

## Trend and pattern of tribal consumption vis-à-vis non-tribal consumption in West Bengal during the reform periods

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### I. Introduction

*The Indian economy has recently grown at historically unprecedented rates and now one of the fastest growing economies in the world. Real GDP per head grew at 5.4% a year from 2000 to 2005. Real per capita consumption has also grown rapidly, at 3.9% a year from 2000 to 2005. It is widely recognized that with the development, inequality in the society gradually rises up to a point and then decreases. Kuznet (1955) has suggested that income inequality might be expected to follow inverse U shape curve in which inequality first rising with industrialization then declining. Increased inequality is the result of forces such as technological change, over which no control, or the globalization of world trade, which people believe despite historical evidence to the country, to be irreversible (Atkinson, 1999). But it is also very true and realistic that too much extreme inequality must definitely be avoided as it is unacceptable to most.*

Most researcher and policymakers recognized that for the wellbeing of people or household Consumption is better

indicator than Income. Because consumption provides more information compare to income. Such as, there are many upward and downward swings in income path of an individual whereas consumption path follow a more or less smooth curve over the life span with adjustment of saving and dis-saving or borrowing and taking or giving gift. Not only in the beginning and end years of an individual's life cycle income become low and high income during the working age, but also during working year's income of an individual fluctuates due to changes in socio-economic environment they live. In the unorganized sector and where job is uncertain, income fluctuation is high. Again government supports poor people through transfer payment or by providing subsidies to the commodity used by such individual on behalf of the redistributive policies of the government.

“Tribal population” mean the members of the Scheduled Tribes declared under the Article 342 of the Constitution of India. They are known to be the descendants of the earliest inhabitants of our country

(hence called Adivasis”). At present, in most parts of India, they form one of the economically weakest sections of the society. So far there has not been any systematic study of their living conditions covering the whole country. Whatever data are available are derived from the decennial censuses, apart from some micro studies carried out by social anthropologists. The National Committee (1981) on the development of backward areas recommended that the following types of problem areas be treated as backward for the purpose of planning: (i) chronically drought prone areas. (ii) Desert areas, (iii) Tribal areas, (iv) Hill areas, (v) Chronically flood affected areas, (vi) Coastal areas affected by salinity. These six categories can be viewed as six types of fundamental backwardness. In this sense an area may suffer from the handicap of more than one type of fundamental backwardness. According to the Task Force Report(2003) the index of backwardness is based on the three parameters e.g., a) value of output per agricultural workers, b) agricultural wage rate and c) percentage of SC/ST population. Under Rastriya Sam VikasYojana (now Backward Region Grant Fund) eight districts of West Bengal are listed as backward districts, namely

PaschimMidnapur, Bankura, Puruliya, Birbhum, 24 South Parganas, South Dinajpur, North Dinajpur and Jalpaiguri out of them three districts – PaschimMidnapur, Bankura, and Puruliya which are in the South-Western Region of West Bengal and boarding with Orissa, Jharkhand and Bihar is our proposed study area. This region is backward in respect of two categories of backwardness namely, drought prone and tribal areas. Nearly 38 per cent of tribal population of West Bengal is livening in these four districts (Census of India 2011). Among 19 districts of West Bengal these three districts are also treated as drought prone districts (Entire Puruliya district, 27 % of PaschimMidnapur, 32 % of Bankura).Not only that a significant area of these districts is forest land – 22 per cent Bankura, 18 per cent in , 15 per cent in Puruliya (State Forest Report 2010-11). These districts are described as JangalMahal of West Bengal meaning forest regions largely inhabited by tribal population.

The region is also witnessed following socio-economic backwardness: a) agricultural is the main occupation; according to latest Census (2011) 63 per cent of the population peoples are

predominately dependent on agriculture for their livelihood) b) low agricultural productivity and low agricultural wage (Das 2010). c) excessive dependence on forest for livelihood and the problem of deforestation, d) cattle breeding, cottage industries, artisan products and collection of forest products are subsidiary occupations (Das 2010), e) lack of infrastructure and modern industries, d) lack of education, healthcare and other civic amenities, f) low level of education; estimated literacy rate in this region is 61 per cent as per Census 2011 which is much lower than state average, and g) social backwardness with high unemployment and high incidence of poverty (29 per cent households are poor in Bankura, 37 per cent in PaschimMidnapur and 36 per cent in Puruliya (Govt. of West Bengal 2008).

