE was lower than that of Assam both in 2004-05 and 2009-10. The difference of MPCE between western Assam and Assam was Rs 9 in 2004-05, but it rose to

Rs. 111 in 2009-10. Similarly MPCE in BTAD was Rs 738 which was much lower than the MPCE of both Assam and western Assam. This implies that the people in four districts of BTAD had less consumption expenditure when compared to the people of other parts of the state.

Across various socio-religious groups, MPCE of the Muslim category was the lowest both in Assam and western Assam in both the years. Consumption expenditure among the ST category was second lowest while that of the General group was the highest in Assam as well as in western Assam in both the years.

In the four districts of BTAD, MPCE of Muslim was the lowest while it was the highest among SC group of population. In contrast to the second bottom place of ST based on MPCE in both whole Assam and western Assam, their average MPCE in BTAD was the second highest in 2009-10. Thus the ST and SC, who are poorer with regard to consumption expenditure in Assam as a whole and western Assam, seem to be relatively richer in BTAD compared to other groups of population. But their consumption expenditure was much lower than that of their counterparts in both Assam and western Assam in 2009-10. Thus people of all socio-religious groups in BTAD were much behind their counterparts in other parts of the state based on consumption expenditure.

5.1.2 *Land ownership*

In order to measure inequality based on land ownership we have considered average extent of land possessed by households. According to NSSO, land possessed refers to land owned, leased-in, mortgaged-in and encroached land[10]and excludes land leased-out and mortgaged out. Average extent of land possessed was 0.85 hectares in both western Assam and Assam

[10]Encroached land means piece of land possessed by a household but the household does not have title of ownership and also lease agreement either in written form or verbally for the use of such land (Government of India, 2006).

in 2004-05. In 2009-10, average extent of land possessed was 0.66 hectares in western Assam compared to 0.84 hectares in the state. In four districts of BTAD it was 0.73 hectares in that year. Thus average extent of land ownership in western Assam was lower compared to Assam as per 2009-10 survey. In BTAD, on the other hand it was higher than that of western Assam but lower compared to the state as a whole.

Table 5.2 *Average extent of land ownership by socio-religious groups, Assam,* 2004-05 to 209-10, in hectare

Social group	*2004-05*		*2009-10*	
	Household Share	*Land possessed*	*Household Share*	*Land possessed*
		Assam		
Muslim	33	0.68	32	0.82
ST	19	1.29	15	1.16
SC	10	0.61	11	0.58
OBC	16	0.73	25	0.93
General	22	0.90	17	0.62
All	**100**	**0.85**	**100**	**0.84**
		Western Assam		
Muslim	40	0.73	40	0.73
ST	17	1.29	12	0.81
SC	8	0.76	12	0.47
OBC	13	0.68	21	0.65
General	22	0.93	15	0.47
All	**100**	**0.85**	**100**	**0.66**
		BTAD		
Muslim	-	-	22	0.85
ST	-	-	35	0.85
SC	-	-	13	0.65
OBC	-	-	19	0.53
General	-	-	10	0.65
All	**-**	**-**	**100**	**0.73**

Source: Authors' calculation from NSSO's 61st and 66th round surveys on Employment and Unemployment

Among all socio-religious groups in Assam, ST households had the highest extent of land possessed both in 2004-05 and 2009-10. On the other hand the SCs with just 0.61 hectares in 2004-05 and 0.58 hectares in 2009-10 had the lowest possessed land. It can be observed from table 5.2 that average extent of land ownership for ST fell from 1.29 hectares in 2004-

05 to 1.16 hectares in 2009-10. Similarly that of General category fell from 0.90 hectares to 0.62 hectares during that period. In contrast the land ownership for Muslim rose from 0.68 hectares to 0.82 hectares and that of the OBC category from 0.73 to 0.93 hectares during that period. Thus land ownership among the Muslim and OBCs increased while that of ST, SC and General categories of population fell during that period.

In western Assam also, ST households with 1.29 hectares in 2004-05 and 0.81 hectares in 2009-10 had highest extent of land ownership compared to other groups. However, their ownership fell by 0.13 hectares in 2009-10. The OBC with just 0.68 hectares of land possessed had the lowest extent of land ownership in 2004-05 while both SC and General category with 0.47 hectares had lowest land ownership in 2009-10. Extent of land possessed for all the social groups in western Assam fell in 2009-10 compared to that in 2004-05. However, land possessed by Muslim (0.73) remained the same in both the years.

In four districts of BTAD on the other hand, estimated extent of land ownership for ST and Muslim were just the same (0.85 hectares), and this was the highest across the groups in 2009-10. Land ownership of OBC with 0.53 was the lowest while that of SC and General household was 0.65 hectares. Thus, in BTAD the rival groups ST (mostly Bodo) and Muslim had equal extent of land ownership.

5.1.3 *Classification of households by principal occupation*

NSSO classifies the households into different types based on the sources of income of the households. The economic activities from which the households generate major share of income are considered to identify the occupation or types of the households. In rural area, households were classified in to self-employed agriculture, self-employed non-agriculture, agricultural labour, other labour, and other households. In urban area on the other hand they were classified into self-employed, regular salaried or wage earning, casual labour and

other households. Household classification is therefore not common for rural and urban sectors. BTAD constitutes largely rural area, its sample of rural sector represents more than 75 per cent of its total sample in NSSO 66th round survey on consumption expenditure. We therefore consider only the households classification for rural sector in this case. Moreover, we have clubbed manual labour in both agriculture and non-agriculture. Thus households in this study are self-employed non-agriculture, self-employed agriculture, manual labour and other households.

If the main earner(s) of a household operates farm or farm related activities with or without hired labour or helpers, the household is defined as self-employed agriculture household. Similarly households with main earners who operates non-farm business on their own or with partner(s), with or without taking help from hired labour are defined as self-employed non-agriculture. The households for which the manual works are main sources of income and received their income in the form of wage either in cash or kind or both, are referred as labour households. Manual works here mean the works that required physical labour but not technical knowledge or skill. The residual households that include salaried and other workers are defined as other households. It is noteworthy that the casual labour households in rural sector are at the bottom of the social hierarchy in the rural areas when their income or consumption expenditures are taken into consideration. The consumption expenditure among the casual labour in both agriculture and non-agriculture was the lowest in all the district categories in both the years (refer table A5.1). On the other hand, consumption expenditure among the others household type was the highest followed by the self-employed agriculture household in both the years.

Table 5.3 shows distribution of households based on the household types. It is seen in the table that the proportion of self-employed agriculture households was the highest among all types of household in all the district categories both in 2004-05 and 2009-10. This is true for

all the socio-religious groups of population. On the other hand household proportion with other types of occupation was the lowest in all the districts categories. Across the socio-religious groups, proportion of household with other occupation was the highest among General followed by OBC, Muslim, ST and SC in both Assam and western Assam in 2004-05.

Table 5.3 *Distribution of households by household types and socio-religious groups, rural Assam,* 2004-05 to 2009-10

Social groups	*2004-5*				*2009-10*			
	Assam							
	1	*2*	*3*	*4*	*1*	*2*	*3*	*4*
Muslim	22	24	46	8	20	25	48	7
ST	11	17	65	7	15	15	62	8
SC	23	24	46	7	24	23	42	11
OBC	9	38	42	11	16	29	45	10
Gen	15	24	48	13	28	21	34	17
All	**18**	**25**	**48**	**9**	**19**	**24**	**47**	**10**
	Western Assam							
Muslim	18	21	52	9	19	29	46	6
ST	11	18	64	7	16	16	54	14
SC	18	17	58	7	31	28	29	12
OBC	12	39	41	8	24	32	36	8
Gen	16	20	50	14	26	17	36	21
All	**16**	**22**	**53**	**9**	**22**	**16**	**42**	**10**
	BTAD							
Muslim	-	-	-	-	16	17	63	4
ST	-	-	-	-	12	14	61	13
SC	-	-	-	-	22	22	46	10
OBC	-	-	-	-	14	32	48	6
Gen	-	-	-	-	25	28	41	6
All	**-**	**-**	**-**	**-**	**15**	**21**	**55**	**9**

Source: Authors' calculation from NSSO's 61st and 66th round surveys on Consumer Expenditure
Note: S*elf-employed in non-agriculture-1, labour-2, self-employed in agriculture-3 and residual-4*

It is noticed in table 5.3 that proportion of such households belonging to all social groups had increased in 2009-10 while that of Muslim and OBC had fallen in both Assam and western Assam. When the households that depend on the manual works for their household income are considered, it is seen that the OBC group had highest proportion of such households. However, their proportion along with all the groups fell with exceptional rise in

proportion of such households for Muslim in 2009-10. Thus, for Muslim group, proportion of the households with occupations that could spend relatively higher expenditure fell while that of households capable of spending less expenditure rose in both Assam and western Assam.

In four district of BTAD, self-employed agriculture households was the highest for Muslim households (63 per cent) followed by the households belong to ST, OBC, General and SC. However, the proportion of household with other occupation was the highest for ST followed by SC, General, Muslim and OBC. When casual labour households are taken into consideration, proportion of OBC households was the highest while it was lower for ST, SC and Muslim.

5.1.4 *Horizontal economic inequalities*

Population weighted Group Gini is first calculated for the five socio-religious categories (SC, ST, OBC, General and Muslim) in Assam and western Assam for 2004-05 and Assam, western Assam and BTAD for 2009-10. The purpose of this measurement is to estimate the level of horizontal inequalities. The group Gini values indicate that higher the value from 0 (zero) higher is the level of horizontal inequalities and vice-versa. In order to test whether the horizontal inequalities are statistically significant, we looked at the variance between socio-religious groups based upon the analysis of variance (ANOVA). ANOVA estimates if there is statistically significant differences in means of a groups of observations (Gujarati, 2006).

Horizontal inequalities in MPCE

Horizontal inequalities in consumption expenditure as measured by the population weighted group Gini was 0.35 in Assam compared to 0.36 in western Assam in 2004-05. It was as high as 0.47 in western Assam and 0.45 in Assam in 2009-10. Thus the levels of horizontal

inequalities with regard to consumption expenditure rose both in western Assam and Assam in 2009-10. Moreover, these were relatively higher in the western Assam compared to whole Assam in both the years. In BTAD on the other hand, the level of horizontal inequalities in respect of consumption expenditure was 0.33 in 200910. Hence the level of horizontal inequalities in BTAD was relatively lower than that in Assam and western Assam. It is worth noting that the consumption expenditure for General and OBC was relatively higher in both western Assam and Assam, while in BTAD their MPCE was lower even compare to ST and SC. In addition consumption expenditure of all the groups in BTAD was relatively lower than that of their counterparts in both Assam and western Assam in 2009-10. The gap between these groups was not high as those in both whole Assam and western Assam. That is why the horizontal inequality in BTAD was relatively lower than that of other district categories. Analysis of the variances among the groups based upon ANOVA show that the inequalities between the groups at all district categories are statistically significant at $p<0.001$ in both the years (see table A5.2).

Table 5.4 *Horizontal inequalities measured by population weighted GGini*

Variable	2004-05		2009-10		
	Assam	*W. Assam*	*Assam*	*W. Assam*	*BTAD*
MPCE	0.35***	0.36****	0.45***	0.47***	0.33***
Land Possessed	0.73***	0.64***	0.66***	0.64***	0.46**
SEAG[1]	0.40***	0.38	0.49***	0.55*	0.43
Other[1]	0.70***	0.75***	0.88***	0.59**	0.98*

Source: Authors' calculation from NSSO's 61st and 66th round surveys on "Consumer Expenditure" and "Employment and Unemployment"
Note: Data for MPCE is based on Consumer Expenditure rounds while others are based on Employment and Unemployment rounds
1 Estimated for only rural sector
*** indicates significant at 1% level, ** at 5% level and * at 10% level

Horizontal inequalities in land ownership

Horizontal inequality in average extent of land possessed in the state of Assam was 0.73 in 2004-05. However, it fell to 0.66 in 2009-10. It is worth noting that the land ownership for ST and General which was relatively higher in 2004-05 and it fell in 2009-10. However,

the extent of land ownership for Muslim and OBC which was relatively lower in 2004-05 rose in 2009-10. Thus the gap between the groups in terms of land ownership fell which led to fall in the level of horizontal inequalities in 2009-10. However, the inequalities remained statistically significant at $p<0.01$ level in both the years (Table A5.3). HIs in western Assam on the other remained at 0.64 in both the years which has also been statistically significant at $p<0.01$. In four districts of BTAD, the horizontal inequality in land ownership was as high as 0.46 in 2009-10. Thus in BTAD, level of horizontal inequality based on land ownership was also relatively lower than that of both Assam and western Assam. It is important to note that the ST had relatively higher extent of land ownership compare to other social groups in whole Assam as well as in western Assam. But in BTAD, the extent of land ownership for ST was about same with other groups and thus level of HIs is low in this region. Although the level of inequality in BTAD was lower, the analysis of the variance based on ANOVA indicates it as statistically significant at $p<0.05$.

Horizontal inequalities based on household types

The horizontal inequality based on self-employed agriculture (SEAG) households in Assam was estimated to be 0.40 in 2004-05 and it rose to 0.49 in 2009-10. The inequality in both the years was statistically significant at $p<0.01$ level (Table A5.4). On the other hand in western Assam it was 0.38 in 2004-05 and became 0.55. Both the level of inequalities were statistically significant at $p<0.10$ level in 2009-10. The inequality in four district of BTAD was 0.43 in 2009-10 and was comparatively lower than that of other district categories. Thus the level of HI in BTAD with regard to SEAG was also lower than other district categories. In addition it is not statistically significant.

Horizontal inequality with regard to other occupation was 0.70 in 2004-05 and rose to 0.88 in 2009-10 in whole Assam. The inequality in both the years was statistically significant at $p<0.01$ per cent level (table A5.5). This inequality in western Assam was 0.75 in 2004-05 and

became 0.59 in 2009-10. In four district of BTAD on the other hand, horizontal inequality with regard to this occupation was as high as 0.98 in 2009-10 and statistically significant at $p<0.01$ level. Thus inequality in terms of other occupation was relatively higher in BTAD when compared to that of other district categories in 2009-10.

5.2 *Educational attainment among the socio-religious groups*

5.2.1 *Literacy status*

The succeeding table 5.5 depicts literacy achievements by the person age 7 and above for different socio-religious categories of population in the state of Assam. NSSO defines a person as a literate if s/he can read and write a simple message in any language with understanding. In whole Assam, literacy rate was estimated to be 83 per cent in 2004-05 while 88 per cent in 2009-10. In western Assam on the other hand literacy rate was 78 per cent in 2004-05 and it rose to 85 per cent in 2009-10. Thus, literacy rates in both Assam and western Assam increased during 2004-05 to 2009-10. However, literacy rate in western Assam was relatively lower than that of the state in both the years. On the other hand it was 84 per cent in BTAD, which was lower compare to western Assam (85 per cent) and Assam (88 per cent) in 2009-10. The people of BTAD were therefore relatively behind the people of other parts of the state in terms of literacy attainments.

