Chapter 2

Trend and Pattern of Tribal Consumption vis-à-vis Non-Tribal Consumption in West Bengal

The tribes are recognized as the descendants of the primitive inhabitants of our country hence they are called Adivasis. Now, in major parts of India, tribes become one of the economically vulnerable sections of the society. Nearly 38 percent of tribal population of West Bengal is livening in Puruliya, Bankura and Paschim Midnapur (Census of India 2011). In the present chapter an attempt has been made to analyze the consumption expenditure of the tribes and non- tribes during the last two decades in the context of Western region that construct with the three districts namely, Puruliya, Bankura and Paschim Midnapur of West Bengal. The analysis is based on the NSSO Unit Level Data sources. In 1993-94 and 2004-05 the unit level data on consumption expenditure of Undivided Midnapur is available only. But in 2002 Midnapur has been divided into Purba Minapur and Pashim Midnapur, as result in 2009-10 and 2011-12 data of NSSO, we can get the unit level data of the two districts separately. So for analyzing rigorously and properly we can take both the districts of Midnapur recombination in 2009-10 and 2011-12. All the chapters which are based on NSSO unit level data have taken Midnapur (Purba and Paschim) as a whole. With the above background the present study tries to understand the trend and pattern of tribal and non- tribal population on the three backward districts of West Bengal.

The plan of this chapter is as follows. Socio- Economic Status of the Tribes and Non Tribes Household in West Bengal has been analysed in Section 2.1. Section 2.2 deals with Trend of Consumption Scenario of tribes and non tribes. Section 2.3 discusses about the Pattern of Consumption Expenditure of tribes and non tribes. Section 2.4

deals with the Food insecurity and Poverty scenario of tribes and non tribes. Section 2.5 reveals the impact of Public Distribution System on consumption. Section 2.6 analyses the convergence in the status of Poverty and Food Insecurity between Tribes and Non Tribes. Finally Section 2.7 makes the summing up of the chapter.

2.1 Socio- Economic Status of the Tribes and Non Tribes Household in West Bengal:

Now let us focus on the tribal society of West Bengal and India. The tribal societies in India are enormously diverse and heterogeneous. There are massive range of diversities among the states in respect of spoken languages, population size and mode of subsistence.

Table 2.1.1: Population, Growth of Population and relative share of STs in West Bengal with Respect to India

State	Population				Growth of population				Relative share of STs to total population	
	ST		Total		ST		Total			
	2001	2011	2001	2011	2001	2011	2001	2011	2001	2011
West Bengal	4406794	5296953	80176191	91276115	15.7	20.2	17.77	13.84	7.63	8.2
India	166,635,700	104281034	1028737436	1210569573	24.45		23.66	22.66	5.5	8.61

Source: www.censusindia.gov.in (2001 and 2011)

The above table deals with the population of ST in total population in West Bengal and India. The data depicts that in Indian nearly 8.61 percent of total population belongs to the tribal community, whereas, in case of West-Bengal 5.5 percent of

population belongs to tribes in 2011. Again if we see the total population of tribes and total pollution both are increasing over time. Data also reveals that tribal decadal growth rate over total population, India their growth rate is 22.6 but in West-Bengal their decadal growth rate is 13.84. That means the growth rates of tribes in West Bengal are less than India as a whole. Now in case of STs, literacy rate of West Bengal is 57.92 (2011) which is far below from state average general literacy rate (77.08). District wise variation is also prominent. In case of Puruliya districts the literacy rate is lower comparing to other study districts of West Bengal. Though' over time the literacy rate of the study districts as well as in West Bengal has increased significantly.

Table 2.1.2: STs and Non STs Literacy Rate in the Selected Districts of West Bengal, 2001-2011

Districts	ST		Non-ST	
	2001	2011	2001	2011
Puruliya	42.64	53.86	56.67	66.48
Bankura	49.6	59.37	64.54	72.05
Undivided Midnapur	47.97	62.15	71.28	78.25

Source: www.censusindia.gov.in (2001 and 2011)

Note: Purba and Paschim Midnapur are calculated together because at the time 2001 census, Midnapur was undivided.

Now let us analyze the trend of the tribal workers and workers participation ratio in West Bengal over time.

Table 2.1.3: ST Workers and Worker Participation Ratio in West Bengal, 1971-2011

	1971	1981	1991	2001	2011

Workers					
Male	705000	834000	1080303	1229606	1470385
Female	247000	440000	583806	774611	1038781
Worker Participation Ratio					
Male	55.2	54.1	55.7	55.3	55.5
Female	20.0	29.1	31.2	35.5	39.2

Source: www.censusindia.gov.in (1971, 1981, 1991, 2001 and 2011)

Data reveals that the participation rates of tribal males are more or less over time. Though in case of female workers, the ratio has been increasing over time. In 1971 it was 20 percent, 31.2 percent in 1991 and now it becomes 39.2 percent in 2011. If we see the occupational structure of the tribes, majority of the tribes are agricultural labours, this case has been seen both for males and females. The next highest percentage of STs in both the male and female in total working category is from other sectors. But the percentage share of female is more than male in case of agricultural labour.

Table 2.1.4: Occupation wise Classification of ST in West Bengal, 2011

Occupation	Percentage Share	
	Male	Female
Cultivators	16.0	6.6
Agricultural Labour	52.7	65.0
Household Workers	1.6	4.1
Other Services	29.8	24.3

Total Workers	100.0 (1470385)	100.0 (1038781)

Source: www.censusindia.gov.in (2011)

Now let us analyze the land distribution of cultivable land of tribes and non tribes of our study area over the years.

Table 2.1.5: Distribution of per capita Cultivable Land of ST and non ST (Puruliya, Bankura and Midnapur)

	Category	Land Holding	Land cultivated
2011-12	ST	56.78	33.2
	Non ST	81.06	58.26
2009-10	ST	65.93	47.7
	Non ST	80.68	73.89
2004-05	ST	99.66	98.5
	Non ST	128.2	102.5
1993-94	ST	101.13	97.91
	Non ST	132.54	106.1

Source: Authors' calculation based on the unit level data of NSSO (50^{th}, 61^{st} , 66^{th} and 68^{th} round)

On the basis of data of NSSO, non tribes are holding more lands than tribes across the years over the study area. And the per capita cultivable lands of tribes are less than that of non tribes in that region. And the notable things are that for both tribes and non tribes land holding and cultivated landholding has been increased over time.

Now after the demographic features of schedule tribes of our study area (Puruliya, Bankura and Midnapur) as well as West-Bengal let us incorporate the consumption trend of tribes and non tribes of backward districts and West Bengal as a whole.

2.2 Trend of Consumption Scenario

The Monthly Per Capita Expenditure (MPCE) defined as the ratio of household monthly consumer expenditure the size of household; this gives us a good reference point to study the behavior and patterns of consumption expenses.