In the present paper an attempt is made to analyze the consumption expenditure of the tribes and non-tribes during the last decade in Bankura, Puruliya and PaschimMidnapurdistrict of West Bengal as per the availability of unit level data sources from NSSO. In India the NSSO has been carrying out Consumer Expenditure Surveys quinquennially since 1972-73 (27th, 32nd, 38th, 43rd, 50th, 55th, 61st, 66th and 68th rounds of NSS at roughly 5 intervals). Based on these surveys, reports

dealing respectively with level and pattern of consumer expenditure, consumption of some important commodities, nutritional intake and sources of household income have already been published.

The reports in the post reform period rounds of 50<sup>th</sup> (1993-94), 61<sup>st</sup> (2004-05), 66<sup>th</sup> (2009-10) and 68<sup>th</sup> (2011-12) brings out the variation in the level of consumer expenditure by household occupation type, household social group and size of land possessed in rural India. Consumer expenditure on different food items are generally used as the main for measuring standard of living of the tribes of our study area. In general, tribes consumed the food baskets consists of cereals, pulses, vegetables, fish meat and beverages. The non-marketed items are excluded from the NSSO calculation of the consumption expenditure. Living closely to nature they are mainly dependent on forest products and/or product from their arable land. So these items are excluded from the NSSO calculation of consumption expenditure.

It is obvious that food problems and habits of tribes are bound to be different from those living in urban and rural areas. Food is a pre-requisite not only for attaining good health but also for maintaining adequate growth and body

equilibrium. The choice of food is deeply related to life style of an individual and also in which he is living. However the food habits are greatly influenced by thoughts, beliefs, notions and traditions of the society. Apart from these socio-cultural barriers, the religion, education and economic factor do alter the food habits. These factors are the determinants of the food pattern of the individuals in a given society but bound to vary among the societies, areas etc. In the era of globalization the question of sustainable livelihood has captured all the points of discussion. Since centuries the tribal communities who have been living in and around the forests, traditionally they depend on forest resources for their livelihoods. With the above background the present study tries to understand the convergence of tribal and non-tribal population of three districts, our study in this article.

## **II. Review of Literature:**

Keynesian psychological law of consumption states that increased income is distributed between consumption and saving. The psychology of the community is such that when aggregate real income is increased aggregate consumption is increased, but not to the proportion of increase in income. [Keynes (1936)]. Again

Propensity to consume is not the mere desire to consume, but the actual consumption that takes place or is expected to take place, out of varying amounts in the change in disposable income. [J.M. Keynes (1936)].

In India, Iyengar and Jain (1973) used Iyengar and Rao's formulation on the income free parameters of indirect addilog Engel curves to estimate the expected levels of consumption in India during the year 1970-71 and 1975-76, separately for rural and urban sectors. An important conclusion drawn from the exercise was that positive income elasticity did not necessarily imply an increase in demand when income rises. Pandey (1973) made an attempt to provide a more complete understanding of the demand relations of food grains in India. The study showed that there was a positive relationship between prices of food grains and per capita demand for them. Kumar (1979) analyzed the consumption expenditure data drawn from NSSO reports for the period from 1960-61 to 1973-74 for rural areas in India. He observed that the per capita expenditure at constant prices (total and also food) declined over the period with small fluctuation in intervening periods. George (1980) analyzed the cross-sectional data to examine the changes in

consumption levels according to the socio-economic characteristics of the population from 1961-62 to 1973-74. The study found that between 1961-62 and 1973-74 in rural areas there had been a decline in both expenditure and quantity elasticity, while quantity elasticity of cereals had increased in urban areas.

Again Singh and Patel (1982) analyzed the variation in consumer expenditure between rural and urban areas of Muzaffarnagar district in Uttar Pradesh using household survey data for the year 1976-77. It was observed that the total per capita expenditure (PCE) on food items especially on cereals, pulses, sugar and jaggery both in absolute and percentage terms was higher in rural areas than in urban areas. Sharma and Ram (1991) conducted a study on consumption pattern of households belonging to weaker sections of Saharanpur district. The study revealed that per capita total expenditure, expenditure on milk and milk products were higher in winter whereas expenditure on food items was higher in rainy season. Srivastava (1991) analyzed regional imbalance in production and consumption of fruits and vegetables in India. Examination of the consumption data showed that very little was spent on fruits and vegetables.