As observed from the above table, literacy rate of all the socio-religious groups had increased in 2009-10 when compared with their literacy rates in 2004-05. However, this figure for ST remained at 85 per cent in both the years. It is also observed from the table the Muslim remained fairly behind the other groups in the state though their literacy rate rose sharply from 75 per cent in 2004-05 to 82 per cent in 2009-10. While literacy rates of the General and OBC groups were always higher than the other groups.

In western Assam also, literacy rate for Muslim was the lowest though it rose from 67 per cent in 2004-05 to 69 per cent in 2009-10. Literacy rate of the ST group was also lower than the other groups in western Assam in both the years. On the other hand literacy rate of the general group with 86 per cent was the highest among the other groups in 2004-05. But, literacy rate of the OBC which rose from 82 per cent in 2004-05 to 92 per cent in 2009-10 was the highest in 2009-10.

Table5.5 *Literacy rate among age 7 years and above by socio-religious groups, Assam,* 2004-05 to 2009-10

	2004-05		*2009-10*	
Social groups	*Population Share*	*Literacy rate*	*Population Share*	*Literacy rate*
		Assam		
Muslim	30	75	26	82
ST	18	85	16	85
SC	10	82	12	87
OBC	19	87	25	91
Other	23	89	21	94
All	**100**	**83**	**100**	**88**
		Western Assam		
Muslim	37	67	33	79
ST	18	79	14	80
SC	8	80	12	91
OBC	15	82	22	92
Other	22	86	19	90
All	**100**	**78**	**100**	**85**
		BTAD		
Muslim	-	-	16	72
ST	-	-	34	83
SC	-	-	15	93
OBC	-	-	17	83
Other	-	-	18	93
All	**-**	**-**	**100**	**84**

Source: Authors' calculation from NSSO's 61st and 66th round surveys on employment and unemployment survey

Muslims are lagging behind the other groups not only in western Assam and Assam but also fairly behind in four district of BTAD. Their literacy rate with just 72 per cent in BTAD was the lowest among all groups in 2009-10. Literacy rate of the General group and SC with 93 per cent was the highest in BTAD.

5.2.2 *Levels of educational attainment*

Level of general education of an individual was determined considering the highest level of education completed successfully by that person. The levels of general education include, below primary, primary, middle, secondary, higher secondary, graduation, and above. The diploma or certificate courses were also included in the general educational level. In this regard, the course which is equivalent to graduate or above were included in the respective class of the general education while the course below the graduation level is considered in the higher secondary level. It is worth mentioning that the NSSO, since 61st round survey defined a person as an educated only when s/he completed successfully at least secondary level. Following NSSO's classification of general educational level, the present study categorizes general education into four broad levels. They are not literate, literate but below primary, primary but below secondary, secondary and above.

In whole Assam, of the total person in the age group of 15 years and above, 25 per cent were illiterate while 18 per cent of them were educated (see table 5.6). While proportion of illiterate person in the state fell to 19 per cent, proportion of educated person rose to 22 per cent in 2009-10. In western Assam also, the illiteracy rate fell from 33 per to 22 per cent while educated persons rose from 15 per cent to 19 per cent during 2004-05 to 2009-10. The illiteracy rate in western Assam was relatively higher while proportion of educated person was lower compare to Assam in both the years. In BTAD on the other hand the illiteracy rate with 24 per cent was higher than the figure for state (19 per cent) and western Assam (22 per cent) in 2009-10. Proportion of educated persons with 18 per cent in BTAD on the other hand was also comparatively lower than the Assam (22 per cent) and western Assam (19 per cent).

Across the socio-religious groups, illiteracy rate for Muslim was the highest in Assam in both the years while it was the lowest for General group. The illiteracy rates of the ST with

23 per cent in 2004-05 and 22 per cent in 2009-01 were also higher than the other groups. On the other hand educated person among the SC with 11 per cent was the lowest in 2004-05 while it was lowest among Muslim with 15 per cent in 2009-10. The educated person among the General group with 23 per cent in 2004-05 and 40 per cent in 2009-10 was the highest in Assam.

Table 5.6 *Educational levels among age 15 years & above by socio-religious groups, Assam,* 2004-05 to 2009-10

Social group	*2004-05*				*2009-10*			
	1	*2*	*3*	*4*	*1*	*2*	*3*	*4*
	Assam							
Muslim	36	19	33	12	28	12	45	15
ST	23	19	44	14	22	11	43	24
SC	25	21	43	11	20	12	50	18
OBC	20	20	41	19	12	9	60	19
General	16	13	42	29	8	7	45	40
All	**25**	**18**	**39**	**18**	**19**	**10**	**49**	**22**
	Western Assam							
Muslim	46	16	27	11	31	7	45	17
ST	30	17	41	12	28	5	43	24
SC	26	20	42	12	16	4	54	26
OBC	26	18	39	17	11	9	62	18
General	19	13	42	26	13	4	46	37
All	**33**	**16**	**36**	**15**	**22**	**9**	**50**	**19**
	BTAD							
Muslim	-	-	-	-	28	5	63	4
ST	-	-	-	-	27	6	43	24
SC	-	-	-	-	13	3	61	23
OBC	-	-	-	-	21	11	50	18
General	-	-	-	-	24	5	56	15
All	**-**	**-**	**-**	**-**	**24**	**6**	**52**	**18**

Source: Authors' calculation from NSSO's 61st and 66th round surveys on Employment and Unemployment
Note*: Not literate-1, literate but below primary-2, completed primary and middle-3, secondary and above-4*

In western Assam, again illiteracy rate of the Muslim with 46 per cent in 2004-05 and 31 per cent in 2009-10 was highest while their educated percentage with just 11 per cent in 2004-05 and 17 per cent in 2009-10 were the lowest. On the other hand illiteracy rate among the General group with 19 per cent was the lowest in 2004-05 while that of OBC (11 per cent)

was the lowest in 2009-10. Proportion of educated persons was the highest among the General group with 26 per cent and 37 per cent in 2004-05 and 2009-10 respectively.

Likewise in other district categories, the illiteracy rate for Muslim with 28 per cent was the highest in the four district of BTAD followed by ST (27 per cent), General (24 per cent), OBC (21 per cent), while it was the lowest among the SC (13 per cent). Proportion of educated persons on the other hand was the highest among the ST with 24 per cent followed by SC (23 per cent), OBC (18 per cent), and General (15 per cent) but it is lowest among the Muslim with just 4 per cent. Therefore, levels of educational attainments of the Muslim were the lowest in all the districts categories in both the years while that were high among the general and OBC in western Assam and Assam.

5.2.3 *Average year of schooling*

Based on the level of general educational attainments of the person age 15 years and above, average year of schooling was calculated for all the social groups. As already mentioned above, general educational levels are classified into primary, middle, secondary, higher secondary, graduate and above. In Assam, the primary level consists of four years of schooling while middle is of seven years. Thus the years of schooling is counted 4 for a person who completed primary, 7 for a person who completed middle level of schooling.

Similarly, years of schooling is counted 10 if a person completed secondary, 12 for who completed higher secondary, 15 for graduate and 17 for the person whose level of educational completion is above the graduate. However, the person who are literate but below primary level are not included in estimation of average years of schooling as their exact years of schooling completion could not be identified. The table given below (5.7) presents average year of schooling among the socio-religious groups of population.

Average year of schooling in the state of Assam was 5.73 compared to 5.44 in western Assam in 2004-05. It rose to 6.77 in Assam and 6.97 in western Assam in 2009-10. Thus average year of schooling which was slightly higher in Assam than western Assam in 2004-05 became reverse in 2009-10. In four district of BTAD, it was as high as 6.79 in 2009-10. Average year of schooling in BTAD was therefore relatively lower than that of the western Assam while higher than that of the state as a whole in 2009-10.

Table 5.7 *Average year of schooling among age 15 years & above by socio-religious groups, Assam,* 2004-05 to 2009-10

Social groups	*2004-05*		*2009-10*	
	Population Share	*Average Years of Schooling*	*Population Share*	*Average Years of Schooling*
		Assam		
Muslim	29	4.54	24	5.77
ST	19	5.58	16	6.45
SC	9	4.79	12	7.23
OBC	19	5.88	26	7.02
Other	24	7.44	22	8.13
All	**100**	**5.73**	**100**	**6.77**
		Western Assam		
Muslim	35	4.24	32	5.77
ST	19	5.32	14	6.15
SC	8	4.47	13	7.58
OBC	16	5.86	24	7.52
Other	23	7.33	18	8.49
All	**100**	**5.44**	**100**	**6.97**
		BTAD		
Muslim	-	-	15	4.18
ST	-	-	35	6.07
SC	-	-	15	7.58
OBC	-	-	16	6.85
Other	-	-	19	7.49
All	**-**	**-**	**100**	**6.79**

Source: Authors' calculation from NSSO's 61st and 66th round surveys on Employment and Unemployment

Across the socio-religious groups in the state of Assam, average year of schooling for Muslim (4.54) was the lowest while it was highest among the General group (7.44) followed by OBC (5.58), ST (5.88) and SC (4.74) in 2004-05. The average year of schooling for General groups was also found to be highest followed by OBC in 2009-10 too. In western

Assam also, average year of schooling for General group was the highest followed by OBC while it was lowest for Muslim. In BTAD on the other hand the average year of schooling among the SC was the highest followed by general (7.49), OBC (6.85), ST (6.07) and it was the lowest among the Muslim (4.18).

Thus year of schooling completion is the highest for General group followed by OBC both in whole Assam and western Assam in both the years. On the other hand, it was lowest for Muslim in all the district categories. In four districts of BTAD, SCs had highest average year of schooling.

5.2.4 *Status of current attendance*

The preceding table depicts status of current attendance in any educational institution by the age group of 6-21 years in Assam. Current attendance rate of children in the age group of 6 to 21 years in Assam increased from 74 per cent in 2004-05 to 76 per cent in 2009-10. In western Assam on the other hand, it increased from 73 per cent to 78 per cent during that period. In four districts of BTAD, overall school attendance rate for children of age 6 to 21 years was as high as 85 per cent. Thus school attendance rate of the children in BTAD was relatively higher than those of the state and western Assam.

In western Assam, school attendance rate for Muslim children in this age group was the lowest in both the years. In 2004-05, school attendance rate of the General children was the highest followed by SC (77 per cent), OBC and ST (67 per cent) in 2004-05. On the other hand it was the highest for OBC children with 83 per cent followed by General (77 per cent), SC (76 per cent) and ST (70 per cent) in 2009-10.

In western Assam also, school attendance rate for Muslim children with 68 per cent was the lowest in both the years. School attendance rate of SC children with 85 per cent was the highest followed by ST (80 per cent), General (77 per cent) and OBC (69 per cent) in 2004-

05. But in 2009-10, it was highest among OBC children (88 per cent) followed by General (82 per cent), SC (79 per cent), SC (79 per cent) and ST (72 per cent).

Table 5.8 *Current attendance rate among age 6 to 21 years by socio-religious groups, Assam,* 2004-05 to 2009-10

Social group	*2004-05*		*2009-10*	
	Population share	*Attendance rate*	*Population share*	*Attendance rate*
		Assam		
Muslim	30	69	26	68
ST	18	76	16	70
SC	10	77	12	76
OBC	19	76	25	83
General	23	78	21	77
All	**100**	**74**	**100**	**76**
		Western Assam		
Muslim	37	68	33	68
ST	18	80	14	72
SC	8	85	12	79
OBC	15	69	22	88
General	22	77	19	82
All	**100**	**73**	**100**	**78**
		BTAD		
Muslim	-	-	16	65
ST	-	-	34	76
SC	-	-	15	89
OBC	-	-	17	93
General	-	-	18	78
All	**-**	**-**	**100**	**85**

Source: Authors' calculation from NSSO's 61st and 66th round surveys on employment and unemployment

Like in both whole Assam and western Assam, school attendance rate for Muslim children with 65 per cent was the lowest in four district of BTAD while it was the highest among the OBC children (93 per cent) followed by SC (89 per cent), General (78 per cent) and ST (76 per cent). Thus Muslim children were much behind the other children in terms of attending school in all the categories. The ST children also lag behind the children of the other groups based on school attendance.

5.2.5 *Horizontal education inequality*

Table 5.9 depicts horizontal education inequalities for all districts categories. It is seen in the table that the level of horizontal education inequality was the highest with respect to average year of schooling followed by current attendance rate and literacy rates in all district categories both in 2004-05 and 2009-10. In whole Assam, GGini value as measured based on literacy rate was 0.13 in 2004-05 while it was 0.14 in 2009-10. In western Assam on the other hand it was 0.24 in 2004-05 and it fell to 0.18 in 2009-10. The level of horizontal inequalities based on literacy rate in western Assam was therefore relatively higher than that of Assam. The GGini value for BTAD was as high as 0.24 in 2009-10. Level of horizontal education inequality was therefore relatively higher in BTAD compared to both whole Assam and western Assam.

Table 5.9 *Horizontal education inequalities measured by population weighted Group Gini*

Indicator	*2004-05*		*2009-10*		
	Assam	*W. Assam*	*Assam*	*W. Assam*	*BTAD*
Literacy rates	0.13***	0.24***	0.14***	0.18***	0.24**
Average year of schooling	0.50***	0.58***	0.33***	0.41***	0.39***
Current Attendance rate	0.13***	0.24***	0.21***	0.29***	0.36***

Source: Authors' calculation from the unit level data of NSSO's 61st and 66th round surveys on Employment and Unemployment

Horizontal education inequality based on average year of schooling was 0.50 in Assam compared to 0.58 in western Assam in 2004-05. These inequalities fell to 0.33 and 0.41 in whole Assam and western Assam respectively in 2009-10. On the other hand in four districts of BTAD, inequality based on this indicator was 0.39. HEI in BTAD was therefore relatively higher than the GGni values of Assam while lower than western Assam. Horizontal inequality based on average year of schooling was always higher in western Assam when compare to the level of inequality for whole Assam.

The GGini value as measured by current attendance rate for different socio-religious groups was 0.13 in Assam compared to 0.24 in western Assam in 2004-05. These values were 0.21 in whole Assam while 0.29 and 0.36 in western Assam and BTAD respectively in 2009-10. The horizontal education inequality based on current attendance rate is also higher in BTAD when compared to Assam and western Assam.

Thus the level of horizontal educational inequality based on all indicators of educational attainments was higher in the western Assam compare to Assam. In BTAD, level of horizontal education inequalities based on literacy rate and current attendance rate was higher than that of both Assam and western Assam. But, it was based on average years of education was higher than Assam while lower compare to western Assam.