Table 2.2.1.: MPCE across STs and Non STs of backward region of West Bengal:

Category		1993-94	2004-05	2009-10	2011-12
		MPCE			
Backward Region	ST	238.88	511.5	849.30	1004.5
	Non-ST	290.86	617.5	1033.86	1308.04
	Total	282.61	699.8	896.4	1178.08
West Bengal		279	562.11	857.77	1290.68

Source: Authors' calculation based on the unit level data of NSSO (50^{th} , 61^{st} , 66^{th} and 68^{th} round)

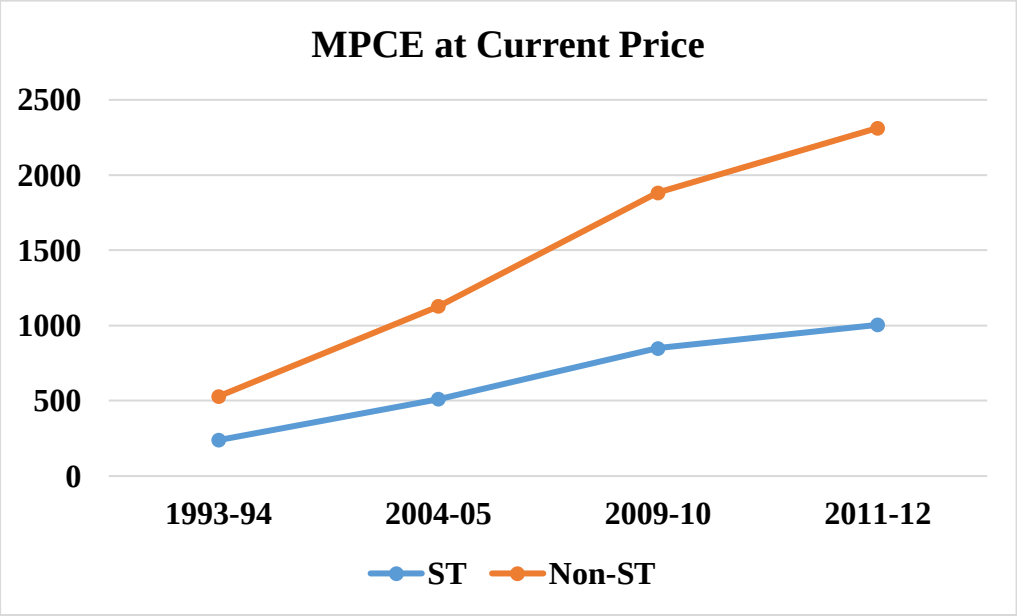
Table 2.2.1 presents the trend of MPCE of tribes and non tribes over time. In case of tribes, over time the MPCE has been increased, in 1993 it was Rs. 238.88 which became Rs. 1004.5 in 2011-12. The similar trend is also seen in case of non tribes. Though, their MPCE has been always greater than tribes over time. Data also follow up the same trend. Finally in case of West Bengal as a whole the trend of MPCE has been discussed here is on market price for better analyzing we have to compute the constant price over time.

However, it is necessary to present our information on consumer expenditure at constant price to make the comparison over periods a realistic one as the changes in the price level substantially influence the level of consumer expenditure in terms of money. Moreover the period 1993-94 to 2011-12 i.e., the span of our study, has never been a period of stable prices as expected in an economy forgoing ahead with a

various development program involving huge amount of investments in both privet and public sector.

Consequently, the observation made in the above table has been adjusted for the price changes and they are expressed at a constant price of 1987-88 (as given in the appendix in table A1). The adjusted tables are given for the same items of consumption and in same order. The entries of all columns of these tables are computed. The findings from these tables are presented in the figures 2.2.1 and 2.2.2.

Figure: 2.2.1: MPCE at Current Prices in the backward region for Tribes and Non-Tribes

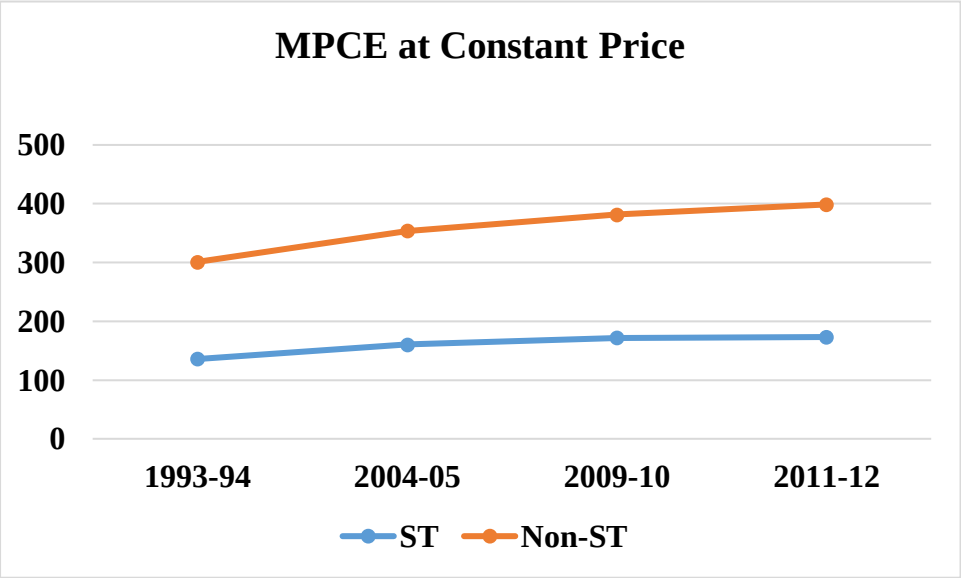


Source: Authors' calculation based on the unit level data of NSSO (50th ,61st , 66th and 68th round)

From the Figure 2.2.1, it is evident that the consumption expenditure of tribes and non tribes has been increased over time. Now let us check this same trend at constant price also. To convert the MPCE of current price at constant price we have been used the values of price deflators. From the NSSO data of the round 50th, 61st, 66th and 68th, the

values of price deflators has been analyzed, taking 1987-88 as a base year (As given in the appendix in table A1).

Figure 2.2.2: MPCE at Constant Prices in the backward region for Tribes and Non-Tribes



Source: Authors' calculation based on the unit level data of NSSO (50th ,61st , 66th and 68th round)

Data reveals that the MPCE in constant price for both ST and non ST is also increasing over time. Though for non tribes their values of expenditure is always greater than the tribes. That is the consumption expenditure of both tribes and non tribes has been increasing in market price as well as in constant price.

Now this change has been significant or not will be statistically tested. We will test the mean difference between tribes and non tribes at current and constant prices for the years 1993-94 and 2011-12.

Table 2.2.2: Test of Significant difference between ST and non-ST at 2011-12 and 1993-94

		Mean Non-St	Mean ST	Mean Diff	SD Non-St	SD ST	t- Value
2011-12	MPCE Current	1308.04	1004.5	303.55	630.61	460.74	344.91***
	MPCE Constant	225.52	173.18	52.34	108.73	79.44	344.91***
1993-94	MPCE Current	290.86	238.88	51.97	153.96	83.53	297.49***
	MPCE Constant	165.26	135.73	29.53	87.48	47.46	296.49***

Source: Authors' calculation based on the unit level data of NSSO (50^{th} , 61^{st} , 66^{th} and 68^{th} round)

Testing reveals that mean differences between tribes and non tribes MPCE have high significance in case of both current and constant prices.