Jain and Patel (1996) studied consumption pattern of food and non-food items in Haryana state using NSSO data. The average per capita total expenditure of urban households was higher compared to rural households. Sekar and Senthilnatham (1994) studied the fish consumption pattern in Coimbatore city using 150 households post classified into three income groups. The study revealed that both the per capita consumption and expenditure increased with increase in income. Rup Kumar et al. (1995) conducted a case study on family consumption pattern in rural sector of Vidarbha region. Among the total expenditure made, major expenditure was made on food items. Kumar and Mathur (1996) noticed that structural changes in income would bring about major shifts in the consumption of milk, fruits, vegetables and livestock products in both the rural and urban areas.

Sahu and Panda (2003) conducted a study to find out the determinants of the Podu practice. Forest land and human labour are the only two inputs into the Podu production. The entire process of tribal development is yet to introduce so diverse and so stable a source of livelihood. Randhwa and Chahal (2005) examined the consumption pattern of milk

and milk products and the factors affecting their consumption in rural Punjab. Soe and Singh (2006) studied the household food consumption pattern in North Eastern states of India. The analysis had brought out clearly that North Eastern states consumed much lower quantities of food items like pulses, milk and milk products, edible oils and fruits as compared to all India averages and recommended levels. Nasurudeen and Kuruvilla (2006) attempted to analyze the dynamics of the per capita expenditure on various food groups. Results states that the share of non-cereal items in monthly per capita expenditure had been consistently increasing in both the rural and urban areas.

Misra and Padhan (2011) studied the traditionally and culturally indispensable food consumed by tribal women of Kalahandi and Koraput district of Odisha. The study reveals that in Koraput district, maximum number of respondents consumed indigenous flowers, cereals, cereals products and pulses in comparison to Kalahandi district. Mishra (2012) try to focus on the food related resources among Oraon tribe inhabiting the forest area of Sundarharh district of Orissa. Oraon, one of the major tribe, depended on the forest for their ritual and economic livelihood,

but in recent times they have become settled agriculturists. Zeeshan and Ali (2015) takes into account the impact of changing lifestyle on consumption pattern in relation to selected demographic variables and socio-economic characteristics. The study reveals that lifestyle of rural households is changing but with gradual pace to have conformity with the social, economic and cultural values. Better infrastructure and extensive awareness through media can turn them to huge market of future.

### **III. Socio- Economic Status of the Tribes and Non tribes household in West Bengal:**

Post-liberations period (after 1991) in India is no doubt significant because Indian economy, society and way of life of Indian people have changed considerably. Presently India is an emerging nation in the field of consumption business and Global policies. West Bengal is located in the eastern side of the country. Total population of West Bengal is 21463270 people according to 2011 census, 7<sup>th</sup> largest figure among the Indian states and the population density is 1029 person per square kilometer, which is the second densely populated state in the country.

Of the three districts under our study PaschimMidnapur is the largest in terms of

total population and density of population followed by Bankura and Paschim Midnapur in both 2001 and 2011.

These districts also vary substantially on gender and regional basis.

**Table 3.1: Population in Selected Districts of West Bengal, 2001 and 2011 (in millions)**

District	2001					2011				
	Male	Female	Urban	Rural	Total	Male	Female	Urban	Rural	Total
Bankura	1.64	1.56	0.24	2.96	3.20	1.84	1.76	0.30	3.30	3.60
Puruliya	1.30	1.24	0.26	2.28	2.54	1.50	1.43	0.37	2.56	2.93
Paschim Midnapur	2.65	2.54	0.62	4.59	5.19	3.03	2.91	0.71	5.23	5.94
West Bengal	41.47	38.71	22.43	57.75	80.18	46.93	44.42	29.1	62.2	91.3

Source: Census of India, 2001 and 2011

**Table 3.2: Density of Population, 2001 and 2011 (Population per Sq. Km.)**

Year	Puruliya	Bankura	Paschim Midnapur	West Bengal
2001	405	464	556	903
2011	468	523	636	1029

Source: Census of India, 2001 and 2011

Economic development of district or a region is measured by several indices like percentage of urban population, literacy rate, percentage of non-agricultural workers, etc. In terms of urbanization all the three districts lag behind the level of

urbanization of the whole of West Bengal. Again, among the three districts Paschim Midnapur district has the highest percentage of urban population followed by Puruliya while Bankura district is the least urbanized.