One way analysis of variance shows that the inequality across the socio-religious groups with regard to literacy rate was statistically significant at $p<0.01$ level in both whole Assam and western Assam while it was significant at the level of $p<0.05$ in four district of BTAD (see table A5.6). The variances among the socio-religious groups based on both the average year of schooling and current attendance rate were statistically significant at the level of $p<0.01$ in all the districts categories (see table A5.7 and table A5.8).

Case study from Kokrajhar

Based on educational attainments by the ethno-religious groups in the study villages as discussed in chapter 4, we measured horizontal education inequalities for both the villages. In revenue village Hasrawbari-II, HEIs was the highest with regard to average year of educational attainment (0.98) followed by literacy rates (0.52) and current attendance rate (0.49) (see table 5.10). However in revenue village Molandubi it was highest with regard to current attendance rate (0.19) followed by average year of schooling (0.10) and literacy rate (0.05). It is seen in the table that the levels of horizontal inequalities in conflict affected

revenue Hasrawbari-II based on all indicators of educational attainments were relatively higher than that of Molandubi.

Table 5.10 *Horizontal education inequalities based on Group Gini, study villages*

Village	*Literacy rate*	*Average years of schooling*	*Currently attending*
Hasrawbari-II	0.52**	0.98*	0.33
Molandubi	0.05	0.10	0.19

Source: Survey data, 2015

It is also worth noting that the horizontal inequalities in respect of average year of educational attainments in the village Hasrawbari-II was found statistically significant at the level of $P<0.01$ while those based on both literacy rate and current attendance rate were statistically significant at $p<0.05$ (see table A5.9). On the other hand the groups inequalities based on all indicators of educational achievements across ethno-religious groups in the revenue village Molandubi were not statistically significant.

5.3 *Conclusion*

HIs as measured by population weighted group Gini based on NSSO unit level data shows that there are significant levels of horizontal inequalities in both the economic and education components. Between 2004-05 and 2009-10, the levels of HI with regard to consumption expenditure and employment status have seen a rise. Based on the district categories we see high levels of horizontal economic inequality in western Assam compared to the state as a whole. A one point analysis in 2009-10 showed that horizontal economic inequality by occupation category was the highest in BTAD than in western Assam and Assam. There is thus an implication of a more unequal distribution of occupations among the socio-religious groups of population in BTAD than the rest of Assam.

Level of horizontal education inequality was the highest with respect to average year of schooling followed by current attendance rate and literacy rates in Assam. The horizontal economic and education inequalities in western Assam were relatively higher when

compared to the whole of Assam. While measuring horizontal education inequalities for study villages, we found that the levels of horizontal inequality in Hasrawbari-II were relatively higher than that of the village Molandubi. The village estimates showed a high level of statistical significance.

Chapter-6

Effects of political unrest on educational outcomes: A cross sectional analysis

We have various country examples where conflict situations have created loss of educational opportunities for the school going age population. Conflict situations have created inequalities in educational outcomes between gender and regions in Tajikistan (Shemyakina, 2011). Similarly, Guatemala's 36 years long conflicts adversely affected educational attainments of the most disadvantaged rural Mayan school age children and aggravated inequality in educational attainments between the Mayan and Non-Mayan groups of population (Chamarbagwala and Moran, 2011). Political conflicts therefore seem to reinforce existing inequality in socio-economic positions between groups (such as ethno-religious, gender or region).

This chapter examines the consequences of conflicts on schooling outcomes in conflict affected and not affected villages of BTAD. Exposure to conflicts varies with respect to different cohorts based on year of birth and place of residence. The effects of conflicts on socio-economic outcomes of people therefore may be different given such different conflict exposed cohorts. Such differences in effects can create or intensify inter-generational inequalities between the groups of population by limiting access to socio-economic opportunities for specific groups.

Section 6.1 gives a background of the Bodo-Muslim conflict that erupted in the study villages in 2012.Section 6.2 discusses the identification and specification of the econometric model for estimating effects of conflict on schooling outcomes followed by description of explanatory variables in section 6.3. Section 6.4 of this chapter analyses the results of the econometric model and section 6.5 concludes.

6.1 *The effect of Bodo-Muslim conflict in the study villages*

The group based conflicts in BTAD and its surrounding districts are a recurrent phenomenon. The Bodo-Muslim conflict is the most recurrent one. The most recent Bodo-Muslim conflict erupted in July 2012 following the attack on two workers of All Bodoland Minority Students' Union (ABMSU) on 22nd July, 2012 at Amguri village of Kokrajhar (Niomiya Barta, 2012). Some unidentified miscreants shot the workers and both of them received bullet injuries. Next evening, suspecting involvement of members of the former Bodo Liberation Tigers (BLT) some unidentified miscreants attacked four members of the former BLT Welfare Association that led them to death at Jaipur just 2 kilometers away from Kokjrajhar, the capital city of BTAD. Subsequently the conflict spread to the whole of BTAD and its neighbouring districts (refer section 3.5.1 of chapter 3). This conflict severely affected revenue village Hasrawbari-II. It claimed lives of two persons besides destroying property and dwellings of many households in the village. As already discussed in chapter 4 (page 83) the village consists of four ethno-religious groups. During the conflicts all the groups left the village. Muslim group returned to the village after 6 months. Since their houses and furniture were totally destroyed, apart from a lingering sense of severe insecurity, they stayed together in the campus of the government primary school for about six months. After receiving a financial assistance of Rs 25,000 (rupees twenty five thousand only) per household from the state government they reconstructed or revived their houses and started to leave the school. During this period classes were carried out in a chaotic environment. The Bodo on the other hand could return to their homes after 12 months. Rajbangsi and Bengali (H) also left the village, but they returned home after a few days. Neither the household dwellings of these groups were destroyed nor did they lose assets and property.

Conflict therefore through destruction of private properties and forced displacement resulted in severe loss of means of livelihood; and created transitory poverty in the village.

Distribution of the households based upon primary occupation in the village indicates that majority of them depend on manual works either in agricultural or nonagricultural for their livelihood (refer page 85 of chapter 4). It is noteworthy that many of the agricultural households had operational holdings of land. That is why they were largely dependent on share cropping. They informed that land leased-in by them for cultivation was mostly owned by the Bodo households belong to adjoining revenue villages of Panowari and Malaguri. But many of these households had lost their means of cultivation as they had lost bull ox and cows which they used for cultivation. It was also informed that Bodo households did not extend their land for share cropping to Muslim since the eruption of a conflict situation. Therefore lease agreement between the Bodo and Muslim did not re-appear in the village after conflict.

6.2 *Identification and specification of econometric model*

Besides a deep sense of insecurity, conflict reduced physical accessibility of schooling infrastructure and financial resources in the village. Therefore the conflict might have serious negative consequences on schooling outcomes. Like in other conflict affected regions, school age children during or post conflict days may receive lower levels and poor quality of education in the village.

Empirical strategy 1: completion of mandatory schooling

If the conflict caused a serious setback in schooling, the conflict exposed younger cohort should receive relatively lower levels of education than the older cohort who did not expose conflict. Moreover, differences in educational attainment between the conflict exposed and not exposed cohorts should be larger in conflict affected village compare to not affected village. The conflict exposure therefore varies with respect to place of residence and year of birth of the cohorts. Difference-in-differences estimator is identified as fit to study the effects of conflicts given the varied conflict exposed cohorts. It systematically captures

variation in educational attainments of both across the cohorts and places of residence (Merrouche, 2011). Many economists like Chamarbagwala and Moran (2011), Merrouche, (2011), Shemyakina (2011), and Maio and Nandi (2013) followed this method to study the economic cost of conflicts. Similarly, Duflo (2001) based on this method studied the impact of the large school construction programme launched by Government of Indonesia on educational attainment and wage earning.

We compare eight grades schooling completion between the older cohort and younger cohort who were school going age during or post conflict days. The older cohort includes those who had opportunity to complete these grades before eruption of the conflict. Estimation of difference-in-differences is based on assumption that if there were not ethnic conflict, grades eight completion rate of the younger cohort would be same or more compared to their older cohort. Difference-in-differences estimator reads as follow:

$$SC_{ijk} = \alpha_{1j} + \beta_{1k} + (p_j k_i)\, y_1 + \varepsilon_{ijk} \qquad (1)$$

Here the dependent variable SC_{ijk} is binary, equal to one if the individual completed eight grades of schooling, and zero otherwise. The subscripts of dependent variable stand for individual i^{th} of age k^{th} residing in village j^{th}. k_i is dummy variable indicating whether individual i belonging to conflict exposed cohort(1) or older cohort (0). P_j is the intensity of conflicts in the residence of village as measured by damaged of household dwelling, loss of livestock and other assets, and displacement. α_{1j} is the fixed effect for individual's place of residence during schooling, β_{1k} is fixed effect for birth of cohort and ε_{ijk} stand for error terms. Their inclusion allows us to control for unobserved variables such as quality of schools, characteristics of the households of each individual and others.

In Assam, schooling generally begins at six years of age and ends eight grades of schooling at age 14 years. Similarly in both the villages, all the children in age 14 to 19 years were

found began their schooling at six years of age or before. It is also important to note that as per the guideline of Sarva Shiksha Abhiyan Mission, children in compulsory education levels cannot be retained in the same grade though s/he could not obtain qualifying marks in examination that came into effective since 2001. The schools must promote students who could not obtain qualifying marks after giving remedial course within three months from the date of result declaration. Therefore it seems, there is absence of repetition or overage age enrolment up to grade eight levels in the villages; and they are supposed to complete eight grades at 14 years of age.

Our treatment group is younger cohort, school going age during or post conflict days. It includes all individuals of age 14 to 16 years. An individual who is 14 years on date of survey is supposed to complete eight years of schooling in academic year of 2014 if s/he could continue schooling during the post conflict days. Again a person age 16 year is supposed to complete these grades at the end of academic year when conflict occurred in the village i.e. December, 2012. The control cohort on other hand includes two groups. First, older cohort includes individuals of age 17 to 19 years who had opportunity to complete these grades in academic year of 2011 i.e. prior to conflict eruption. The next group includes individual age 14 to 16 years who are residence of not affected village.

Empirical strategy 2: Current attendance of school going children

In addition, we attempt to measure the impact of conflict intensity on school attendance of children during or post conflict days. Currently not attending category does not include the children who are not attending due to illness, vacation and waiting their result after completion of particular course. Thus by currently not attending, we mean those who have dropped from schooling. Conflict intensity is measured by damage of household dwelling and loss of properties in the study villages. Therefore identification of the main parameter is the effect of dwelling damaged and loss of property on probability of school attendance.

The underlying assumption is that damage of household dwelling and loss of property is the probable exogenous to school attendance. Dependent variable is binary indicating one if individual is currently attending, and zero otherwise. Chamarbagwala and Moran (2011) say that the logit or probit model can be used for measuring such conflicts' effect. Both the logit and probit models provide similar results. There is no major theoretical justification for preferring one over another (Green, 2003, Gujarati and Sangeetha, 2007). Maio and Nandi (2011) in their study of the effect of Israeli-Palestinian conflict on child labour and school attendance adopted probit regression. Following them we use probit model for studying the effect of conflict on current attendance by children age 6 to 21 years as follow.

$$SC_{ijk} = \alpha_{1j} + \beta_{1k} Z_{1jt} + X_{ijt} \Phi_{1k} + village + year + \varepsilon_{ijk} \qquad (2)$$

Where outcome variable SC_{ijk} is binary, equal to one if child is attending educational institution, and zero otherwise. Subscripts i, j and k indicate i^{th} individual of k^{th} age who is residence of village j^{th} respectively. Damage of household dwelling and loss of necessary assets during the conflict are indicated by Z_{1jt} which is our treatment variable. X_{ijt} is a vector comprising a set of control variables which includes characteristics of the sample uncorrelated with the treatment variable. These variables are parents' education, operational holding of land, land owned, age and sex of children, distance of institution from residence place, ethnicity, and occupation of the households. $\alpha_1$is constant while ε_{ijk} is an error term. Village and year is the village and year fixed effects respectively.

Children in the study villages usually attend primary school when they are 6 to 13 years, secondary between 14 to 15 years and; higher secondary and degree between 16 to 21 years. If the ethnic conflicts would not have affected schooling, people between ages 6 to 21 years old would continue their school attendance. However there may have other factors which determine school attendance of children.

Village dummy: Revenue village Hasrawbari-II is affected by ethnic conflict in 1996 as well in 2012. In 2012 conflict, houses and properties were damaged or destroyed and also people were forced to displace from the village. However, revenue village Molandubi could avoid both the conflicts. The households of this village reported that although women and children of the village stayed other neighboring villages at night for about a week during the conflict, male population stayed together and guarded their own village. Thus the households of this village had neither lost any asset or property nor displaced. We take village dummy as one for revenue village Hasrawbari-II, and zero for Molandubi village.

Damaged of household dwelling: Although the revenue village Hasrawbari-II is worst affected, not all the households were equally affected. Some households reported that their houses and assets were destroyed or damaged while some other informed that they had lost livestock like bull ox, cow and other. There were also households reporting neither their houses nor assets were destroyed nor they had lost livestock. Therefore the amount of effects by the conflict varies across the households within the village. In order to study the effect of conflict on school attendance we take household dummy one for households that lost either assets including bull ox and cow or houses were damaged and zero if households neither lost assets nor houses were damaged.

Gender: Gender also plays important role in educational outcomes and school attendance. The parents show relatively less interest in daughters' education on account of their relatively less expectation of returns to schooling girl. Therefore parent not interested is shown as one of primary reasons for majority of female children being never enrolled and out of schooling i.e. dropout or discontinue schooling (NSSO, 2010). Besides, fear due to insecurity in conflict situation is relatively high for girl children (Chamarbagwala and Moran, 2011). In order to capture possible effects of this differential preference of the parents over

schooling their children we took dummy for sex indicating one for male children and zero otherwise.

Age: Age of children is also considered as important factor influencing school attendance. Generally, the older children are supposed to support the households in various activities particularly in the conflict situations. Moreover, expenditure for schooling children also increases with succeeding grades and thus often older children are more likely to be withdrawn from schooling if their required expenditure cannot be borne by the households. They may also discontinue attending school after completion of desired levels. Therefore, dropout rate or discontinuation of schooling rises rapidly among children after 15 years of age (NSSO, 2010)

Operational holding of land: Operational holding of land is measured in terms of hectare. It refers to the land that is used for cultivation which may either be households' owned land, mortgaged-in or leased-in. Thus, it excludes the homestead land. It is used as OLH in the model.

Land owned: Land owned includes both the homestead and operational holding of land owned by the household. It includes either mortgaged-out or lease-out land also. It is measured in hectare and indicated as LWND in the model.

Ethnicity: All the ethno-religious groups in the study villages were not commonly affected during the conflict. Bodo and Muslim were the worst affected groups. Therefore impact of conflict on school attendance may be different between the groups. Thus we have considered the ethnicity as important variable. Dummy for ethnicity is one if sample is belonging to Muslim and zero otherwise. Similar technique is used for other ethnic dummy. We used ethnic1 for Bodo, ethnic2 for Muslim, ethnic 3 for Bengali and ehtnic4 for Rabha

ethnic groups in the model. The Rajbangsi are on the other hand treated as reference group in the model.