2.3 Pattern of Consumption Expenditure

The chosen items for NSS on consumption expenditure were divided into two broad groups viz, expenditure on food items and expenditure on non-food items. The foodgrains include husked grains of rice, wheat, jowar, bajra, gram, barley, small millets, ragi and other foodgrains such as tapioca etc. Gram meant here all type of grams. Milk and milk products' includes milk, ghee, butter, dahi, ghol (lassi), khoa, chhana and other milk products. These items are self-explanatory. It is proposed to combine these two items of consumption viz, 'milk and milk products' with 'meat, egg and fish' to give us a new groups of items of consumption. The formulation of

these new groups of items is meant for studying the pattern of consumption of food items which are commonly considered as items with high nutrition values. In 2011-12 NSS gives the separate data of salt and sugar, whereas in the previous rounds they take these two items together. So we take Salt and Sugar as a whole. Again in case of Beverages we take packaged food, Served food and Beverages together. Moreover as the incomes of the people increases, they tend to substitute these items more for other ordinary food items. As the amount of expenditure on these items is regarded as a popular index of the level of living, it is important to find out how the amount changes over time. If the long-run tendency in this group is found to be a rising one in real terms, then there can be little doubt about the continuous improvement of the standard of living of the general people throughout the period. The 'other food' item in the NSS included pulses and pulse products, vegetables, fruits and nuts, spices, beverages and refreshments.

In the second group of items, i.e, the total consumer expenditure on non-food items, NSSO subdivided into six sub-groups viz, clothing, fuel and light, rent, taxes and miscellaneous and durable goods. Fuel and light covered coal, fire-wood, electricity, gas, kerosene, candle, matches and other lighting agents. As we have included 'Rent and Taxes', we are going into details of these categories of consumption in the miscellaneous group. In case of clothing we include bedding into. Thus to understand the pattern consumption in our study, total consumer expenditure on all items pooled together and that on food items and non-food items separately are taken into consideration. We make the percentage share of food, non food and total across tribes and non tribes over a time period, in the backward as well as West Bengal also.

Table 2.3.1: Percentage of MPCE of Food and Non food Items across ST and Non-ST of the Backward Region

Item	Category	Food	Non food
1993-94	ST	75.81	24.18
	Non-ST	73.01	26.98
	West Bengal	66.8	33.2
2004-05	ST	58.22	41.78
	Non-ST	53.33	46.67
	West Bengal	58.69	41.31
2009-10	ST	57.33	42.67
	Non-ST	52.26	47.74
	West Bengal	53.45	46.55
2011-12	ST	49.92	50.08
	Non-ST	50.94	49.06
	West Bengal	58.24	41.76

Source: Authors' calculation based on the unit level data of NSSO (50^{th} , 61^{st} , 66^{th} and 68^{th} round)

The Table 2.3.1 gives the trend of the relative shares of food and non food expenditure in MPCE for tribes and non tribes. In case of tribes the percentage share of food is more than 75.81 percent in 1993-94 which becomes 58.22 percent in 2004-05 and finally 49.92 percent in 2011-12. The more or less same trend has been found in case of non tribes also. In 1993-94 they have 73 percent food share which becomes 52.26 percent in 2009-10 and finally 50.94 percent in 2011-12. So over time it is quite clear that consumption expenditure has been decreasing over time for both tribes and non tribes. The same scenario has also been found in West Bengal as a

whole. The most notable point is that in 2011-12 tribes and non tribes are both sharing the same percentage more or less for food and non food. That means they are converging each other over time. As we know from Keynesian psychological law of consumption if the income increases the percentage share on expenditure of luxurious goods will increase. Now let us check the significant test on food and non food items across tribes and non tribes of the same period.

Table 2.3.2: Test of Significance of ST and Non ST for Food and Non-food Items in 1993-94 and 2011-12

		Mean Non-St	Mean ST	Mean Diff	SD Non-ST	SD ST	t- Value
2011-12	Food Items	682.98	552.66	130.32	294.36	224.94	305.56***
	Non-Food Items	625.06	451.8	173.22	412.75	291.29	309.44***
1993-94	Food Items	195.94	164.87	31.07	88.34	45.82	318.34***
	Non-Food Items	94.92	74.01	20.91	77.94	44.24	229.89***

Source: Authors' calculation based on the unit level data of NSSO (50^{th} , 61^{st} , 66^{th} and 68^{th} round)

Testing reveals that in case of food and non food items, the difference between tribes and non tribes are significantly high in the backward region.

Table 2.3.3: Test of Significance of ST for Food and Non-food Items in 1993-94 and 2011-12

	MPCE	Monthly Per Capita Food	Monthly Per Capita Non-food

		Consumption	Consumption
Mean in 2011-12	1004.50	552.66	451.84
Mean in 1993-94	238.88	164.87	74.01
Mean Diff	765.61	388.79	377.83
SD ST 2011-12	460.74	224.94	291.30
SD Non ST 1993-94	83.53	45.82	44.24
t-value	818.52***	594.83***	542.67***

Source: Authors' calculation based on the unit level data of NSSO (50th , 61st , 66th and 68th round)

The level of MPCE of STs in the backward region significantly increased in 2011-12 compared with 1993-94. It increased for both food and non food (Table 2.3.3).

Table 2.3.4: Test of the relative share of Non food consumption of STs and Non in 1993-94 and 2011-12

	Mean in 2011-12	Mean in 1993-94	Mean Diff	SD 2011-12	SD 1993-94	t-value
ST	50.08	24.18	25.9	21.56	26.78	17.073***
Non ST	49.06	26.98	22.08	23.41	31.29	7.684***

Source: Authors' calculation based on the unit level data of NSSO (50th , 61st , 66th and 68th round)

The relative share of Non Food Consumption of STs has been significantly increased over the years. It increased for non STs also (Table 2.3.4).

Now for better analysis the percentage share of food across tribes and non tribes are presented in table 2.3.5.

Table 2.3.5: Percentage of MPCE of Food Items across ST and Non-ST of the backward region:

Year	1993-94		2004-05		2009-10		2011-12	

	ST	Non-ST	ST	Non-ST	ST	Non-ST	ST	Non-ST
Cereals	38.8	27.92	22.08	15.16	19.33	13.15	13.54	10.47
Cereal Substitutes	1.5	0.8	0.0	0.0	0.0	0.0	0.0	0.0
Pulses	1.13	1.3	1.29	1.36	1.42	1.45	1.48	1.49
Milk & Milk products	3.03	3.13	3.54	3.05	3.64	2.89	2.85	2.23
Salt & Sugar	3.65	4.54	3.89	4.86	3.95	5.01	3.98	5.14
Edible Oil	3.03	3.89	3.56	4.13	3.54	4.19	3.68	4.56
Egg, Fish & Meat	3.21	3.68	4.58	4.64	5.68	5.82	5.83	6.45
Vegetables	7.65	9.54	3.37	3.38	3.25	2.65	2.17	2.05
Fruits (Fresh)	0.51	1.07	0.32	0.65	0.35	0.34	0.14	0.16
Fruits (Dry)	0.1	0.24	0.08	0.08	0.02	0.01	0	0
Spices	1.54	2.42	2.06	2.67	2.04	2.89	2.14	3.22
Beverages & Processed Food	2.46	3.5	2.89	3.56	3.51	4.02	3.68	4.65
Pan	1.23	1.99	1.14	0.76	1.05	0.51	0.8	0.44

Tobacco	0.87	0.98	0.57	0.34	0.43	0.25	0.42	0.24
Intoxicants	0.96	1.21	0.89	0.56	0.49	0.23	0.32	0.3
Fuel & Light	6.14	6.8	7.96	8.13	8.63	8.85	8.89	9.54
Total	75.81	73.01	58.22	53.33	57.33	52.26	49.92	50.94

Source: Authors' calculation based on the unit level data of NSSO (50^{th} ,61^{st} , 66^{th} and 68^{th} round)

In case of cereals which is the staple food have given near about 39 percent share for tribes and 28 percent for non tribes in 1993-94 where as it becomes 13.5 percent for tribes and 10.5 percent for non tribes in 2011-12 that means over time the cereal consumption has been decreased for both the categories. Whereas both of pulses and salt & sugar there have been a similar scenario found for both tribes and non tribes. In case of egg, fish, meat, sugar, edible oil, beverages and processed food, there has been as increasing trend over the time for both the categories. Though in case of vegetables and addicted items, such as pan, tobacco and intoxicants, the consumption of these items have been decreased between the study period for tribes and non tribes. And finally in case of fuel it is quite predictable that its percentage will be increasing over time. So from the above discussion it is quite clear that tribes and non tribes both are tending towards the high value products such as egg, fish, meat, edible oil and beverages and processed foods. The tribes are either tending towards non food or luxurious items or not can be depicted from the table 2.3.7. According to the economic theory we know that if income increases the consumption of food decreases and consequently the consumption of non food increases. Our study also gives the same picture for both the tribes and non tribes.