**Table 3.3: Percentage of Urban Population in Sample Districts, 2001 and 2011**

District	2001	2011
Bankura	7.50	8.33
Puruliya	10.07	12.74
Paschim Midnapur	11.56	11.95
West Bengal	27.97	31.87

Source: Census of India, 2001 and 2011

The literacy rate of West Bengal is 77.08, according to 2011 census. The rank of the

state is 20<sup>th</sup> in terms of literacy among all Indian states. The rate is just 3.07% higher

than national average. In our study area Bankura and Puruliya districts fall below that of the State as a whole while Paschim Midnapur district records the higher literacy than the whole of West Bengal. Urban literacy rate in the sample

districts and West Bengal as a whole was higher than the rural but this gap declined during 2001 to 2011. Similarly, gender gap in literacy rate also registered decline during this period in all the districts.

**Table 3.4: Literacy Rate, 2001 and 2011**

Year	Puruliya			Bankura			Paschim Midnapur			West Bengal		
	Person	Male	Female	Person	Male	Female	Person	Male	Female	Person	Male	Female
2001	55.57	73.72	36.50	63.4	76.8	49.4	70.4	81.3	70.4	68.5	77.0	59.6
2011	65.38	78.85	51.29	70.9	81.0	60.4	79.0	86.7	71.1	77.1	82.7	71.2

Source: Census of India, 2001 and 2011

**Table 3.5: Rural and Urban Literacy rates in Study districts of West Bengal, 2001 and 2011**

District	2001		2011	
	Rural	Urban	Rural	Urban
Bankura	62.04	80.22	69.60	85.23
Paschim Midnapur	68.71	82.43	77.92	87.01
Puruliya	53.57	75.40	63.75	76.24
West Bengal	63.42	81.25	72.97	85.54

Source: Census of India, 2001 and 2011

**Table 3.6: Rural and Urban Gap in Literacy rates in selected districts of West Bengal, 2001 and 2011 (in percentage)**

District	2001	2011
Bankura	18.18	15.63
Paschim Midnapur	13.72	9.09
Puruliya	22.16	12.49
West Bengal	17.83	12.57

Source: Census of India, 2001 and 2011



In case of Gender Gap all the selected districts gives a significant change compare to West Bengal. Though, Puruliya registered the highest literacy gap

among the three districts. Again in the case of Puruliya district urban rural literacy gap is the highest among the three districts.

**Table 3.7: Gender Gap in Literacy Rate in Districts of West Bengal, 2001 and 2011**

Region	Puruliya		Bankura		PaschimMidnapur		WestBengal	
	2001	2011	2001	2011	2001	2011	2001	2011
Total	37.22	27.56	27.33	10.56	22.17	15.55	17.41	11.51
Rural	39.13	29.03	28.25	21.4	23.43	16.43	19.97	13.43
Urban	20.12	17.47	16.2	11.73	13.02	9.36	10.39	7.45

Source: Census of India, 2001 and 2011

**Table3. 8: Urban Rural differential in Literacy Rate (Percentage), 2001 and 2011**

	Puruliya		Bankura		PaschimMidnapur		WestBengal	
	2001	2011	2001	2011	2001	2011	2001	2011
Male	12.66	6.72	12.3	10.91	8.54	5.64	13	9.64
Female	31.67	18.28	24.35	20.58	18.95	12.71	22.58	15.62
Total	37.22	27.56	27.4	10.56	22.17	15.55	17.41	11.51

Source: Census of India 2011

Now let us focus on the tribal community. The tribal communities in India are enormously diverse and heterogeneous.

There are wide ranging diversities among them in respect of languages spoken, size of population and mode of livelihood.

**Table 3.9: Total population of STs and proportion of STs in West Bengal to the total state and national population**

Name of the State	Total Population	ST Population	% of STs in the State to total State population	% of STs in the State to total ST population in India
India	1210569573	104281034	8.61	--
West Bengal	91276115	5296953	5.80	5.07

Source: Census of India, 2011.