Distance of educational institution: Distance of educational institution from the place of residence is also important factor considered in the model. If the institution situated at a place where the students have to travel beyond convenient walking distance, they have to rely on other means of travelling like bicycle, bus or other public vehicles involving traveling costs. The distance we considered is the institution nearest from the village measured in kilometer. For the respondents who are not currently attending, distance of institution where they would attend if they continued their school attendance based on grade completion and age is taken into account. However for currently attending children the distance of institution where they are attending is taken into consideration.

Table 6.1 *Explanatory variables used in the probit model*

Serial No	*Variable*	*Descriptions*
1.	HDMG	Household dwellings damaged, (1=if damaged or lost and 0= otherwise)
2.	Village	Hasrawbari-II = 1 and Molandubi =0
3.	Sex	1= if male; 0= female
4.	Age	year of individuals
5.	Ethnic1	(1=if respondent is Bodo and 0= otherwise)
6.	Ethnic2	(1=if religion of respondent is Muslim and 0= otherwise)
7.	Ethnic3	(1=if respondent is Bengali and 0= otherwise)
8.	Ethnic4	(1=if respondent is Rabha and 0= otherwise)
9.	OLH	Operational holding of land measured in hectare
10.	LWND	Land owned measured in hectare
11.	FYRS	Father's year of schooling
12.	MYRS	Mother's year of schooling
13.	DEIFR	Distance of educational institution from the place of residence in kilometer
14.	Occupation1	Salaried households
15.	Occupation2	Petty business
16.	Occupation3	Workers in transport including driver
17.	Occupation4	Laboring out in agriculture
18.	Occupation5	Laboring out in non-agriculture

Note: Dummy of current attendance for age 6 to 21 years is our dependent variable (1 if attending; and 0 otherwise)
Variable DDMG is not taken into account for the village Molandubi as none of the household is damaged during conflict.

Education level of parents: Year of schooling of both mother and father of an individual age 6 to 21 years has also been taken as important explanatory variable. Education and awareness of parents are important in decision of sending children in schools and their learning achievements. There is a positive relation between levels of parents' education and children's schooling (Maio and Nandi, 2013).

Occupation of the household: The main occupation of the households is determined based on the sources of income of the households. The occupation or source of income which was identified or perceived by the respondents as major source of their household income is considered as the occupation of households. The economic activities with which the workers of the study villages engaged are broadly classified into cultivator, salaried household, laboring out in agriculture, laboring out in non-agriculture, petty business, and workers in transport including transport driver. In the model, salaried households are identified as occuaption1, petty business as occuaption2; workers in transport sector as occuaption3, laboring out in agriculture as occupation4 and the laboring out in non-agriculture as occupation5. Cultivator households are treated as reference households in the model.

6.4 *Results and discussion*

6.4.1 *Effects on completion of mandatory schooling grade*

The table 6.2 presents results of difference-in-differences estimation explained in equation (1). Our regression estimations are interested in coefficient on the interaction terms. First we estimated coefficient on interaction between conflict exposed cohort (age 14 to 16 years) and household dwelling damaged and or loss of assets (HDMG) dummy. Secondly, we used the village dummy i.e. conflict activities in the village to construct interaction with conflict exposed cohort and places of residence.

Table 6.2 *Probability of completing grades eights of schooling, study villages*

	Hasrawbari-II	*Molandubi*
HDMG	-0.216**	
	(0.096)	
Conflict activity		-0.66***
		(0.065)
Treated cohort	-0.32***	0.10
	(0.091)	(0.69)
_cons	0.77***	1.00***
	(0.095)	(1.960)
No. observations	105	70
R-squared	0.13	0.42
Prob > F	0.000	0.000

*Columns represent OLS coefficient. Robust standard errors are in parentheses. Reference group in first column is cohort age 17-19 years while that of second column is cohort age 14-16 of not affected village. Inference *** p<0.01, ** p<0.05*

The coefficient on the interaction term between HDMG and conflict exposed cohort was estimated to be negative and statistically significant at 5 per cent level. It implies that the household dwelling damage or loss of assets led to a significant fall in probability of eight grade completion of the conflict exposed cohort. The estimated coefficient on the interaction term between conflict exposed cohort and the places of their residence has also turned out to be negative and statistically significant at p<0.001. It indicates that the conflict exposed cohort in the conflict affected village Hasrawbari-II was 66 per cent (significant at 1 per cent level) less likely to complete mandatory schooling grade eight compare to their same cohort of the village which was not affected by the conflict. While the coefficient on conflict exposed cohort is estimated to be negative and significant in the conflict affected village, it is positive and insignificant in the village not affected by the conflict. These indicate that the conflict exposed cohort of the conflict affected village Hasrawbari-II was 32 per cent (significant at 1 per cent level) less likely to complete eight grades when compare to their older cohort. In the village not affected by the conflict on the other hand, the younger cohort had completed eight grades by 10 per cent more compare to their older cohort.

Educational outcomes of the younger conflict exposed cohort in revenue Hasrawbari-II were therefore significantly lower compare to their older cohort. In contrast, as expected, higher percentage of younger cohort could complete eight grades compared to their older counterparts in not affected village. Therefore, percentage of conflict exposed cohort not completing mandatory schooling was significantly lower than their older cohort of same village as well as their same age of the village which was not affected by the conflict.

Table 6.3 *Probability of completing grades eights of schooling, revenue village Hasrawbari-II*

	Bodo and Muslim	*Bengali and Rajbangsi*
HDMG	-0.20*	
	(0.105)	
Treated cohort	-0.37***	-0.20
	(0.095)	(0.69)
_cons	0.77***	.60***
	(0.106)	(0.24)
No. observations	95	10
R-squared	0.15	0.05
Prob > F	0.000	0.40

*Columns represent OLS coefficient. Robust standard errors are in parentheses. Reference group in first column is cohort age 17-19 years while that of second column is cohort age 14-16 of not affected village. Inference *** p<0.01, ** p<0.05*

Although the conflict affected educational outcomes of all ethnic groups in conflict affected village, its effect fall relatively more on the ethnic groups who were most affected during the conflict. This is evident from the table 6.3 that the younger conflict exposed cohort belonging to Muslim and Bodo in conflict affected village Hasrawbari-II are 37 per cent (at 1 per cent) less likely to complete mandatory schooling compare to their older cohort. Within this village, the conflict exposed cohort belong to Rajbangsi and Bengali (H) groups also 20 per cent less likely to complete mandatory schooling grades compare to their older cohort although not statistically significant. Thus educational outcomes of Muslim and Bodo the worst affected groups during the conflict were found to be the worst in the conflict affected village.

6.4.2 *Effects of conflict on school attendance*

Probit regression analysis has been carried out separately for both the villages to identify the factors influencing school attendance of children. The table 6.4 presents results of the probit model for revenue village Hasrawbari-II as described in equation 2. We have estimated the effect of household dwelling damage or and loss of assets on current attendance of children controlling for their age. It is clear from the table that the model is good fit as Likelihood Ratio Test (L-R Chi^2) is found to be highly significant. The descriptive statistics for the explanatory variables have also been calculated[11]. While the overall pseudo R^2 has turned out to be 0.19, the Adjusted Count R^2 has appeared to be 0.82 and the Cragg and Uhler's R^2 has turned out to be 0.29.

Table 6.4 *Effect of conflicts on school attendance by children age 6 to 21 years, Hasrawbari-II,* 2015

Currently attending	*Coef.*	*Std. Err.*	*dy/dx*	*Std. Err.*
HDMG	-0.672***	0.179	-0.209	0.049
Age	-0.135***	0.020	-0.043	0.005
_cons	2.812***	0.325		
Log likelihood	*-140.08*			
LR chi²(2)	*66.31****			
Pseudo R^2	*0.19*			
Count R2:	*0.82*			
Cragg & Uhler's R2	*0.29*			
No. of observation	*281*			

***, ** and * stand for significant at 1 per cent, 5 per cent and 10 per cent levels respectively

The coefficient of our treatment variable is found to be -0.672 and significant at 1 per cent level. It indicates that rise in one unit of household being damaged or lost assets results in fall in odds of attending (versus not attending) by 0.672 points. It is noteworthy that unlike in linear regression, the coefficient in the probit model cannot be interpreted as the amount of change in dependent variable for a one unit change in independent variable given unknown scale or unit of measurement of dependent variable (Aldrish and Cnudde, 1975). Therefore marginal effects are widely used in explaining the effects of change in explanatory

[11]Please see table A6.1 for descriptive statistics

variables on outcome variable. The marginal effect is approximation of how much the dependent variable is expected to change for a unit change in an explanatory variable (Buis, 2016). Marginal effect was estimated to be 0.209 implying that rise in one household being destroyed or set on fire or lost necessary asset results in fall in probability of school attendance by 0.20 to 0.21 points other thing remaining the same.

We have checked the robustness of our estimation by including parents' education, distance of institution from the place of residence, sex, operational land holding, owned land, ethnicity, and occupation of the households as additional control variables (table 6.5). The Variance Inflation Factor (VIF) values used to check multi-collinearity problem (Table A6.5) shows absence of any multi-collinearity problem in the model. The result shows that the coefficient of our treatment variable remained negative and statistically significant even after adding control variables. Among the control variables coefficient for age of children and occupation1 were found to be statistically significant. Coefficient of the former is found to be negative while that of later is positive. The negative coefficient of the age of children indicates the significant negative influence of age on school attendance of a child. It means when age of a child gets rise, his or her probability of attending school falls. In other words, older children are more likely to be withdrawn from the schooling. The partial probability of the age is estimated to be 0.039 indicating increase in probability of being out of school by 3 to 4 per cent with a rise in age by one year anything else remaining the same. The positive coefficient of the Occupation1 (salaried households) indicates that the school attendance rate of children belong to the salaried household is significantly higher than children belonging to reference households i.e. cultivator households.

Coefficient of the distance of institution from the place of residence was also found to be negative. It signifies that probability of school attending of children falls when the distance of institution from place of residence rises. The marginal effect is estimated to be -0.07,

referring fall in children's school attendance by 7 per cent when there is a rise in distance of institution from the village by one kilometer anything else remaining the same.

Table 6.5 *Effect of conflicts on school attendance of children age 6 to 21 years, Hasrawbari-II,* 2015

Currently attending	*Coef.*	*Std. Err.*	*dx/dy*	*Std. Err.*
HDMG	-0.589***	0.216	-0.175	0.059
Age	-0.132***	0.030	-0.039	0.008
Sex	-0.155	0.185	-0.032	0.049
FYRS	0.018	0.034	0.006	0.009
MYRS	0.018	0.038	0.004	0.010
DIFR	-0.024	0.044	-0.008	0.013
Ethnic1	-0.063	0.691	-0.016	0.187
Ethnic2	-0.190	0.355	-0.100	0.098
Ethnic3	0.401	0.587	0.082	0.154
OLH	0.099	0.076	0.029	0.019
LWN	0.179	0.122	0.028	0.024
Occupation1	0.936**	0.456	0.151	0.093
Occupation2	0.188	0.311	0.038	0.084
Occupation3	0.172	0.502	-0.009	0.139
Occupation4	-0.012	0.301	-0.019	0.082
Occupation5	0.023	0.304	-0.020	0.083
_cons	2.600	0.538		
Log likelihood	*172.24*			
LR chi2(9)	*86.93****			
McFadden's Adj R2:	*0.154*			
Pseudo R2	*0.252*			
Cragg & Uhler's R2:	*0.377*			
Adj Count R2:	*0.400*			
No. of observations	*281*			

Note: Probit model regression results. ***, ** and * stand for significant at 1%, 5% and 10% level respectively

Salaried-1, Business-2, Driver-3, Agricultural labour-4 other labor-5, Bodo-1 Muslim-2, Bengali-3

Parents' educational attainments as measured by year of schooling of both father and mother were found to have positive influence on school attendance of their siblings. This means that the siblings of the educated parents are more likely to attend school. Marginal effects for father and mother education were estimated to be 0.007 and 0.002 respectively. These signify that rise in one year of father's schooling leads to rise in probability of school attendance of his child by 0.006 points and that of mother education results in rise in same of her sibling by 0.004 points.

The coefficients of both OHL and LWND were also found to be positive but statistically insignificant. The positive coefficient of land holding implies that land ownership has positive influence on the decision of households on educating their children. In other words the children of the landless households are more likely to drop the schooling. This suggests that the landless households which had lost livelihood means during the conflict could not revive the economic conditions. The conflict ridden poverty leads the households to withdraw their children from schooling.

The negative coefficient of the sex indicates that the probability of male children being out of school is relatively higher than their female counterparts. The reason for this finding in our study may be that the older male children are more likely to be withdrawn from the schooling and engaged in economic activities outside the village given the scarcity of job opportunities in their local areas. The households which had lost means of livelihood during the conflicts are in desperate need of help from their children for survival. In other words, conflict ridden poverty induced the households to withdraw their older children particularly male from schooling and engaged in economic activities.

The coefficients of both ethnic1 and ethnic2 were found to be negative while that of the ethnic3 was positive. The negative coefficients of Ethnic1 and Etnic2 indicate that the current attendance rates of both the groups (Bodo and Muslim) were relatively lower than the reference children i.e. Rajbangsi children in the village. On the other hand positive coefficient of the Ethnic3 indicates that the current attendance rate of Bengali children was better compare to reference children in Hasrawbari-II village. Thus the school attendance of Bengali children was the highest in the village followed by Rajbangsi children. School attendance of the most conflict affected groups Bodo and Muslim were relatively lower than the children belong to other groups in the village. The coefficient of the occupation of the households was found to be positive for all the occupation except the occupation4. This

reveals that school attendance of children of the households dependent on salaried works, petty business, transport sector, and laboring out in non-agriculture sector was found to be better off the children of the cultivator households while that of the children belong to laboring out in agriculture was the worst in the village.

The table 5.7 presents results of the probit model regression for revenue village Molandubi. The model is good fit as indicated by highly significant value of Likelihood-Ratio Test (LR Chi^2 Test= 84.87***). Absence of any multi-linearity problem among explanatory variables has been shown by values of the variance inflation factor (VIF)[12]. Overall Pseudo R^2 has turned out to be 0.88, Adj Count R^2 is 0.89 and Cragg & Uhler's R^2 has turned out to be 0.92. Among all the explanatory variables the age of children and distance of educational institution from the place of residences had been found to have statistically significant influence on school attendance. In other words probability of school attendance of children falls with rise in their age. The partial probability is estimated to be -0.017. It indicates that a rise in age of children by one year results in fall in probability of school attendance by 1.7 percentage points all other things remaining the same.