From the above scenario it is clear that the MPCE of cereals for tribes and non tribes have been decreasing over time. As the cereals are the main staple food for both STs

and Non STs, so it is quite significant to study the quantity of cereals consumed by them over the years.

Table 2.3.6: Quantity of Cereals Consumption (in Kilogram) by Tribes and Non tribes over the year 1993-94 to 2011-12

Year	Tribes	Non Tribes
1993-94	17.21	15.65
2004-05	15.45	13.90
2009-10	13.58	11.91
2011-12	13.58	11.26

Source: Authors' calculation based on the unit level data of NSSO (50^{th} , 61^{st} , 66^{th} and 68^{th} round)

The table 2.3.6 deals with quantity distribution of cereals in kilograms on total MPCE in real terms across tribes and non tribes over the years. Data reveals that quantity distribution of cereals has been decreased over the years of the study region. In case of tribes the quantity is 17.21 Kg at 1993-94 and decreases to 15.45 Kg at 2004-05, becomes 13.58 Kg in 2009-10 and finally 13.58 Kg in 2011-12. Whereas in case of non tribes 15.65 Kg is the quantity of cereals in 1993-94, becomes 13.90 Kg in 2004-05, 11.91 Kg in 2009-10 and 11.26 Kg in 2011-12. That means over times the quantity of cereals consumption of non tribes has been decreased more than the tribes. As discussed above, the percentage share of cereals consumption has been deceased over time for both tribes and non tribes over time, though the share in between 2009-10 to 2011-12 has remains unchanged. That means there must have been some impact of government program on consumption of tribes and non tribes. The impact

of Public Distribution System (PDS) on the household of our study area has been discussed in the later section.

Table 2.3.7: Percentage of MPCE of Non-Food Items across ST and Non-ST of the Backward Region:

Year	1993-94		2004-05		2009-10		2011-12	
	ST	Non-ST	ST	Non-ST	ST	Non-ST	ST	Non-ST
Clothing	4.2	5.1	8.87	9.65	8.35	9.04	8.55	9.43
Footware	1.2	1.4	3.54	4.52	3.02	3.72	3.18	3.18
Education	2.5	3.5	4.68	5.72	4.58	5.98	4.69	6.03
Medicine	1.6	1.54	3.5	3.8	3.16	3.76	4.51	3.97
Misc. Goods	13.08	13.54	16.54	17.56	18.35	19.15	20.5	19.84
Durable Goods	1.6	1.9	4.65	5.42	5.21	6.09	8.65	6.61
Total	24.18	26.98	41.78	46.67	42.67	47.74	50.08	49.06

Source: Authors' calculation based on the unit level data of NSSO (50^{th} , 61^{st} , 66^{th} and 68^{th} round)

As discussed earlier the percentage of non food consumption has been increased over time for both tribes and non tribes. Let us analyze non food consumption item wise. All the items of non food have given an increasing percentage over time across tribes and non tribes. The most interesting items are the miscellaneous and durable goods. In 1993-94 the share of miscellaneous good is 13.08 percent for tribe which becomes

20.5 percent in 2011-12, for non tribes it becomes 19.84 percent (2011-12) to 13.54 percent (1993-94). The same scenario has been seen in case of durable goods also. So it is quite clear that percentage share of tribes for miscellaneous and durable goods overlapping the non tribes. So tribes are following the same path as the non tribes of the backward region of West Bengal. The MPCE of non food of all the items for both the categories has been increasing over time but the rate increase of tribes is much higher than that of non- tribes. That means over time both the tribes and non tribes are diversified towards high value products.

2.4 Food Insecurity and Poverty:

The concept of Food Security is not a standalone phenomenon. “Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and and healthy life.” (FAO, 2002).

The budget share of food items of the class around poverty line is considered as a food security line. Poverty line has been given by the Expert Group under the chairmanship of Rangarajan on behalf of the Planning Commission of India. The methodology has been based on an exogenously determined poverty line which has been expressed in terms of Monthly Per Capita Consumption Expenditure. The report gave us two separate consumption baskets for the rural and urban areas in India as well as the state specific rural and urban poverty lines.

The Food Insecurity Line (FIL) is nothing but the minimum amount of monetary value for a person’s minimum food requirement during a month. The food insecurity lines (FIL) are derived from poverty lines which an area follows

$$FIL=PL * X$$

Where FILis the food insecurity line of the i-th state in the j-th region,

PLis the poverty line of the i-th state in the j-th region and

Xis the share of food of the i-th state in the j-th region.

Table 2.4.1: Sector Specific Poverty Line and Food Insecurity Line of Rural West Bengal (Rs. per capita per month)

Year	1993-94	2004-05	2009-10	2011-12
Poverty Line	283.0	445.0	643.0	783.0
Food Insecurity Line	193.25	280.4	395.7	472.9

Sources- Authors Calculation form State Specific Poverty Lines (Tendulkar Methodology)

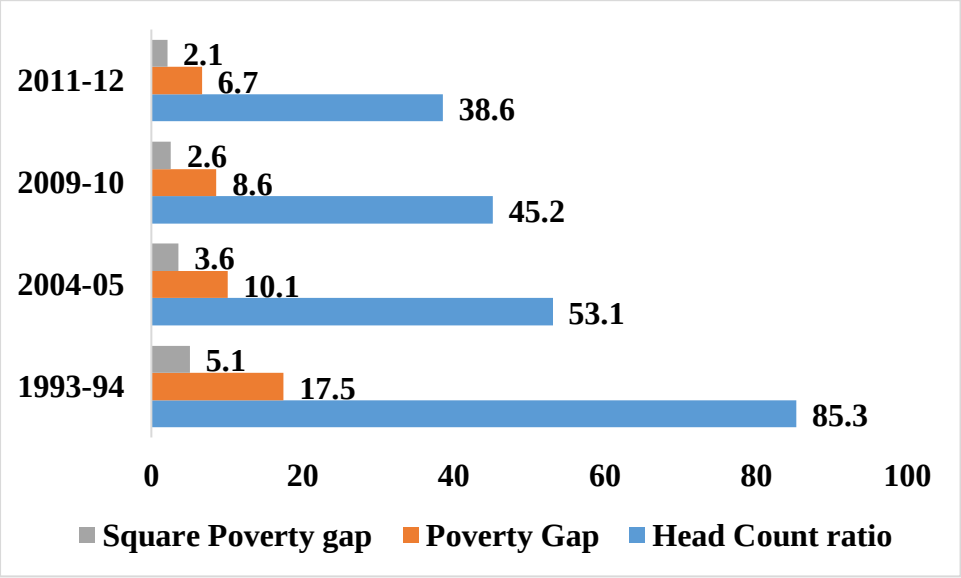
The table 2.4.1 deals with the sector specific poverty line and food insecurity line of rural West Bengal over the period 1993-94 to 2011-12. The state specific poverty line has been taken from the planning commission using Tendulkar methodology. In