The table depicts that in Indian nearly 9% of total population belongs to the tribal community, whereas, in case of West-Bengal 5.07% of population belongs to tribal.

**Table 3.10: State ST decadal growth rate**

State	Decadal Growth Rate among STs		Decadal Growth Rate among Total Population		% of STs in the State to total State population	
	1991-2001	2001-2011	1999-2001	2001-2011	2001	2011
India	24.45		23.66	22.66	17.64	8.20
West Bengal	15.70	20.2	17.77	13.84	5.50	8.61

Source: Census of India 2001 and 2011.

If we see the 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.

Scheduled Tribes' literacy rate of West Bengal is 57.92(2011) which is far below

from state average general literacy (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.

**Table 3.11: Scheduled Tribes' (ST) Literacy Rate in the selected districts of West Bengal, 2001-2011**

Districts	2001	2011
Puruliya	42.64	53.86
Bankura	49.6	59.37
Undivided Midnapur	47.97	62.15
West Bengal	43.4	57.92

Source: Census of West Bengal 2001 & 2011

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

**Table 3.12: ST Workers and Worker Population Ratio in West Bengal, 1971-2011**

	1971	1981	1991	2001	2011
<b>Workers</b>					
Male	705000	834000	1080303	1229606	1470385
Female	247000	440000	583806	774611	1038781
<b>Worker Population Ratio</b>					
Male	55.2	54.1	55.7	55.3	55.5
Female	20.0	29.1	31.2	35.5	39.2

Sources: Census of West Bengal 1971, 1981, 1991, 2001 & 2011

If we see the occupational structure of the tribes majority of the tribes are agricultural labors, this case has been seen both for males and females. The next highest percentage of STs in both the male and female Total working category is from other sectors.

**Table 3. 13: Occupation Classification of ST in West Bengal, 2011**

Occupation	Number		Percentage Share	
	Male	Female	Male	Female
Cultivators	234676	68214	16.0	6.6
Agricultural Labour	774549	675635	52.7	65.0
Household Workers	23301	42248	1.6	4.1
Other Services	437859	252684	29.8	24.3
Total Workers	1470385	1038781	100.0	100.0

Source: Census of India 2011.

Regarding the conditions of the Socio-Economic Status of Scheduled Tribes of West Bengal vis-à-vis Scheduled Tribes of India, some of the important indicators are shown below.

**Table 3.14: Basic Indicators of Scheduled Tribes in West Bengal and India:**

Indicator	ST (WB)	ST (India)
Decadal growth rate of population	20.20	23.66
Sex Ratio	999	990
Literacy rate	57.90	59.00

Infant Mortality Rate		95.7
Percentage of household having latrine facility within premises	24.40	22.60
Percentage of household having drinking water source within the premises	18.6	19.7
Percentage of household having access to treated tap water/ hand pump as drinking water source	56.67	53.82

*Source: House Listing Data, Census 2011*

If we compare tribes of West-Bengal and India we find that tribes of West-Bengal lagging behind India in case of literacy rate, drinking water facilities and decadal growth rate.

Now after the demographic features of schedule tribes of our study area (Puruliya, Bakura and PaschimMedinipur) as well as West-Bengal let us incorporate the theoretical background of the consumption pattern.

#### **IV. Theoretical framework of the Consumption pattern:**

**Proposition: If consumption expenditure of a social group will increase, then they will trying to consume non- food goods (high valued products) to tending towards the higher income class group.**

As we know from the Duesenberry's relative income hypothesis, if the income of an individual increases, the consumption rate of that individual will decrease and savings rate will increase. Again due to demonstration effect with increasing income that individual will consume more high value goods then the normal goods.

In this paper as our main focus is the consumption, we will analyse the theory with the help of consumption expenditure. Again consumption expenditure is a better proxy than income, the fluctuation of the income can be minimized if we use consumption expenditure instead of income.

We know that,  $f = h(c)$  and  $nf = j(c) \dots \dots \dots (1)$

Where  $f_1$  = food,  $f_2$  = non -food and  $c$  = Consumption

Assuming that:  $f_1$  = Food Consumption [ $=h(c)$ ] and  $f_2$  = Non- food Consumption [ $=j(c)$ ].

Therefore, we can say that  $f_1 - f_2$  is also a function of consumption.