In this village problem of non-attendance among the children in younger age was not found. But most of older children were found discontinued their access to education after completion of secondary and higher secondary levels. One of the primary reasons for most of such older children discontinuing access to education is absence of institution for higher education nearer village. Pupils in this village have to travel around 25 kilometer for higher education. Most of them informed that since there is hardly travelling facilities from the village, it is very difficult for them to travel everyday 25 kilometer for accessing higher education. If the economic conditions of the households are not in a position to support lodging, children in this village have to discontinue access to education after completing

[12] Please see table A6.6

higher secondary level. This is indicated by negative and statistically significant ($p<0.05$) coefficient for the distance of institution from the place of residence. The estimated marginal effect of distance of institution form the place of residence was found to be -0.021. This indicates that the probability of dropping from schooling increases by 2.1 percentage points with increase in distance of institution from the village by one kilometer other things remaining the same.

The coefficients of educational level of parents were also found to be positive but they are statistically insignificant. The estimated marginal effects of educational level of both father and mother were 0.018. These indicate that every additional one year of schooling of both mother and father results in rise in probability of school attendance of their sibling by 1 to 2 per cent anything else remaining the same.

The coefficient of the OLH was found to be negative while that of the LWND was positive. However, both are statistically insignificant. The negative coefficient of operational holding of land (OLH) indicates that the school attendance of children fall with rise in operational holding of land. In this village, all the salaried and the business households were found to have large size of cultivated land. But they do not cultivate their own. They lease out their land for cultivation to the households which do not have their own operational holding of land or the households having small size of operational holding of land. Therefore the households which are shown with operational holding of land in this village are landless households in real sense. Their economic conditions are not as good as those of the salaried and business households. Most of cultivator households were found that they could not afford the schooling expenditure of children particularly for older children who are supposed to travel about 25 kilometers. Thus the older children of such households were found more likely to be withdrawn from schooling and engaged in agricultural and other economic activities. The positive coefficient of LWND on the other hand implies that the

school attendance rate of children gets rises with every additional hectare of owned land other things remaining the same.

Table 6.6 *Probit regression for school attendance of children age 6 to 21 years, Molandubi,* 2015

Currently attending	*Coef.*	*Std. Err.*	*dy/dx*	*Std. Err.*
Age	-0.933**	0.407	-0.017	0.010
Sex	1.591	2.043	0.050	0.059
FYRS	0.604	0.421	0.018	0.011
MYRS	0.429	0.286	0.018	0.011
DIFR	-0.288**	0.283	-0.021	0.006
Ethnic1	0.960	4.330	0.960	0.117
Ethnic2	2.014	2.740	0.028	0.763
Ethnic4	2.149	3.222	0.001	0.801
OLH	-5.258	3.629	-0.072	0.043
LWND	3.164	2.768	0.034	0.033
Occupation1	3.591	6.540	0.037	0.126
Occupation2	2.835	3.500	0.010	0.099
Occupation4	-1.674	2.262	-0.060	0.107
_cons	23.923**	11.630		
Log likelihood	*-48.196*			
LR chi2(8)	*84.87****			
Pseudo R2	*0.880*			
McFadden's Adj R2:	*0.591*			
Cragg & Uhler's R2:	*0.925*			
Adj Count R2:	*0.89*			
No. of observations	*98*			

Note: ***, ** and * stand for significant at 1 per cent, 5 per cent and 10 per cent level respectively

The coefficients of the variable Ethnic1, Ethnic2, and Ethnic4 were also found to be positive. This implies that the current attendance rate of children of all ethno-religious groups (Bodo, Muslim and Rabha) were relatively better off the reference children (Rajbangsi children) in revenue village Molandubi. Unlike in the revenue village Hasrawbari-II, coefficient of variable sex was found to be positive implying relative advantage of male children in school attendance compare to their female counterparts. Besides, the coefficients of occupation1 and occupation2 were found to be positive while that of occupation4 was negative. The positive coefficients of occupation1 and occupation2 indicate that the school

attendance rates of children belong to salaried and petty business households were higher compare to the children of cultivator households. On the other hand school attendance of children of the households which depend mainly on manual labour in non-agriculture sector was found to be the worst in revenue village Molandubi.

Table 6.7 *Effect of conflicts on school attendance by children aged 6 to 21 years, study villages,* 2015

Currently attending	*Coef.*	*Std. Err.*	*dy/dx*	*Std. Err.*
HDMG	-0.792***	0.157	-0.219	0.040
Age	-0.156***	0.019	-0.044	0.004
_cons	3.228***	0.309		
Log likelihood	*-219.72*			
LR chi²(2)	*102.77****			
Pseudo R²	*0.233*			
Adj. Count R2:	*0.346*			
Cragg & Uhler's R2	*0.347*			
No. of observation	*379*			

***, ** and * stand for significant at 1 per cent, 5 per cent and 10 per cent levels respectively

The table 6.7 depicts the estimated result of probit regression for pooled data of study villages. The model has turned out to be good fit as Likelihood Ratio (L-R Ch^2) has been significant at one percent level. The overall pseudo R^2 appears to be 0.23, and both adjusted R^2 and Cragg and Ulher's values have turned out to be 0.35. The estimated coefficient of the HDMG on school attendance by controlling the age of children was found to be negative and statistically significant at 1 per cent level, implying households dwelling damaged and/or loss of necessary assets lead to fall in children's probability of attending educational institution. The partial probability is estimated to be -0.219 which signifies that rise in one household being damaged or lost necessary asset results in fall in probability of school attendance by 21 to 22 per cent other things remaining the same. Thus the household dwelling damaged and or loss of other assets results in significantly high incidence of dropout from schooling.

In order to check out robustness of the results we added control variables in the model (Table 6.8). The values of Variance Inflation Factor (VIF) have shown absence of any multi-collinearity problem among the explanatory variables (Tab A6.3). The results show that the coefficient of damage of household dwellings with school attendance remained negative and statistically significant at one percent level even after adding control variables. This confirms the significant negative impact of loss of property or damaged of household dwelling on probability of school attendance in the study villages. The control variables which have significant influences on school attendance of children are age of children, distance of institution from the place of residence and occupation1. Age of children was found to have negative and statistically significant influence on the decision of households sending their children for schooling. Marginal effect is estimated to be -0.030, indicating an additional rise in age of children results in fall in probability of school attendance by 3 per cent other things remaining the same.

The coefficient for distance of educational institution from the place of residence has also been estimated to be negative and statistically significant at 5 per cent level. The distance of educational institution also therefore affects negatively on school attendance of children. As indicated by estimated marginal effects, the rise in distance by one kilometer leads to rise in probability of being out of school by 1 to 2 per cent.

Coefficient of occupation1 was on the other hand found to have positive and statistically significant influence on children's school attendance. This implies that probability of school attendance rate of children belong to salaried households is significantly higher than the children of all other households. Parents' year of schooling was also found to have positive influence on school attendance of their sibling though statistically insignificant.

Table 6.8 *Effect of conflicts on school attendance of children age 6 to 21 years, study villages,* 2015

Currently attending	*Coef.*	*Std. Err.*	*dy/dx*	*Std. Err.*
HDMG	-0.615***	0.213	-0.181	0.052
Age	-0.114***	0.025	-0.030	0.006
Sex	-0.051	0.170	0.005	0.039
FYRS	0.030	0.031	0.007	0.007
MYRS	0.053	0.034	0.010	0.008
DIFR	-0.078***	0.023	-0.018	0.005
Ethnic1	0.309	0.448	0.014	0.097
Ethnic2	-0.083	0.288	-0.066	0.065
Ethnic3	0.035	0.671	-0.009	0.165
Ethnic4	0.550	0.659	0.028	0.101
OHL	0.096	0.074	0.027	0.017
LWN	0.076	0.096	0.008	0.018
Occupation1	0.670*	0.406	0.098	0.077
Occupation2	0.001	0.274	0.026	0.062
Occupation3	0.032	0.493	-0.059	0.122
Occupation4	-0.108	0.290	-0.021	0.069
Occupation5	-0.069	0.287	-0.035	0.070
Village	-0.340	0.363	0.026	0.076
_cons	2.857	0.546		
Log likelihood	*-219.72*			
LR chi2(18)	*142.39****			
McFadden's Adj R2:	*0.232*			
Pseudo R2	*0.324*			
Cragg & Uhler's R2:	*0.456*			
Adj Count R2:	*0.376*			
No. of observation	*379*			

The coefficient of the sex was found to be negative indicating relative disadvantage position of the male children in school attendance compare to their female counterparts when the children in both the study villages are taken into consideration. Among the variable of the land ownership, both the OLH and LWND were found to have positive influence on school attendance of children in the study villages. The coefficients for all types of the main occupation of the households other than occupation4 and occupation5 were also found to be positive. Thus school attendance of children belonging to the salaried households, petty business and workers in transport were relatively better than the children of the cultivator

households. On the other hand schooling of children belonging to laboring out both in agriculture and non-agriculture was the worst.

Among the variables for ethnicity, the coefficient for ethnic2 was found to be negative while those of other ethnicity variables were positive. The negative coefficient of ethnic2 indicates that the school attendance rate of Muslim children in the study villages as a whole was relatively lower than the Rajbangsi children. On the other hand the schooling of children belonging to Bodo, Bengali and Rabha was relatively better off Rajbangsi children. Thus when all the children in the study villages are taken into account, school attending of the Muslim children was the worst. The school attendance of the Rajbangsi children was better than Muslim children while their school attendance was found to be worse compare to children belonging to other ethnic groups.

The coefficient of the village dummy was also found to be negative indicating that the school attendance of children in the conflict affected village Hasrawbari-II was relatively lower than that of children in the village which was not affected by the conflicts. The deep rooted poverty created through destruction of private properties and other household assets make the children of the conflict affected village out of schooling and thus the school attendance of this village was comparatively lower than the children of Molandubi village.

6.5 *Conclusion*

Results of both the difference-in-differences and probit regressions have shown the evidences of negative effects of conflict on schooling outcomes. Educational outcomes of the conflict exposed younger cohort were found to be the worst in the conflict affected village. Percentage of the younger conflict exposed cohort in Hasrawbari-II not completing mandatory schooling (grades eight) were found significantly higher than their older cohort as well as their same cohort of village which was not affected by the conflict. Moreover,

educational outcomes of Muslim and Bodo the worst affected groups during conflict were found to be the lowest. In addition, current attendance rates of these groups in conflict affected village were found to be relatively lower than other group. Household dwelling damage and loss of assets during the conflict were found to have resulted in fall in probability of eight grade completion as well as in significantly high incidence of dropout from schooling. This suggests that the loss of financial resources and means of livelihood and subsequent poverty on the one hand and scarcity of job opportunities in the local areas on the other hand led the households to withdraw their older children particularly the male from schooling. This has been shown by the negative coefficients of age and sex with current attendance.

In revenue village Molandubi, problem of non-attendance among younger children was not found. But most of the older children were found to have discontinued education after completion of secondary and higher secondary levels. Absence of institution for higher education nearer village has been shown as one of the primary reasons for discontinuing access to education. If economic conditions of the households are not good enough, children in this village are more likely to discontinue accessing education after completing higher secondary level. This is indicated by negative and statistically significant coefficient for the distance of institution from place of residence. However, overall school attendance rate of children of this village was better than the children of the conflict affected village Hasrawbari-II.

Chapter-7

Summary and conclusion

The thesis has studied the state of primary education in western Assam, one of the most conflicts affected as well as underdeveloped regions of Assam in terms of educational attainments. It also investigated if there is presence of significant horizontal inequalities in economic and social dimensions among the different socio-religious groups of population in western Assam in general and in BTAD in particular. Moreover, it investigates presence of horizontal education inequalities in the conflict affected and not affected villages of BTAD based upon household level cross section data. Attempt is also made to inquire if there is an effect of ethnic conflict induced political unrests upon educational outcomes among the different groups of population in BTAD. Besides the political unrests, the factors that have significant influence on school attendance of children have also been identified in the study villages.

7.1 *Elementary Schooling facilities in western Assam*

Analyzing data from both NSSO and DISE, there seems to rise in number of educational institutions for primary education accessible within convenient walking distance. In Assam, 99 per cent of the households in both rural and urban sectors have access to educational institution for lower primary classes within a distance of less than 2 kilometers. Similarly, for upper primary level 76 per cent of rural households and 97 per cent of urban households have access to educational institutions within that distance. Among the schools imparting primary education government managed schools are predominant. However, its share fell from 95 per cent to 77 per cent between 2005-06 and 2014-15. But, percentage of private schools increased by more than two times (from 5 per cent to 11 per cent) during that period. Besides there were as many as 8034 (12.33 per cent) unrecognized schools imparting primary education in 2014-15.

7.2 *Student enrolment and current attendance*

Proportion of enrolment in government primary schools fell by 17 per cent from 94 per cent in 2005-06 to 77 per cent in 2014-15 in both western Assam and whole Assam. On the other hand enrolment in private schools rose from 5 per cent (0.22 million) to 15 per cent (0.88 million) in Assam during that period. So, there is a rise in participation of private schools in the provision of primary education. In western Assam, proportion of both government schools and enrolment in government managed school was always lower compared to Assam as a whole. Thus, in western Assam larger proportion of children is accessing education either from private or unrecognized schools.

As far as student enrolment in school imparting primary education is concerned, both GER and NER at lower primary level are rising both in Assam and western Assam. It seems that many districts in western Assam have achieved universal enrolment in lower primary level. However, at upper primary level both GER and NER were not satisfactory although they were improving. Still more than 30 per cent of the children in the age group of 11 to 13 years were not enrolled in western Assam. Relatively low enrolment ratio at upper primary level despite universal enrolment at lower primary level implies that many children could not continue their schooling beyond the lower primary level. The incidence of dropout is relatively higher in western Assam as its NER is always lower compared to whole Assam.

Low enrolment at upper primary level reflects larger proportion of the children in the age group of 6 to 14 years who were not currently attending school. The currently not attending rate for western Assam (26 per cent) was higher than the figure for state (19 per cent) and nation (12 per cent) in 2011. All the considered districts in western Assam other than Barpeta and Baksa have currently not attending rate higher than the state average. Besides, incidence of dropout rate remained as serious problem though it is reducing in the recent years. Dropout rate in the state of Assam was higher than that of the nation during the

reference period. But this figure for western Assam was higher than Assam. Thus, relatively larger proportion of the children in western Assam drop from schooling before completion of five years of schooling compared to Assam and India as a whole.