1993-94 the poverty line of rural Bengal is Rs. 283, it becomes Rs. 445 in 2004-05, Rs. 643 in 2009-10 and finally Rs.783 in 2011-12. The food insecurity line has been calculated on the basis of poverty line and the share of expenditure on food. Food insecurity line calculated in 1993-94 is Rs. 193.25, Rs. 280.4 in 2004-05, Rs. 395.7 in 2009-10 and Rs. 472.9 in 2011-12. Let us now estimate the percent of household below poverty line of backward region across tribes and non tribes between the year 1993-94 to 2011-12.

The statuses of poverty and food insecurity are measured by using the methodology of Foster, Greer and Therbecke (1984).

The diagram 2.4.1 describes the Poverty Scenario of tribal population during 1993-94 to 2011-12

Figure 2.4.1: Poverty Scenario of Tribal Population during 1993-94 to 2011-12

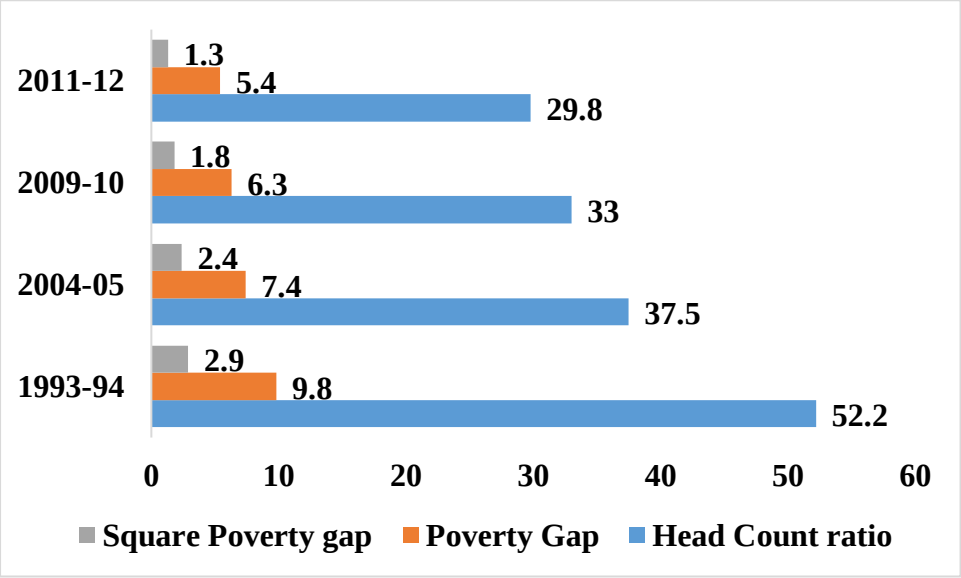


Source: Authors' calculation based on the unit level data of NSSO (50th , 61st , 66th and 68th round)

The table given in the appendix A2 depicts the poverty scenario of tribes across the time frame 1993-94 to 2011-12. The poverty scenario has been discussed on the basis

of Head count ratio (Incidence of Poverty), Poverty Gap (Depth of Poverty) and Square Poverty Gap (Risk of Poverty).The share of tribal population of below poverty line has been decreased from 85.3 percent in 1993-94 to 38.6 percent in 2011-12. Depth of poverty also decreased from 17.5 percentin 1993-94 to 6.7 percent in 2011-12. The poverty risk measured by the severity of poverty also decreased from 5.1 percentin 1993-94 to 2.1 percentin 2011-12. Thus, we can conclude that the overall poverty scenario of tribes in the backward districts of West Bengal has been improving during the years 1993-94 to 2011-12.

Figure 2.4.2: Poverty Scenario of NonTribal Population during 1993-94 to 2011-12



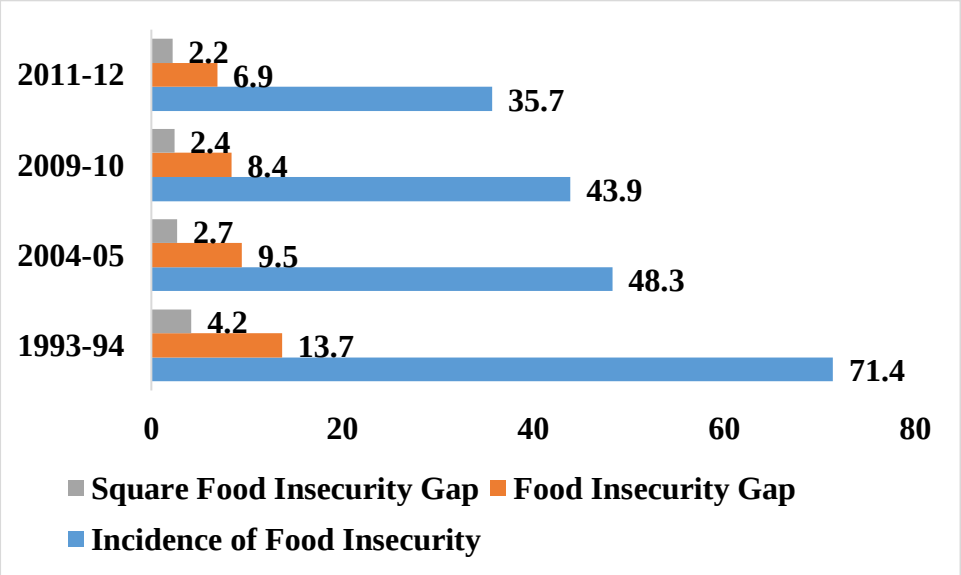
Source: Authors' calculation based on the unit level data of NSSO (50th ,61st , 66th and 68th round)

The table given in appendix A2 depicts the poverty scenario of non tribes across the time frame 1993-94 to 2011-12. .The share of below poverty people of non tribes has been decreased from 52.2 percent in 1993-94 to 29.8 percent in 2011-12. Depth of poverty also decreased from 9.8 percent in 1993-94 to 5.4 percent in 2011-12. The poverty risk measured by the severity of poverty also decreased from 2.9 percent in

1993-94 to 1.3 percent in the year 2011-12. Thus, we can conclude that the overall poverty scenario of non tribes in the backward districts of West Bengal has been improving over the studied time period. Though, the poverty scenarios of non tribes are better than tribes over the years.

The table given in appendix A3 illustrates the food insecurity scenario of tribes through different indicator.