Let  $f_1 - f_2 = \psi(c)$ .....  
.. (2)

Now according to demonstration effect when  $f_1 = f_2$  then  $\psi(c) = 0$ , which gives the critical value of  $C$  namely  $C^*$  whose characteristics will be as follows:

For,  $C < C^*$  ,  $f_1 > f_2$

$C > C^*$  ,  $f_1 < f_2$ .

	years	1993-1994	2004-2005	2009-2010	2011-2012
y	$f_1 - f_2$	$\Psi(c_1)$	$\Psi(c_2)$	$\Psi(c_3)$	$\Psi(c_4)$
x	AMPCE	$C_1$	$C_2$	$C_3$	$C_4$

Since the value of  $X$  are not equispaced , so we can estimate the function of  $\Psi(c)$  by Lagrange Interpolation Formula ,  $\Psi(c) = \sum_{i=0}^3 w_i(c) \Psi(c_i)$

Where  $\Psi(c)$  are known and  $w_i(c) = \frac{w(c)}{w'(c_i)(c-c_i)}$

Where we  $w = \frac{\pi^3}{120} (c-c_i)$

So we get

$$f_1 - f_2 = \Psi(c) = (-1.88 \times 10^{-3})c^3 + (0.996)c^2 - (174.8)c + 10203.27$$

and hence  $\Psi(c) = 0$  gives

$c = 211.5$  as only real root where other two are complex

Now we will try to find out the explicit relation between  $(f_1 - f_2)$  and  $C$  i.e., explicit form of  $\psi$ .

If we take the values of  $(f_1 - f_2)$  and the Average of Monthly Per capita Consumption Expenditure( $C$ ) across the years of the tribes, then by using Lagrange Interpolation Formula we get,

If we takes the value of  $(f_1 - f_2)$  along y axis and average MPCE along x axis over the years then, we can estimate  $(f_1 - f_2)$  as a function of AMPCE  $f_1 - f_2 = \Psi(c)$ .

And when  $\Psi(c) = 0$  gives the real root as  $c = c^*$  then

That implies the zero difference between food and non-food consumption.

Now the table responding the food and non-food consumption along the years with the AMPCE given below:

we get  $C = 211.5$  as a real root, which is the value of  $C^*$ .

So if we observe the consumption pattern of tribes across years, then we can estimate that very nearer to 2011-12, the food and non- food distribution of consumption will be more or less equal. Again over time tribes are tending to consume high value goods than normal goods, which means gradually they are approaching to follow the mainstream livelihood of non tribes, i.e., inspite of less consumption expenditure they are actually trying to absorbed the high class consumption pattern.

**V. Trend of Consumption scenario:**

Though this work is based on the rounds of 50, 61, 66 & 68 NSSO unit level data yet on some points it claims originally in its observation and procedures. The study has been viewed with the time allocation approach that consumption acts as a process. This study has been based on rural tribes vis- a -vis non tribes of Purulia, Bankura and PaschimMidnapur districts of West Bengal. The sample tribal

households that have been estimated for this study from NSSO unit level data are 152, 95, 55 and 70 of 1993-1994, 2004-2005, 2009-10 and 2011-12 respectively and the sample non tribal households that have been estimated for this study from NSSO unit level data are 1168, 1023, 585 and 570 of 1993-1994, 2004-2005, 2009-10 and 2011-12 respectively.

The concept of MPCE (Monthly Per Capita Expenditure) is defined as the household level (household monthly consumer expenditure ÷ household size). This gives us a good reference point to study the behavior and patterns along lifeline and lifestyle expenses. Table 4.1 shows the average MPCE of the tribes and Non- tribes’ people of the three backward districts, West Bengal, in different point of time. The table also gives the percentage distribution of population according to decile class and percentage of ST population belonging in those classes.