7.3 *Teaching competency and learning outcomes*

Rise in number of teachers in the government primary schools due to various teacher recruitments policies of the government on the one hand and fall in proportion of enrolment in the government primary school on the other hand gives comfortable pupil-teacher ratio. It fell from 29 in 2011-12 to 22 in 2012-13 in Assam as a whole and from 32 to 25 in western Assam. However the state of Assam has a large number of primary schools with single teacher for entire classes. Absolute number of lower primary schools with single teacher remained as high as 1308 in 2014-15. As per recent estimates of DISE, 2014-15 percentage of lower primary schools with single teacher was 8 per cent in western Assam compared to just 3 per cent in Assam. In 2014-15, BTAD districts of Baksa (14 per cent), Chirang (10 per cent), Kokrajhar (16 per cent) and Udalguri (8 per cent) and the districts of western Assam Dhubri (10 per cent), Kamrup (13 per cent), Sonitpur (7 per cent) and Darrang (4 per cent) have higher percentage of lower primary schools with single teacher compared to Assam (3 per cent). Prevalence of large number of single teacher schools in western Assam in general and in BTAD in particular remained as serious constraint in provision of quality education.

There is also deterioration in learning achievements among the children. Majority of children who are going to complete first eight years of schooling were found to be unable to read the text and simple English sentences, and solve arithmetic problems that were taught at lower grades which they successfully completed. Proportion of such children is increasing over the years. Deterioration of learning achievements in rural Assam is much higher

compared to India as a whole. Most of our considered districts in western Assam had larger proportion of such children compared to Assam.

7.4 *Educational attainments in the study villages*

Estimation of educational attainments for revenue village Hasrawbari-II show that the village has 52 per cent of literacy rate against 45 per cent based on census, 2011. Although the literacy rate in Hasrawbari-II has shown an improvement by 7 per cent in 2015, it is much lower than the average literacy rates of district (65 per cent) and state (72 per cent) based on census 2011. In Molandubi, overall literacy rate is found to be 84 per cent compared to 70 per cent in 2011. The mean year of levels of educational completion among age 15 and above was found to be 3.09 in Hasrawbari-II while it was more than double (7.01) in revenue village Molandubi. Similarly, current attendance rate of children age 6 to 14 years was 86 per cent in Hasrawbari-II compared to 99 per cent in Molandubi. Thus people of revenue village Hasrawbari-II is far behind the people of Molandubi in terms of educational attainments.

Across the ethno-religious groups in Hasrawbari-II, educational attainment of Bengali (H) based on all indicators was the highest, while it was the lowest among Muslim. It was also found that the Bodo were ahead of Rajbangsi and Muslim with respect to literacy rate and average year of educational attainments. However, they were at bottom with respect to proportion of currently school attending children. In revenue village Molandubi on the other hand, there is no much variations in educational attainments across the ethno-religious groups. In this village except one Muslim girl and one Rabha boy in the age groups of 6 to 14 years, all children were found attending educational institutions.

7.5 *Socio-economic conditions across the socio-religious groups and their inequalities*

Analysis based on NSSO unit level data shows that economic conditions of BTAD based on MPCE, land possessed, and household occupation was worse compared to both western Assam and Assam. MPCE of BTAD (Rs. 738) was much lower than Assam (Rs.933) and western Assam (Rs. 822) in 2009-10. Across the socio-religious groups, MPCE of Muslim was the lowest in all the categories. MPCE of the ST was also found to be lower than that of other groups in both whole Assam and western Assam. However in BTAD, MPCE of General group happened to be relatively lower than ST and SC. But MPCE of both ST and SC was much lower than their counterparts in both Assam and western Assam. Thus people of all groups could spend very low expenditure on consumption of various goods and services compared to people of rest of the state.

Average extent of land possessed in BTAD was also lower compared to that of Assam. In all the categories, ST households had highest extent of land ownership. Their land ownership along with SC and general groups of population fell while it rose among Muslim in 2009-10. In BTAD, the rival groups ST (mostly Bodo) and Muslim had land ownership just the same and it was the highest among all the groups.

Household classification based on the primary sources of income shows that majority of households belonging to all socio-religious groups depend on agriculture and such households are relatively higher for Muslim and ST. On the other hand proportion of the households depending on other occupation was the highest among General households followed by OBC. Proportion of such households belonging to General and SC groups rose while that of Muslim and OBC fell during the period of 2004-05 to 2009-10. However, proportion of casual labour households for Muslim rose against fall in proportion of such households for all other groups. Thus for Muslim proportion of household which could

spend higher expenditure fell while that which could spend less rose during the period of 2004-05 to 2009-10.

BTAD is not merely economically lagging behind; its educational achievement is far behind the other parts of the state. Its literacy rate (84 per cent) was lower compared to Assam (88 per cent) and western Assam (85 per cent) in 2009-10. Similarly educated person among age 15 and above was estimated to be 18 per cent in BTAD compared to 22 per cent and 19 per cent in 2009-10 in Assam and western Assam respectively. However, school attendance rate of children in the age group of 6 to 21 years was relatively higher in BTAD compared to state as a whole and western Assam.

Across the socio-religious groups, educational attainments among Muslim by all indicators were found to be the lowest in all categories. The educational attainments of SC were also found to be lower than other groups both in Assam and western Assam. In BTAD on the other hand, educational attainment of the SC was the highest both in terms of literacy and level of educational attainments among all the social groups. The ST children also behind the children of the other groups in school attendance and literacy rates, though they were ahead of Muslim children in all categories.

Estimation of horizontal inequalities shows that levels of HIs with regard to consumption expenditure rose both in Assam and western Assam during 2004-05 to 2009-10. Level of HIs in western Assam was relatively higher than that in Assam in both the years. But in BTAD, its level with 0.33 was lower than Assam (0.45) and western Assam (0.47) in 2009-10. Similarly, levels of horizontal inequality in BTAD based on land possessed and self-employed agriculture households (SEAG) were relatively lower than those of other categories. However, inequality in terms of other occupation was relatively higher in BTAD. The results of ANOVA show that the horizontal inequalities based on all indicators other

than SEAG were statistically significant in all categories. Horizontal inequalities based on SEAG in western Assam in 2004-05 and BTAD in 2009-10 were insignificant.

While estimating horizontal education inequality, level of inequality based on average years of schooling was found to be highest followed by current attendance rate and literacy rates in all the district categories. They were also found to be statistically significant. In western Assam, HIs with respect to all indicators were relatively higher compare to Assam both in 2004-05 and 2009-10. Level of HI based on all indicators in BTAD on the other hand was relatively higher than state of Assam in 2009-10. HIs based on literacy rate and current attendance rate of BTAD were also comparatively higher than western Assam.

Estimation of horizontal education inequality for the study villages shows that the levels of horizontal inequality based on all indicators were relatively higher in revenue village Hasrawbari-II compared to Molandubi. They were also found to be statistically significant in conflict affected village Hasrawbari-II while not significant in Molandubi.

7.6 *Effects of political unrests on schooling outcomes*

Results of both the difference-in-differences and probit regressions have shown the evidences of negative and statistically significant effects of the conflict on schooling outcomes. Difference in differences estimation shows that the household dwelling damage or loss of assets during the conflict resulted in significant fall in probability of eight grade completion of the conflict exposed cohort in the conflict affected village. Therefore, conflict exposed cohort in the conflict affected village were 66 per cent (significant at 1 per cent level) less likely to complete eight grade compared to their same cohort of the village which was not affected by the conflict. They were also 32 per cent (significant at 1 per cent level) less likely to complete this grades compared to their older cohort in village Hasrawbari-II. But in Molandubi younger cohort had completed eight grades by 10 per cent more than

their older cohort. Therefore, percentage of younger conflict exposed cohort in revenue Hasrawbari-II not completing mandatory schooling (eight grades) was significantly higher than their older cohort of the village as well as their same cohort of the village which was not affected by the conflict. In addition conflict exposed cohort belonging to the worst affected groups Muslim and Bodo in conflict affected village Hasrawbari-II were 37 per cent (at 1 per cent) less likely to complete this grade while that of Rajbangsi and Bengali (H) groups completed 20 per cent less compared to their older counterparts. Thus educational outcomes of Muslim and Bodo the worst affected groups during the conflict were found to be the worst in the conflict affected village.

The results of probit regression for revenue village Hasrawbari-II shows that the households dwelling damaged and/or loss of assets had resulted in significantly high incidence of dropout from schooling. The effects of conflict remained negative and significant at one percent level even after adding control variables, confirming significant negative impact of conflict on schooling in the conflict affected village. The incidence of school dropout rate is relatively higher for the most affected groups Bodo and Muslim as school attendance rate of their children was relatively lower compared to both less affected group Rajbangsi and Bengali in the village. Older children were found more likely to be withdrawn from schooling as indicated by significant and negative coefficient of age. It was also found that the probability of school dropout rate of the male children was relatively higher than their female counterparts. This suggests that conflict ridden poverty induced the households to withdraw their older children particularly male from schooling and engaged economic activities.

In Molandubi, on the other hand problem of non-attendance among the children in the younger age was not found. But most of the older children were found discontinued their schooling after completion of secondary and higher secondary levels. Absence of institution

for higher education nearer village is shown as one of the primary reasons for most of the older children discontinued access to education. If economic condition of the households cannot support lodging of children around the collage, children in this village are more likely to discontinued access to education after completion of higher secondary level. This is indicated by negative and statistically significant coefficients for the age and distance of institution from the place of residence. Unlike in the revenue village Hasrawbari-II, coefficient of variable sex was also found to be positive indicating relative advantage of male children in schooling compared to their female counterparts.

School attendance of children of the conflict affected village Hasrawbari-II was relatively lower than the children of not affected village. The deep rooted poverty created through destruction of the household properties and other assets make the children of the conflict affected village out of schooling and thus the school attendance rate of this village was comparatively lower than the children of Molandubi. Considering the children of both the villages as a whole we found that the school attendance rate of Muslim children was the lowest.

7.7 *To conclude*

Share of government primary schools is found continuously falling while that of private schools is rising in the reference period. These reveal increasing participation of private institutions in the provision of education. Accordingly the share of enrolment in the government primary schools is falling over the years. Enrolment of the students in the lower primary schools irrespective of management types shows that there has been universal enrolment at lower primary level. However the enrolment at upper primary level is not satisfactory. Low enrolment at upper primary level in spite of universal enrolment at lower primary level reveals that many children could not continue their access to education

beyond the lower primary level. This is also indicated by high dropout rate and high proportion of currently not school attending children in the age groups of 6 to 14 years.

Besides, deterioration in quality of learning achievements among the school children remained serious problem as indicated by increasing percentage of children who could not read the text and solve simple arithmetic problems that are taught at lower grades, which they successfully completed. Proportion of such children in Assam is relatively mush higher than India, and proportion for such children in most of the districts in western Assam was higher compared to Assam.

Analysis of NSSO unit level data shows the evidences of significant horizontal economic inequalities in all district categories of Assam. Similar significant horizontal inequalities have been found in the dimension of education. The horizontal education inequalities in BTAD were found to be relatively higher than the state as a whole based on all the indicators. The calculations also reveal that HEIs based on current attendance rate and literacy rate are relatively higher in BTAD when compared to western Assam. Between the study villages, Hasrawbari-II, the severe conflict affected village had shown existence of a very similar picture of inequalities between the ethno-religious groups wherein group Gini estimates based on average year of schooling is the highest followed by literacy rate and current attendance rates. These differences across the groups are statistically significant. However, no such significant horizontal education inequality was found in Molandubi village. The level of horizontal education inequality in this village was much lower when compared with Hasrawbari-II with respect to all indicators. Besides, the educational attainments of the people of revenue village Hasrawbari-II in terms of all indicators was found to be relatively much lower than Molandubi.

Analysis of the effects of political conflicts has shown evidences of significant negative consequences upon educational attainments in the conflict affected region. Percentage of the conflict exposed cohort not completing mandatory schooling is found to be significantly higher than the older cohort of the same village as well as their same cohort of the village not affected by conflict. It is also found that this percentage of the worst affected groups Muslim and Bodo during conflict to be lower than the other groups in conflict affected village. Current attendance rate of these groups in conflict affected village is found to be relatively lower than other groups. Household dwelling damaged and/or losses of assets during the conflict were found to have resulted in significantly high incidence of dropout from schooling. In village Molandubi on the other hand, only the older children were found to have discontinued schooling after completion of secondary and higher secondary levels. Absence of institution for higher education nearer village has been shown as one of the primary reasons for discontinuing access to education. If economic condition of the households cannot support lodging of children, children in this village are more likely to discontinued access to education after completion of higher secondary level.

7.8 *Policy suggestions*

There has been overlapping of both spatial and horizontal inequalities in BTAD. The regional development policy favoring the relative backward regions can therefore be useful policy in addressing HIs in BTAD. The provisions of educational services including the health and other social services should be expanded to the extent accessible for all sections of the society. Moreover, there must be a provision of subsidized higher education in favour of the deprived groups in both the government and private institutions. Widespread expansion of the facilities may not be sufficient to correct HIs if certain groups are not in a position to access the same given their relative disadvantaged in economic conditions. Therefore, the tax and expenditure policies should favour the areas or regions where the

deprived groups are concentrated to improve their financial positions. Also the government should provide adequate financial assistance in reviving conditions of the households affected by the conflicts.

7.9 *Limitations of the study*

In this study, horizontal inequalities including the Santhal or Orao ethnic group who were engaged in conflicts and massacred for several times in BTAD and its surrounding districts could not be measured. One more limitation of this study is that although we estimated horizontal inequalities including the Bodo and Muslim based on NSSO unit level data, the exact information of socio-economic conditions of the Bodo could not be considered as they are not available. We used the information of the ST considering it to be representative of the Bodo given their largest number among the tribes in western Assam. The study also could not measure horizontal inequalities in the BTAD areas prior to its creation. Due to limitations of time and space, the study is also confined to only district of Kokrajhar and failed to expand to other districts of BTAD.

A NOTE ON FIELD INVESTIGATION

Perceptions of the people on overall living conditions

In order to assess the perception of people on their overall living conditions in the study villages, questions were put to the respondents how they feel present situation in their locality. For that they were asked how they feel while walking alone in their areas given the recurrent conflicts. We also asked them how they see their identities and perceive on dominating over state institutions and government amenities particularly in local governance, government job, contracts for infrastructure and other government projects, higher education and other benefit (like old age pension, public housing and so on) by certain ethnic-religious group. They were asked if they thought that their ethnic or religion background affected in getting access to public amenities with a view to assess the perceived impact of ethno-religious background in the public sphere. They were also put questions how they think socio-economic conditions of their own ethnic or religious groups compared to other. Because perception of unequal distribution of socio-economic opportunities between the groups by different social or religious groups in a society in which they live and act is crucial in mobilization and collective actions and subsequent conflicts.

As already stated in chapter 3 (section 3.5.3) respondents are classified into groups based on their responses on their own group affiliations. The groups in which the respondents are categorized are Bengali Hindu and Muslim Bodo, Rabha, and Rajbangsi. Analyzing their responses on situations in the areas, 95 per cent of respondents of the revenue village Hasrawbari-II were found to be thinking safe while walking alone in their local areas during the days (table A1). However they felt not safe if it is to be the case during the night. Just 10 per cent of the respondents informed that they are not scared of anything now. They also

avoided certain areas or roads thinking them to be dangerous. Most of them also have pessimistic outlook on sustaining present normal situation. 82 per cent of the respondents of the village Hasrawbari-II were found to be thinking probable reoccurrence of the group conflicts in their area given the protest and counter protests for their own causes by all the groups.