Figure 2.4.3: Food Insecurity Scenario of Tribal Population during 1993-94 to 2011-12

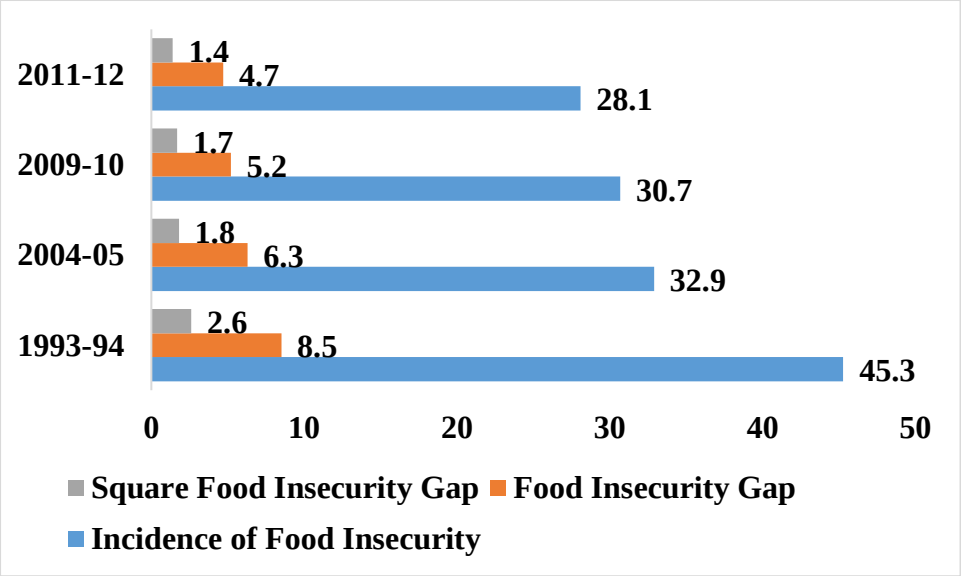


Source: Authors' calculation based on the unit level data of NSSO (50th , 61st , 66th and 68th round)

The table given in appendix A3 depicts the Food insecurity scenario of tribes across the time frame 1993-94 to 2011-12. The Food insecurity scenario has been discussed on the basis of head count ratio (Incidence of Food insecurity), food insecurity gap (Depth of Food insecurity) and square food insecurity gap (Risk of Food insecurity).The share of food insecure people has been decreased from 71.4 percent in

1993-94 to 35.7 percent in 2011-12. Depth of food insecurity also decreased from 13.7 percent in 1993-94 to 6.9 percent in 2011-12. The risk of food insecurity measured by the severity of food insecurity also decreased from 4.2 percent in the year 1993-94 to 2.2 percent in the year 2011-12. Thus, we can conclude that the overall Food insecurity scenario of tribes in the backward districts of West Bengal has been improving during 1993-94 to 2011-12.

Figure 2.4.4: Food Insecurity Scenario of Non Tribal Population during 1993-94 to 2011-12



Source: Authors' calculation based on the unit level data of NSSO (50th ,61st , 66th and 68th round)

The table given in appendix A3 depicts the Food insecurity scenario of tribes across the time frame 1993-94 to 2011-12. The share of food insecure people has been decreased from 45.3 percent in 1993-94 to 28.1 percent in 2011-12. Depth of food insecurity has also been decreased from 8.5 percent in 1993-94 to 4.7 percent in 2011-12. The Food insecurity risk measured by the severity of food insecurity also decreased from 2.6 percent in the year 1993-94 to 1.4 percent in the year 2011-12.

Thus, we can conclude that the overall Food insecurity scenario of tribes in the backward districts of West Bengal has been improving over the studied time period. Though, the study reveals that the Poverty scenarios of non tribes are better than that of tribes over the years.

As this section reveals that over time both the tribal and non tribal population of the Jangalmahal districts of West Bengal have become more secure, that means there has been an impact of Government Food Program on those households.

2.5 Impact of Public Distribution System on Consumption:

An important measure that has been taken by the government of India is to strengthen the public distribution system through proper provision of food grains and other food and non-food items that have been acted as the basic needs of life. Several policies have been undertaken to eradicate poverty for the benefit of people in general and weaker section, such as tribes. One of that measures to provide the security of food at affordable prices to the Below Poverty Line families. Government of India has been introduced the Targeted Public Distribution System (TPDS). The TPDS is a main instrument that focused on poverty alleviation through the mechanism of delivering minimum requirements of at least two food grains at a highly subsidized price to the households which are Below the Poverty Line (BPL).

Below poverty line is an economic benchmark used by the Indian government to indicate economic backwardness and to identify individual as well as households in need of government assistance and aid. Internationally, an income of less than $1.90 perday per head of purchasing power parity is defined as extreme poverty or BPL. It

is determined using various parameters which vary from state to state and within states. State specific BPL line has been discussed earlier in the previous section. The Public Distribution System provides rationed amounts of basic staple food items like rice, and wheat, and other food items like sugar and kerosene at below market prices to consumers through a network of fair price shops. Eligible families have been given a ration card that entitled them to buy fixed quantity of selected items. Like BPL card, another scheme Antodaya Anna Yojana (AAY) is a step in the direction of making TPDS that main focus is to alleviating hunger among the BPL families. Another important program is Annapurna (AP) scheme especially for the senior citizen of the BPL family, which releases food grains at the BPL rates.

As we know Public Distribution System (PDS) facilitates the supply of food grains and that has been implemented through the ration cards. Though the benefits of this system differs for different types of ration cards, i.e., BPL, APL, AP, AAY and which has been differs in respect of Jangalmahal and drought prone region also. Since the BPL beneficiaries under special schemes like Jangalmahal, allots more than AAY or APL. Since most of the households of tribes and non tribes are BPL families, they benefited more from the above schemes.

Table 2.5.1: Contribution of PDS in Consumption expenditure (%) of the Backward Region across Tribes and Non tribes:

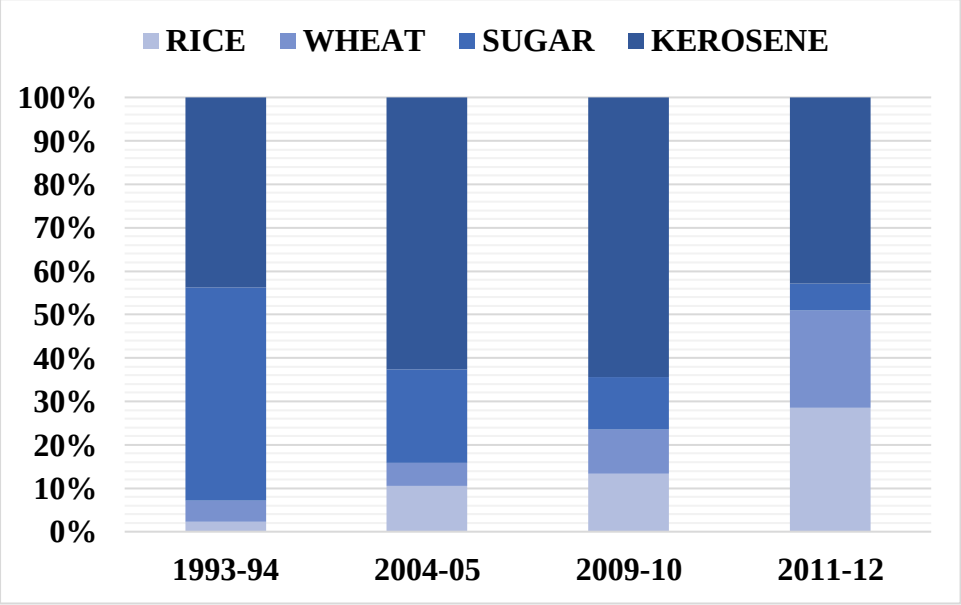
Year	ST	Non-ST
1993-94	9.48	12.13
2004-05	12.39	12.47
2009-10	14.95	13.73

2011-12	15.59	13.95

Source: Authors' calculation based on the unit level data of NSSO (50th ,61st , 66th and 68th round)

The table 2.5.1 deals with the percentage share of PDS on total MPCE across tribes and non tribes over the years. Data reveals that the percentage share of PDS has been increased over the years of the study region. In case of tribes the percentage is 9.48 in 1993-94 and it increases to 12.39 in 2004-05, becomes 14.95 in 2009-10 and finally 15.6 in 2011-12. whereas in case of non tribes it is 12.3 percent in PDS share in 1993-94, 12.47 in 2004-05, 13.73 in 2009-10 and 13.95 in 2011-12. So the most interesting phenomena is that tribes are benefited more from the the public distribution system than the non tribes. Again we can say that tribal consumption are more dependent on PDS than non tribal.