**Table 5.1: Average MPCE across decile classes**

Decile class		1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	Total
1993-94	Upper	168.	198.	216.	243.	269.	298.	341.	398.	532.	550	816.7
	Limit(Rs.)	86	86	67	17	52	71	2	18	8	0	97
	%of HH	7.3	12.3	9.7	11	10.3	9.5	10.3	9.8	10.1	9.7	-
	% of ST	9.21	21.7	12.6	11.9	16.4	7.3	9.2	7.9	1.3	1.9	-

			1									
	Average	142.	184.	206.	232	255.	282.	317.	368.	456.	856.	330.3
	MPCE	5	9	9		3	3	4	8	9	1	
2004-05	Upper	331.	400.	455.	507.	572.	642.	739.	878.	117	599	1169.
	Limit(Rs.)	9	6	3	6	6	3	4	4	1.7	2	2
	%of HH	11.7	10.7	10.9	11	10.5	9.4	9.7	9.8	8.8	7.6	-
	% of ST	21.4	7	19.8	17.5	11.2	5.5	4.9	5.5	4.3	2	-
	Average	278.	367.	430.	482.	540.	608.	688	805.	100	179	699.8
	MPCE	2	5	2	3	6	8		8	3.5	3.6	
2009-10	Upper	506.	637.	711.	787.	880.	995.	112	135	162	420	1282.
	Limit(Rs.)	6	2	8	8	1	8	4.4	4.1	0.6	4.4	3
	%of HH	9.8	10.1	13.2	9.6	11.1	9.8	8.8	10.8	8.7	8.1	-
	% of ST	10.5	11.2	16	11.4	8.8	6.8	5.3	12.5	7.8	7.9	-
	Average	439.	571.	675.	748.	833	933.	105	122	149	298	1096.
	MPCE	5	6	6	4		5	9.4	1.6	4.1	7.2	4
2011-12	Upper	683.	782.	893.	100	111	131	150	182	231	869	2013.
	Limit(Rs.)	9	7	3	1.7	3.5	6.9	5.8	1.8	2.6	9.6	2
	%of HH	10.4	11.5	9.8	9	26.1	6	3.5	12.5	4.5	6.9	-
	% of ST	10.5	12.4	26.5	5.4	22	4.5	1	11.4	2.1	4.5	-
	Average	583.	739.	842.	952.	106	119	139	164	206	335	1384.
	MPCE	5	3	1	9	8.4	9.5	7.9	7.3	2.9	3.7	8

**Source:** Authors' calculation from NSSO unit level data (50<sup>th</sup>, 61<sup>st</sup>, 66<sup>th</sup> and 68<sup>th</sup> round)

From the table we can see that in the 1<sup>st</sup>decile class percentage population of ST have been increased in 2011-12 compare to 2004-05 (21.4% from 10.5%), i.e., tribes are emerging towards the higher consumption class. Again the 5<sup>th</sup>decile class show that percentage population of tribes has been doubled in 2011-12 compare to 2004-05. Accordingly in the 10<sup>th</sup>decile class the percentage population of tribes have been also increased from

1.9% in 1993-94 to 4.5% in 2011-12. On the other hand we can see that the patterns of consumption expenditure of non tribes are fluctuating in the observed period.

The next table deals with average MPCE across tribes and non tribes in West Bengal our study period.

**Table 5.2: Average MPCE across ST and Non ST**

Category		1993-94	2004-05	2009-10	2011-12
		AMPCE	AMPCE	AMPCE	AMPCE
Between Region	ST	251.74	511.5	992.30	1212.2
	Non-ST	339.98	717.5	1133.86	1405.9
	Total	330.3	699.8	1096.4	1384.8
West Bengal		279	562.11	857.77	1290.68