In contrast, all the respondents in revenue village Molandubi thought that walking alone during both night and day are not problem for them. In this village, negligible proportion of the respondents avoided certain areas in their locality. They are also optimistic of sustaining peace situation of their village.

Table A1 *Perception of people regarding security of life and property, study villages,* 2015

	Hasrawbari-II	*Molandubi*
Feeling safe while walking alone during day	95	100
Feeling safe while walking alone during night	10	98
Avoid certain place or road	60	2
Conflict likely to occur in the days to come	82	0
Possibility being attacked by other groups	57	0

Source: Survey data, 2015

The respondents of conflict affected village were also very scared of getting possible attacks by the miscreants. As high as 57 per cent of the respondents in the revenue village Hasrawbari-II thought that they may be attacked in some point of time. However many of the respondents were found it thinking to be undecided one. It is worth noting that about half of people in the village were illiterate (refer section 4.1, page. 86). They are not connected with the media. Moreover, many households were economically poor and thus purchasing television and radios are out of dream for them. Therefore majority of the respondents are not exposed to both the print and electronic media. As a result most of the people in this village scared of being attacked once again based on mere rumor.

Table A2 presents the proportion of respondents who thought that their ethno-religious background affected a person's chances of getting access to public benefits. It is seen in the

table that the proportion of them who thought their ethno-religious background affected in getting access to public benefit like public housing, old age pension and other was the highest (66 per cent) in Hasrawbari-II followed by membership in the local government like village council development committee (VCDC) and territorial constituency level co-ordination committee (TCLCC) (52 per cent), and government jobs (10 per cent). In BTAD, grass-root level government is known as VCDC and TCLCC which are equivalent to Gaon Panchayat and Zila Parishod, the lowest level of government under three-tire governance system. Proportion of the respondents who thought their ethnic and religious background affected chance of getting access to provision of higher education like graduate and post graduate was the lowest. Similarly in revenue village Molandubi, proportion of the respondents thinking their ethnic and religious background affected in getting access to higher education was the lowest (2 per cent), but it was the highest in the case of government jobs (20 per cent) followed by government contracts (10 per cent), membership in local governance (8 per cent) and other public benefit (5 per cent). Therefore proportion of the respondents thinking their ethno-religious background affecting in access to government amenities, government contract and membership in local government was much higher in Hasrawbari-II compared to revenue village Molandubi. One of its reasons is that the Bodoland People Front (BPF) Government in BTC is overrepresentation of the Bodo. Besides, *Hagrama Mohilari the chief Executive Member* of the BTC government since its inception is himself Bodo. That is why the government is widely perceived to be pro-Bodo. It is noteworthy that in BTAD, the port-folio members of the lowest level of the governance under three-tier governance system, i.e. VCDC and TCLCC are not elected rather selected by the elected representative. Although the members of these committees are supposed to be selected by the elected representative in respective constituency, the BPF government denied the right to select them to elected representatives of the opposition political parties. The BPF government nominates only their workers in these positions.

Table A2 *Respondents thinking their ethno-religious background affected in access to public amenities, study villages,* 2015, in per cent

Village	*Govt. jobs*	*Govt. contract*	*Public housing and other benefits*	*Membership in local govt.*	*Higher education*
Hasrawbari-II	10	35	66	52	2
Molandubi	20	10	5	8	2

Source: Survey data, 2015

However in revenue village Molandubi, the respondents thought that the political power is equally shared among all the groups in their VCDC. While selecting the members to form the local government i.e. VCDC under which their village fall, the member of all the groups are included and thus they believe that benefit are also equally distributed. However, proportion of respondents who thought that chance of getting government jobs is affected was higher in Molandubi compared to Hasrawbari-II. It is known to us that one has to have educational qualification for getting government jobs. Therefore, just the educated people engaged in competition for government jobs. Since the educated respondents in the revenue village Hasrawbari-II were relatively lower compared to Molandubi, the proportion of respondents thinking their background affecting chances of getting government employment may also be lower in Hasrawbari-II.

Perception of Muslim

Thinking their religious background affected in getting access to public amenities, the Muslim respondents of revenue village Hasrawbari-II thought that the Bodo enjoy more such benefits compared to them (Table A3). That is why majority of them thought that the socio-economic positions of the Bodo are better compared to conditions of their own groups. Of the total Muslim respondents, 60 per cent thought that average income of their group is lower than the Bodo, while more than 80 per cent of them thought it to be equal when compared to the other group. However, in revenue village Molandubi, just 20 per cent of them thought their income is lower than that of the Bodo while half of them thought

equal. When compare with other groups, 90 per cent of them thought that there is no difference between their own group and other groups in terms of income.

Table A3 *Perception of Muslim on their economic condition compared to others, study villages,* 2015

Variable	*Position*	*Hasrawbari-II*		*Molandubi*	
		Bodo	*Others*	*Bodo*	*Others*
Income	*Equal*	20	81	30	10
	Better	20	14	50	90
	Worse	60	5	20	0
Land ownership	*Equal*	4	81	80	20
	Better	16	12	10	70
	Worse	80	7	10	10
Members in local governance like VCDC	*Equal*	17	75	100	100
	Better	0	2	0	0
	Worse	83	23	0	0
Government benefit like IAY house, contract, old age pension so on	*Equal*	14	80	100	100
	Better	6	0	0	0
	Worse	80	20	0	0
Government jobs	*Equal*	66	74	50	60
	Better	10	7	20	40
	Worse	24	19	30	0
Children's education	*Equal*	72	80	90	80
	Better	8	7	0	20
	Worse	20	13	10	0

Source: Survey data, 2015

Again more than 80 per cent of the Muslim respondents of the revenue village Hasrawbari-II thought that their land ownership entitlement, membership in local governance, access to other government benefits are worse compared to the Bodo group. In sharp contrast, more than 75 per cent of them thought that they are equal with the other group in terms of these benefits and opportunities. In revenue village Molandubi on the other hand all Muslim respondents thought that there is no much difference between the groups.

Perception of other groups

Majority of the respondents (63 per cent) belonging to other groups (Rajbangsi and Bengali) in the revenue village Hasrawbari-II thought that both the Bodo and Muslim are better than their group in terms of the income (Table A4). As far as land entitlement of their own

groups is concerned, half of the respondents thought that they are equal to both the Bodo and Muslim while half of them thought they are worse. In revenue village Molandubi also 80 per cent of the Rajbangsi and Rabha ethnic group thought that they are worse than both the Bodo and Muslim in terms of both land and income.

Table A4 *Perception of Other (Bengali, Rabha and Rajbangsi,) on their economic condition compared to others, study villages,* 2015

Variable		*Hasrawbari-II*		*Molandubi*	
	Position	*Bodo*	*Muslim*	*Bodo*	*Muslim*
Income	*Equal*	37	30	20	10
	Better	0	7	0	10
	Worse	63	63	80	80
Land ownership	*Equal*	50	50	20	20
	Better	0	0	0	0
	Worse	50	50	80	80
Government benefit like IAY house, contract, old age pension so on	*Equal*	37	5	100	100
	Better	0	12	0	0
	Worse	63	63	0	0
Members in local governance like VCDC	*Equal*	25	37	100	100
	Better	0	0	0	0
	Worse	75	63	0	0
Employment in government jobs	*Equal*	80	80	90	88
	Better	0	0	0	0
	Worse	20	20	10	12
Children's education	*Equal*	90	90	100	100
	Better	0	0	0	0
	Worse	10	10	0	0

Source: Survey data, 2015

However, in terms of membership in local governance and getting access to government benefit, more than 60 per cent of the other respondents thought that they are worse than both the Bodo and Muslim in Hasrawbari. But in Molandubi the respondents belong to both Rabha and Rajbangsi thought that they are equal with all the groups in terms of these opportunities. While 80 per cent of Rajbangsi and Bengali respondents in Hasrawbari-II thought they are equal with both the Bodo and Muslim in terms of government jobs, 90 per cent of them thought equal in terms of children's education. In Molandubi on the other hand they thought that there are no differences between the groups in terms of access to government benefits, membership in local level governance and children's education. But in

terms of government job 10 per cent of them thought their groups are behind the Bodo while 12 per cent thought they are worse than the Muslim.

Perception of Bodo

Most of the Bodo respondents also thought that their income was lower compared to Muslim (see table A5). Close to 80 per cent of them in Hasrawbari-II thought that their income is lower than the Muslim while better comparing with the other groups. However, all of them thought they are better than Muslim in terms of land ownership. Similarly, 80 per cent of them thought that their land ownership is better than other groups in the village. However, about 60 to 70 per cent of them thought that there is equal distribution of membership in local governance and government benefits across the groups. 80 per cent of them also thought that they are equal in access to government jobs. It is important to note that none of the Bodo respondents thought they are behind the other groups in terms of the access to these benefits.

But in Molandubi, half of the respondents thought that they are equal while remaining half thought they are worse compare to Muslim in terms of income. Similarly 70 per cent of them thought that they are equal while remaining 30 per cent thought that they are better compared to other group in the village. Majority of the respondents thought that their land ownership is better compare to all other groups while none of them thought worse. In terms of other benefits and membership in the local governance, all the Bodo respondents thought there is equal distribution of these opportunities among the groups. In this village none of the Bodo respondents thought they are worse off any other groups in terms of access to government benefit, government jobs and children education. Majority of them thought they are equal while few of them thought they are better compared to other groups.

Table A5 *Perception of Bodo on their economic condition compared to others, study villages,* 2015

Variable		*Hasrawbari-II*		*Molandubi*	
	Position	*Muslim*	*Others*	*Muslim*	*Others*
Income	*Equal*	16	20	50	70
	Better	5	80	0	30
	Worse	79	0	50	0
Land ownership	*Equal*	0	20	20	40
	Better	100	80	80	60
	Worse	0	0	0	0
Members in local governance like VCDC	*Equal*	70	70	100	100
	Better	30	30	0	0
	Worse	0	0	0	0
Government benefit like IAY house, contract, old age pension so on	*Equal*	60	60	100	100
	Better	30	40	0	0
	Worse	10	0	0	0
Employment in government sector	*Equal*	80	80	50	50
	Better	20	20	30	50
	Worse	0	0	20	0
Children's education	*Equal*	40	60	80	50
	Better	60	40	20	50
	Worse	0	0	0	0

Source: Survey data, 2015

Therefore, majority of the respondents in revenue village Hasrawbari-II thought that they feel safe during the day while unsafe during the night. They also avoided certain areas or roads thinking them to be dangerous. Most of them also have pessimistic outlook on sustaining present peace situation given the protests and counter-protests for their causes by different groups in their area. In revenue village Molandubi on the other hand, almost all the respondents were found feel safe during not only day but also at night. Unlike in conflict affected village, negligible proportion of the respondents in Molandubi village avoided certain areas in their locality. They were also optimistic of sustaining peace situation of their village.

Moreover, majority of respondents belonging to both Muslim and other ethnic groups in Hasrawbari-II thought that their economic condition in terms of income and land ownership was worse off the Bodo. Most of the Bodo respondents also thought that their economic condition based on income was worse off Muslim while better off other groups.

In terms of land ownership, all the Bodo households thought that they are better off. Besides, majority of both the Muslim and other respondents thought that the Bodo were dominant not only in the territorial level government but also in the local governance. These governments are widely perceived to be pro-Bodo. Thinking their ethnic or religious background affected in getting access to benefits of government like public housing, government contracts, old age pension and others, both the Muslim and other respondents thought that the Bodo enjoy more such benefits compared to them.

Table A3.1 *Classification of population by religion, Assam,* 2011

District	*Hindu*	*Muslim*	*Christian*	*Sikh*	*Buddhist*	*Jain*	*Others/ not stated*
Kokrajhar	59.64	28.44	11.40	0.01	0.19	0.04	0.28
Dhubri	19.92	79.67	0.21	0.01	0.01	0.09	0.08
Bongaigaon	48.61	50.22	0.80	0.05	0.03	0.12	0.16
Chirang	66.50	22.66	10.32	0.02	0.08	0.03	0.39
Baksa	82.40	14.29	2.85	0.02	0.13	0.03	0.29
Barpeta	29.11	70.74	0.06	0.01	0.00	0.02	0.06
Kamrup	57.82	39.66	2.19	0.02	0.01	0.09	0.21
Nalbari	63.71	35.96	0.06	0.01	0.00	0.13	0.14
Udalguri	73.64	12.66	13.25	0.03	0.20	0.01	0.20
Darrang	35.25	64.34	0.18	0.05	0.01	0.08	0.10
Sonitpur	73.95	18.22	7.18	0.07	0.26	0.05	0.27
W. Assam	**71.25**	**19.12**	**9.14**	**0.02**	**0.16**	**0.03**	**0.28**
Morigaon	47.20	52.56	0.09	0.01	0.01	0.03	0.11
Nagaon	43.39	55.36	0.95	0.11	0.04	0.04	0.11
Goalpara	34.51	57.52	7.72	0.08	0.02	0.05	0.11
Lakhimpur	76.49	18.57	4.43	0.04	0.10	0.02	0.34
Dhemaji	95.47	1.96	1.27	0.04	0.13	0.02	1.10
Tinsukia	88.96	3.64	5.79	0.15	1.22	0.06	0.17
Dibrugarh	90.35	4.86	3.99	0.17	0.35	0.08	0.18
Sibsagar	87.51	8.30	2.88	0.08	0.34	0.02	0.86
Jorhat	92.31	5.01	1.93	0.14	0.22	0.07	0.34
Golaghat	85.99	8.46	4.74	0.11	0.36	0.05	0.29
Karbi-Anglong	80.10	2.12	16.50	0.04	0.65	0.04	0.54
Dima-Hasao	67.07	2.04	29.57	0.10	0.32	0.03	0.88
Cachar	59.83	37.71	2.17	0.02	0.02	0.10	0.17
Karimganj	42.48	56.36	0.98	0.01	0.04	0.04	0.09
Hailakandi	38.10	60.31	1.29	0.01	0.07	0.04	0.17
Kamrup Metro	84.89	12.05	1.50	0.29	0.13	0.74	0.41
ASSAM	**61.47**	**34.22**	**3.74**	**0.07**	**0.18**	**0.08**	**0.25**

Source: Registrar General and Census Commissioner, Govt. of India, 2011

Table A5.1 *MPEC by households types, Assam,* 2004-05 to 2009-10

District	*2004-05*						*2009-10*					
categories	*1*	*2*	*3*	*4*	*9*	*All*	*1*	*2*	*3*	*4*	*9*	*All*
Assam	529	445	443	559	734	543	881	672	648	895	1142	863
W. Assam	518	456	427	538	702	532	859	624	587	782	1168	794
BTAD	-	-	-	-	-	-	771	599	566	703	1094	722