Figure 2.5.1: Percentage Share of Items of Public Distribution System of Tribes over the Years:

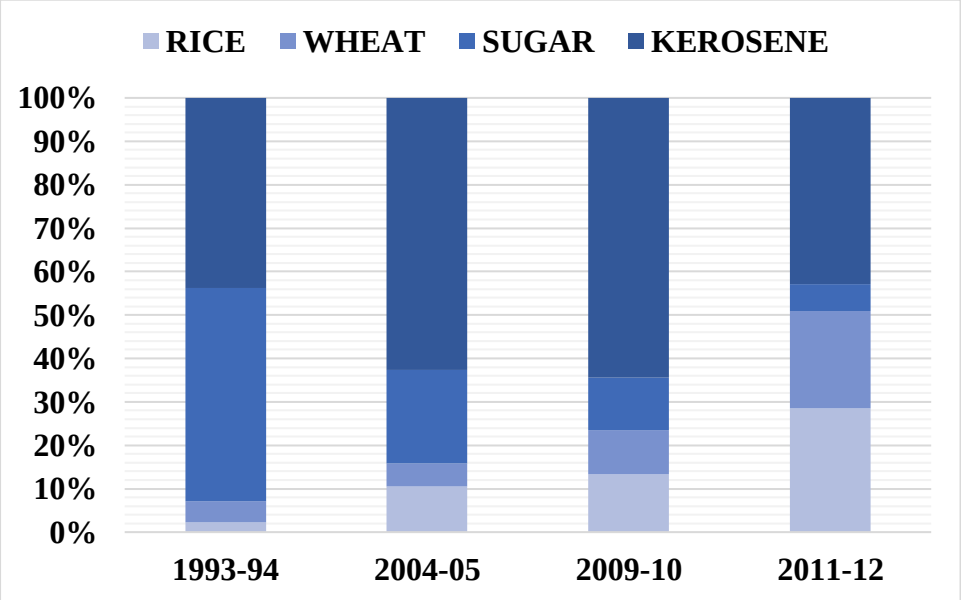


Source: Authors' calculation based on the unit level data of NSSO (50th , 61st , 66th and 68th round)

For better analyzing the contribution of PDS let us discuss the percentage share of PDS items of tribes and non tribes across the years. Table A4 in the appendix discussed the

percentage share of Public Distribution System items of Tribes across the year's. In case of tribes initially rice and wheat which we can say cereals percentage is quite low in 1993-94. But over the years the cereal percentage has been increased. Particularly after 2009-10 this cereal percentage has tremendously increased, it becomes more than 50 percent of total PDS contribution. The Jangalmahal BPL card has been worked as a safety net programme for the tribes that can be depicting from the figure 2.5.1. We have discussed earlier that the food insecurity scenario of tribes has been decreasing over time, resulting the good impact of PDS over them.

Figure 2.5.2: Percentage Share of Items of Public Distribution System of Non Tribes over the Years:



Source: Authors' calculation based on the unit level data of NSSO (50th ,61st , 66th and 68th round)

In case of non tribes the scenario is quite similar like tribes of the Jangalmahal districts. Initially in 1993-94 the cereal percentage is quite low than the other years though that percentage is greater than the tribes. Alike tribes after 2009-10 the contribution of cereal percentage has been increased tremendously, which becomes

near about 40 percent of total PDS contribution. That means non tribes also getting benefited from the PDS system though their benefit is lower than the tribes.

As the consumption of tribes and non tribes are dependent on Public Distribution System though the percentage of contribution differs. So the test of hypothesis between the two groups analyses the significant difference of 1993-94 and 2011-12.

Table 2.5.2: Test of Significance of PDS Difference between ST and non-ST in 2011-12 and 1993-94

		Mean of 2011-12	Mean of 1993-94	Mean Difference	t value
Tribes	Total PDS	67.254	17.279	49.974	6.409***
	Cereals PDS	34.268	1.235	33.024	5.278***
Non tribes	Total PDS	68.037	25.251	42.776	17.993***
	Cereals PDS	26.827	2.756	24.07	11.942***

Source: Authors' calculation based on the unit level data of NSSO (50^{th} ,61^{st} , 66^{th} and 68^{th} round)

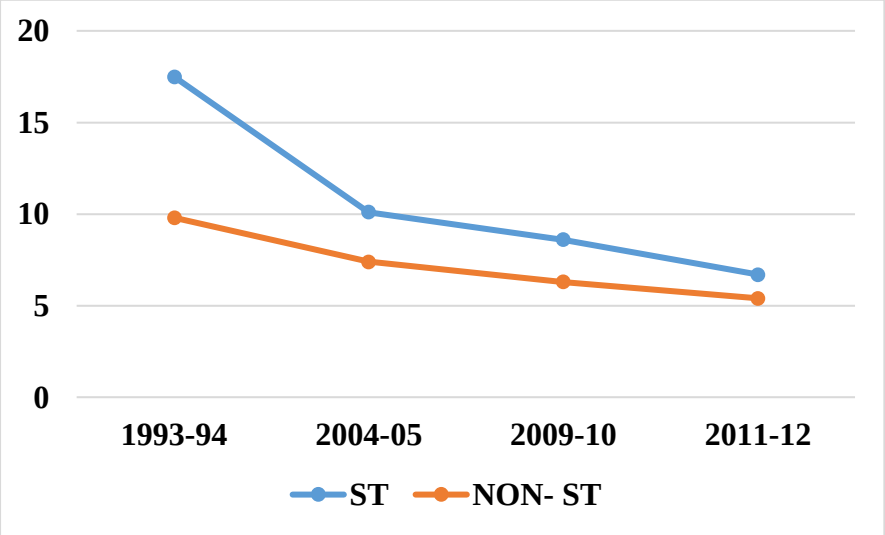
The table 2.5.2 has been classified into total PDS and cereals PDS across tribes and non tribes. Testing reveals that there has been significant difference of tribes and non tribes in case of total PDS and cereal PDS of the years 1993-94 and 2011-12.

2.6 Convergence in the Status of Poverty and Food Insecurity between Tribes and Non Tribes :

In our analysis we have studied the consumption expenditure of tribes and non tribe in new way. Study reveals that over the time the tribes become more food secure. The

reasons behind that have been discussed in the previous section. Now let us discuss the comparative analysis between tribes and non tribes of the backward region of West Bengal. This point can be illustrated with the help of gap analysis i.e., through Poverty Gap analysis and Food Insecurity Gap analysis.

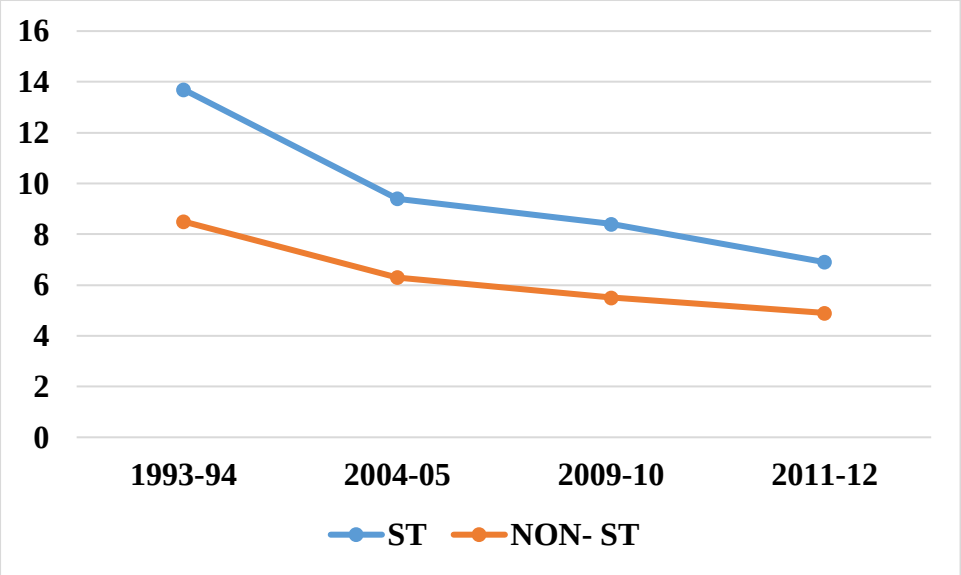
Figure 2.6.1: Poverty Gap of Tribes and Non Tribes over the Years



Source: Authors' calculation based on the unit level data of NSSO (50th, 61st , 66th and 68th round)

The diagram 2.6.1 deals with the poverty gap analysis of tribes and non tribes over the years. The poverty gaps of the tribes are decreasing more than the non tribes. As a result the gap between the two groups have been also diminishing, that means they are in a path of convergence in terms of poverty.

Fig 2.6.2: Food Insecurity Gap of Tribes and Non Tribes over the Years



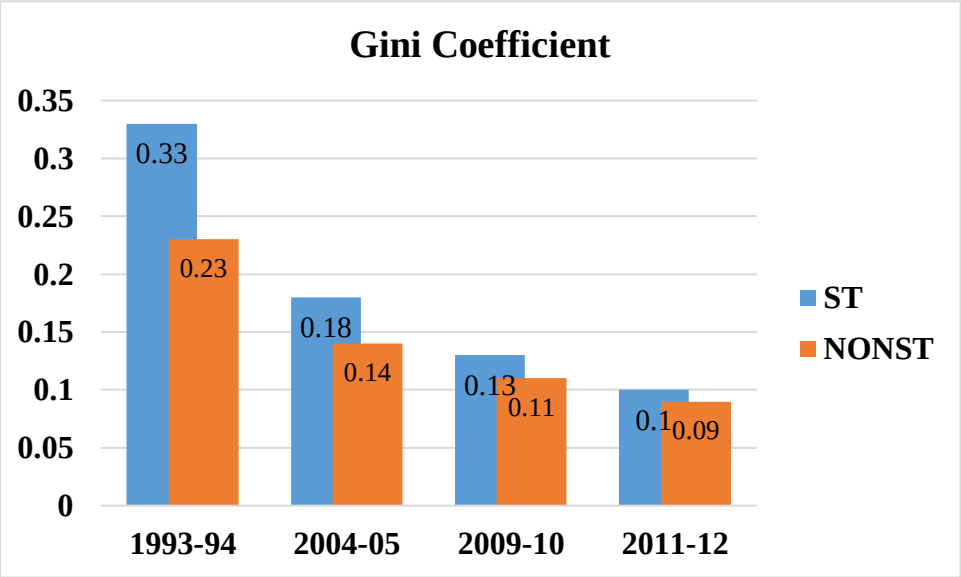
Source: Authors' calculation based on the unit level data of NSSO (50th, 61st , 66th and 68th round)

The figure 2.6.2 deals with the food insecurity gap across tribes and non tribes over the years. As we know, from the section 2.5 that the food security scenario for both tribes and non tribes has been improving. The food insecurity gaps of the non tribes are decreasing. As a result the gap between the two groups have been also diminishing, that means they are in a path of convergence in terms of food security also. That means both the groups are getting benefits of the public distribution system . That means they are in a converging path.

As our results show that due to decreasing poverty a large and perhaps growing section of the tribal population in the study districts of the backward districts of West Bengal and the gap between the two categories is reducing over time. The Gini coefficient has been used to measure the inequality between tribes and non tribes of our studied area. It has been developed by the Corrado Gini an Italian statistician in 1912.

Let us see the changing pattern of consumption inequality of food between the scheduled tribes and non tribes of the study area

Fig 2.6.3: Trend of Food Inequality across ST and Non ST of the backward region over the Year:



Source: Authors' calculation based on the unit level data of NSSO (50th , 61st , 66th and 68th round)

The figure 2.6.3 deals with the food inequality across tribes and non tribes over the years. In the study area consumption inequality is higher for scheduled tribes compare to non tribal population.The food inequality between tribes as well as non tribes has been diminishing over time. In case of tribes it was 0.33 in 1993-94 and it reduces to 0.1 in 2011-12. Whereas in case of non tribes the value of coefficient is 0.23 in 1993-94 and it reduces to 0.09 in 2011-12. Another notable point is that over the years the food inequality between the two groups has been diminishes, that means they are in a path of equality or they will converge over time.

2.7 Summing Up

Monthly Per Capita Consumption Expenditure (MPCE) of tribes and non tribes has been increasing overtime Tribes consume more non food products than food products over time, whose growth rate is more than that of non tribes and consequently the gaps are also reducing over time. Consumption of the items like Egg, Fish, Meat, Spices, Fuel and Light, Clothing, Durable goods and miscellaneous goods has been increased for both tribes and non-tribes over the studied time period. That means both the categories are trending towards the high value product. The study also reveals that over time the tribes are converging towards the non-tribes in terms of consumption. Though a major portion of tribes and non-tribes lies in below poverty zone and food insecurity zone, the percentage has been diminishing overtime. In 1993-94, 85.3 percent of tribal households lying below poverty line, whereas it becomes only 38.6 percent, in 2011-12. Again in case of non tribes for the year 1993-94, 52.2 percent of households lying below poverty line, whereas it becomes only 29.8 percent, in 2011-12. Now in case of food insecurity in 1993-94, 71.4 percent of tribal households lying below food security line, whereas it becomes only 35.7 percent in 2011-12. Again in case of non tribes in 1993-94, 45.3 percent of households lying below food security line, whereas it becomes only 28.1 percent in 2011-12. Study revels that in case of tribes there has been a significant impact of public distribution system on food security which results the poverty reduction also. Over the years consumption inequality of food between tribes and non tribes are also diminishing. Yet the application of Poverty gap and Food insecurity gap clearly shows an existence of increasing convergence between the two categories. So finally this chapter gives concluding remarks that tribes are converging towards the non tribes in terms of consumption expenditure and the level of tribal consumption increased during the reform periods and it also diversified towards high value products.