Source: Authors' calculation from NSSO's 61st and 66th surveys on Consumer Expenditure

Note: S*elf-employed in non-agriculture-1, agricultural labour-2, other labour-3, self-employed in agriculture-4 and residual-9*

Table A5.2 *One way ANOVA in consumption expenditure by socio-religious groups,* 2004-05 to 2009-10

	Muslim	*ST*	*SC*	*OBC*	*General*	*All*	*F*	*Prob>F*
				2004-05				
Assam	508 (275.38)	570 (191.51)	547 (271.90)	627 (675.63)	715 (387.23)	591 (395.18)	(4, 4236)= 43.94	0.000
W. Assam	497 (296.54)	589 (188.62)	604 (261.51)	585 (201.14)	714 (388.89)	582 (305.27)	(4, 1705)=34.49	0.000
				2009-10				
Assam	732 (350.51)	890(404.41)	917(542.47)	1080(1279.47)	1152(834.01)	933(802.36)	(4, 3439)= 36.66	0.000
W. Assam	727(277.77)	855(347.11)	879(432.36)	894(500.99)	942 (480.29)	822 (398.16)	(4, 1426)=17.42	0.000
BTAD	575(142.90)	816(381.80)	845(299.19)	722(228.62)	748(335.40)	738(258.62)	(4, 470)=13.7	0.000

Source: Authors' calculation from NSSO's 61st and 66th surveys on Consumer Expenditure
Note: Figure in parenthesis are standard deviation

Table A5.3 *One way ANOVA in land possessed (in hectare) by socio-religious groups,* 2004-05 to 2009-10

	Muslim	*ST*	*SC*	*OBC*	*General*	*All*	*F*	*Prob>F*
				2004-05				
Assam	0.96 (0.81)	1.29 (1.10)	0.61(0.85)	0.73 (0.93)	0.87 (1.18)	0.84 (1.01)	(4, 4146)= 54.29	0.000
W. Assam	0.72 (0.80)	1.32(0.77)	0.71 (0.87)	0.83 (1.03)	1.05 (1.13)	0.91(0.99)	(4, 1530)=21.86	0.000
				2009-10				
Assam	0.82 (0.92)	1.15 (1.38)	0.58 (0.81)	0.93 (0.99)	0.62 (1.12)	0.83 (1.05)	(4, 3177)= 23.32	0.000
W. Assam	0.73 (0.80)	0.81(1.08)	0.47 (0.63)	0.65 (0.80)	0.47(0.65)	0.66 (0.79)	(4, 1378) =7.22	0.000
BTAD	0.85 (0.76)	0.85(0.77)	0.65(0.62)	0.53(0.76)	0.65(0.97)	0.73 (0.77)	(4, 398) =2.74	0.028

Source: Authors' calculation from NSSO's 61st and 66th surveys on Consumer Expenditure
Note: Figure in parenthesis are standard deviation

Table A5.4 *One way ANOVA for self-employed agriculture households by socio-religious groups,* 2004-05 to 2009-10

	Muslim	*ST*	*SC*	*OBC*	*General*	*All*	*F*	*Prob>F*
				2004-05				
Assam	46 (13.28)	65(15.37)	46 (20.11)	42 (17.67)	48 (21.95)	48 (18.86)	(4, 106)= 6.23	0.000
W. Assam	52(12.25)	64 (17.34)	58 (20.45)	41 (20.00)	50 (22.20)	53 (18.03)	(4, 35)=1.43	0.244
				2009-10				
Assam	48 (17.35)	62 (22.75)	42 (26.67)	45 (19.55)	34 (19.96)	47 (21.77)	(4, 121) = 4.98	0.000
W. Assam	46 (14.15)	54 (17.71)	29 (19.06)	36 (20.88)	36 (21.02)	42 (18.74)	(4, 46) = 2.23	0.080
BTAD	63 (9.88)	61 (14.98)	46 (12.09)	48 (38.76)	41 (42.55)	55 (22.55)	(4, 13) = 0.47	0.760

Source: Authors' calculation from NSSO's 61st and 66th surveys on Consumer Expenditure
Note: Figure in parenthesis are standard deviation

Table A5.5 *One way ANOVA for other households by socio-religious groups,* 2004-05 to 2009-10

	Muslim	*ST*	*SC*	*OBC*	*General*	*All*	*F*	*Prob>F*
				2004-05				
Assam	8(5.82)	7(6.32)	7 (8.11)	11 (8.87)	13(11.14)	9(8.27)	(4, 104)= 2.40	0.054
W. Assam	9(6.40)	7(1.92)	7 (11.13)	8 (3.47)	14 (4.99)	9 (7.43)	(4, 31)=6.19	0.000
				2009-10				
Assam	7 (7.06)	8 (12.28)	11 (10.69)	10 (8.28)	17 (11.65)	10 (10.26)	(4, 121) = 5.27	0.000
W. Assam	6 (8.65)	14 (17.68)	12 (11.86)	8 (6.28)	21 (10.11)	10 (11.35)	(4, 46) = 2.99	0.028
BTAD	4 (2.45)	13 (10.35)	10 (8.20)	6 (2.84)	6 (1.63)	9 (8.71)	(4, 13) = 2.52	0.091

Source: Authors' calculation from NSSO's 61st and 66th surveys on Consumer Expenditure
Note: Figure in parenthesis are standard deviation

Table A5.6 *One way ANOVA for literacy rates by socio-religious groups,* 2004-05 to 2009-10

	Muslim	*ST*	*SC*	*OBC*	*General*	*All*	*F*	*Prob>F*
				2004-05				
Assam	75(12.85)	85 (8.37)	82 (9.67)	87 (10.57)	89 (7.25)	83 (11.39)	(4, 109)= 7.74	0.000
W. Assam	67 (8.36)	79 (7.22)	80 (8.64)	82 (14.40)	86 (8.68)	78 (11.80)	(4, 35)= 6.89	0.000
				2009-10				
Assam	82 (11.86)	85 (10.90)	87 (16.19)	91 (7.05)	94 (6.13)	88 (11.11)	(4, 126) = 5.73	0.000
W. Assam	79 (11.77)	80 (10.49)	91 (8.41)	92 (4.65)	90 (8.3)	85 (10.81)	(4, 48) =5.30	0.001
BTAD	72 (14.85)	83 (5.86)	93 (5.90)	83 (6.47)	93 (5.62)	84 (5.62)	(4, 15) =3.66	0.028

Source: Authors' calculation from NSSO's 61st and 66th surveys on Employment and Unemployment
Note: Figure in parenthesis are standard deviation

Table A5.7 *One way ANOVA for average year of schooling by socio-religious groups,* 2004-05 to 2009-10

	Muslim	*ST*	*SC*	*OBC*	*General*	*All*	*F*	*Prob>F*
				2004-05				
Assam	4.54(4.47)	5.58(4.24)	4.79 (4.20)	5.88 (4.20)	7.44 (4.66)	5.73 (4.56)	(4, 11976)= 186.37	0.000
W. Assam	4.24(4.41)	5.31 (4.41)	4.75 (4.22)	5.86 (4.33)	7.33 (4.80)	5.54 (4.74)	(4, 4739)= 77.93	0.000
				2009-10				
Assam	5.55 (4.16)	6.44 (4.25)	6.54 (4.43)	7.02 (3.95)	8.49 (4.30)	6.83 (4.30)	(4, 10246) = 151.89	0.000
W. Assam	5.77 (4.20)	6.45 (4.37)	7.23 (4.26)	7.02 (3.95)	8.13 (4.30)	6.77 (4.27)	(4, 4308) =43. 27	0.000
BTAD	4.78 (3.82)	6.70 (4.32)	7.03 (3.63)	6.52 (4.14)	7.04 (4.33)	6.49 (4.18)	(4, 1211) = 9.98	0.000

Source: Authors' calculation from NSSO's 61st and 66th surveys on Employment and Unemployment
Note: Figure in parenthesis are standard deviation

Table A5.8 *One way ANOVA for current attendance rates among age 6 to 21 years by socio-religious groups,* 2004-05 to 2009-10

	Muslim	*ST*	*SC*	*OBC*	*General*	*All*	*F*	*Prob>F*
				2004-05				
Assam	69 (9.75)	76 (10.46)	77 (14.98)	76 (8.36)	78 (9.66)	74 (10.86)	(4, 109)= 4.51	0.002
W. Assam	68 (11.63)	80 (9.45)	85 (6.03)	69 (5.76)	77 (8.53)	73 (10.93)	(4, 35)= 3.56	0.015
				2009-10				
Assam	68 (10.56)	70 (15.12)	76 (15.80)	83 (17.05)	77 (16.84)	76 (16.10)	(4, 126) = 5.12	0.000
W. Assam	68 (10.36)	72 (10.25)	79 (14.18)	88 (14.66)	82 (15.28)	78 (15.23)	(4, 48) =5.95	0.000
BTAD	65 (9.06)	76 (7.87)	89 (4.75)	93 (12.27)	78 (27.64)	85 (14.07)	(4, 15) =2.67	0.073

Source: Authors' calculation from NSSO's 61st and 66th surveys on Employment and Unemployment
Note: Figure in parenthesis are standard deviation

Table A5.9 *One way ANOVA for different indicators of educational attainments by ethno-religious groups,* study villages

Ethnicity	*Bodo*	*Muslim*	*Rajbangsi*	*Rabha/ Bengali*	*All*	*F*	*Prob>F*
			Hasrawbari-II				
Literacy rate	57 (22.49)	42 (30.35)	52 (27.29)	90 (11.63)	52 (27.43)	(3, 386)=3.77	0.010
Average year of schooling	3.81 (3.87)	2.42 (2.91)	3.02 (3.38)	7.73 (3.92)	3.09 (3.42)	(3, 1194)=8.39	0.000
Current attendance rate	67 (39.55)	53 (29.84)	65 (31.05)	82 (16.31)	54 (30.44)	(3, 370)=2.63	0.049
			Molandubi				
Literacy rate	82 (40.34)	85 (36.76)	84 (36.43)	87 (41.11)	87 (36.95)	(3, 173)=0.64	0.592
Average year of schooling	8.16 (4.53)	6.70 (3.64)	6.58(3.72)	6.75 (3.80)	7.75 (3.93)	(3, 628)=1.77	0.152
Current attendance rate	72 (38.705)	62 (39.205)	70 (39.39)	79 (36.665)	71 (38.709)	(3, 131)=1.08	0.360

Source: Survey data, 2015
Note: Figure in parentheses is standard deviation, inference *** p<0.001, ** p<0.005 and * p<0.1

Table A6.1*Descriptive statistics, study villages*

Age group	*Revenue village Hasrawbari-II*					
	All Persons	*Share*	*Male*	*Share*	*Female*	*Share*
0 to 5 years	72	12	35	10	37	13
6 to 21 years	281	45	157	47	124	43
22+ years	268	43	143	43	125	44
All persons	**621**	**100**	**335**	**100**	**286**	**100**
	Revenue village Molandubi					
0 to 5 years	35	12	18	11	17	12
6 to 21 years	98	34	55	36	43	32
22+ years	154	54	78	52	76	56
All persons	**287**	**100**	**151**	**100**	**136**	**100**

Source: Survey data, 2015

Table A6.2*School attendance rates among age 6 to 21years, study villages*

Ethnic groups	*Revenue village Hasrawbari-II*		
	All Persons	*Attending*	*Per cent*
Bodo	13	11	85
Muslim	241	171	71
Rajbangsi	20	16	80
Bengali	7	6	86
All persons	**281**	**204**	**73**
	Revenue village Molandubi		
Bodo	14	8	57
Muslim	30	27	90
Rajbangsi	33	26	79
Rabha	21	17	81
All persons	**98**	**78**	**80**

Source: Survey data, 2015

Table A6.3*Mandatory schooling completion rates by cohorts, study villages*

Cohort	*Person*	*Eight completion*	*Per cent*
	Hasrawbari-II		
Age 17 to 19 (NE)	51	32	63
Age 14 to 16 (E)	54	18	33
	Molandubi		
Age 17 to 19 (NE)	20	18	90
Age 14 to 16 (E)	16	16	100

Source: Survey data, 2015

Table A6.4*Parent's years of schooling, land holding and distance of educational institution from residence*

	Hasrawbari-II			
	Mean	*SD*	*Max*	*Min*
Father's year of schooling	1.70	3.00	12	0
Mother's year of schooling	1.58	2.58	10	0
Distance of institution	3.21	2.77	17	1
Operational land holding in hectare	1.09	1.62	6.27	0
	Molandubi-II			
Father's year of schooling	4.80	3.97	15	0
Mother's year of schooling	4.77	3.91	14	0
Distance of institution	6.24	8.23	25	1
Operational land holding hectare.	1.33	1.20	4.95	0

Source: Survey data, 2015

Table A6.5*Multi-collinearity test for independent variables influencing school attendance of children, Hasrawbari-II*

Variable	VIF	1/VIF
DIFR	4.02	0.25
Age	3.95	0.25
Ethnic1	3.24	0.31
Ethnic2	2.80	0.36
Occupation2	2.41	0.41
OHL	2.21	0.45
LDWN	1.93	0.52
Occupation4	1.93	0.52
Occupation1	1.87	0.54
FYRS	1.80	0.56
HDMG	1.76	0.57
MYRS	1.59	0.63
Occupation2	1.39	0.72
Ethnic3	1.34	0.74
Sex	1.24	0.80
Age	1.04	0.96
Mean VIF	**2.16**	

Table A6.6*Multi-collinearity test for independent variables influencing school attendance of children, Molandubi*

Variable	*VIF*	*1/VIF*
Ethnic2	3.91	0.255863
Ethnic1	3.77	0.265022
OLH	3.5	0.286035
DIFR	3.14	0.318816
LDWN	2.97	0.336612
Ethnic3	2.71	0.369005
Age	2.67	0.374498
MYRS	2.48	0.403072
FYRS	2.46	0.40655
Occupation1	1.55	0.643707
Occupation4	1.38	0.72327
Sex	1.14	0.877344
Occupation2	1.08	0.925268
Mean VIF	2.52	

Table A6.7 *Multi-collinearity test for independent variables influencing school attendance of children, study villages*

Variable	*VIF*	*1/VIF*
Ethnic1	4.17	0.24
Ethnic2	3.18	0.31
Village	3.06	0.33
DIFR	2.38	0.42
OLH	2.15	0.46
Age	2.1	0.48
FYRS	2.02	0.49
Ethnic4	1.93	0.52
MYRS	1.92	0.52
Occupation2	1.89	0.53
LDWN	1.85	0.54
HDMG	1.75	0.57
Occupation4	1.65	0.61
Ethnic3	1.57	0.64
Occupation1	1.56	0.64
Occupation5	1.55	0.64
Occupation3	1.18	0.85
Sex	1.04	0.97
Mean VIF	2.05	

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