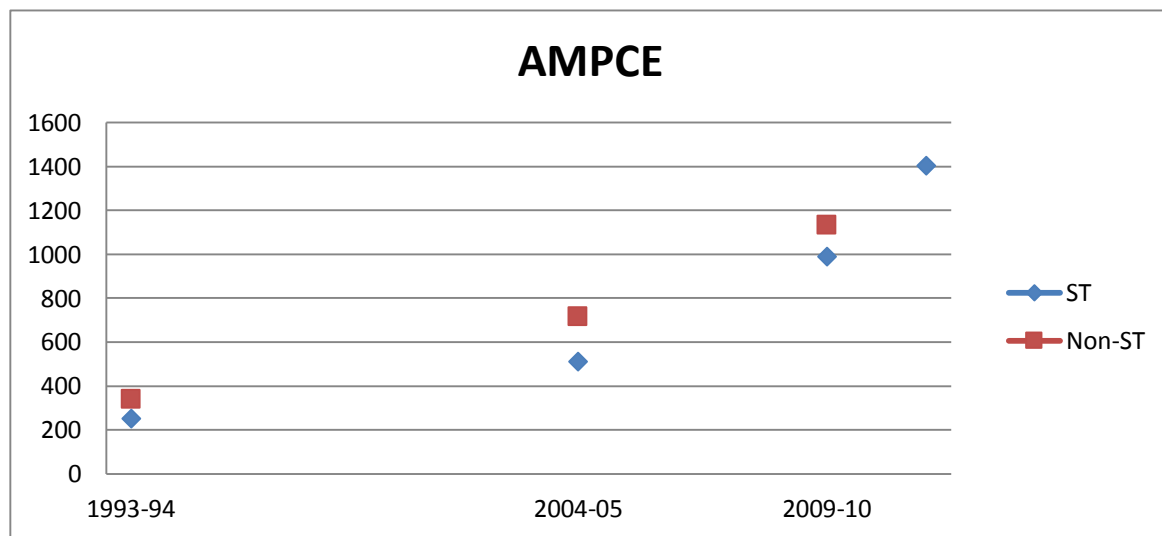
*Source: Authors' calculation from NSSO unit level data (50<sup>th</sup>.61<sup>st</sup>, 66<sup>th</sup> and 68<sup>th</sup> round)*

\* AMPCE= Average MPCE

Average MPCE of West Bengal has been increasing in that period. Though, it has been higher than the Average MPCE of tribes throughout the study period. And the

average MPCE of the non tribes are greater than STs and West Bengal over the time. The position of STs and Non STs has been illustrated with the help of the following diagram.

**Figure 5.1: Average MPCE across ST and Non ST**



*Source: Authors' calculation from NSSO unit level data (50<sup>th</sup>.61<sup>st</sup>, 66<sup>th</sup> and 68<sup>th</sup> round)*

The next table that is table 4.3 gives the trend of MPCE in current and constant price of tribes and non-tribes over time.

**Table 5. 3: Growth in MPCE at Current and Constant prices**

Category	1993-94		2004-05		2009-10		2011-12	
	MPCE current price	MPCE constant price	MPCE current price	MPCE constant price	MPCE current price	MPCE constant price	MPCE current price	MPCE constant price
ST	251.74	143.03	511.46	165.52	992.30	200.87	1212.19	209



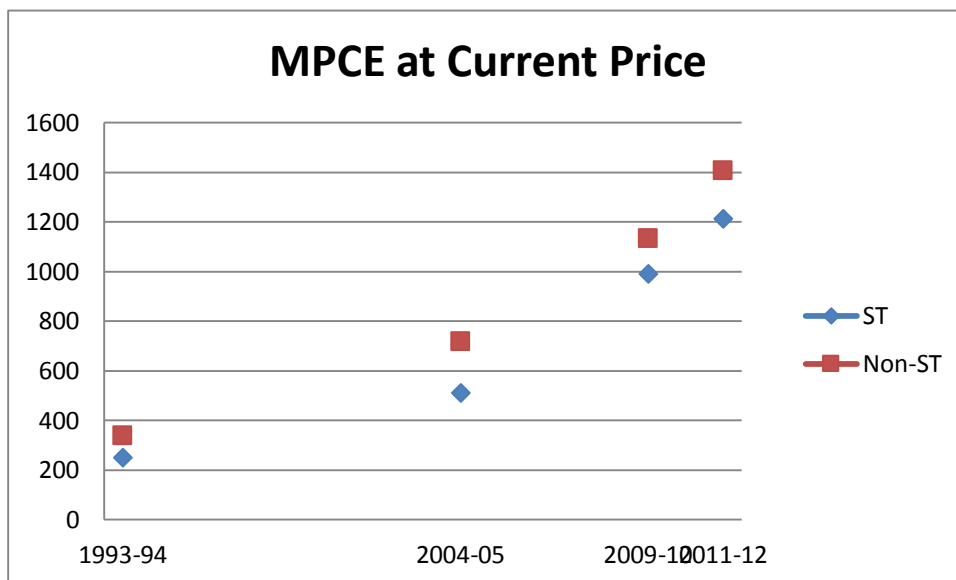
<b>Non-ST</b>	339.98	193.17	717.53	232.21	1133.86	229.53	1405.87	242.39
<b>Price Deflator</b>	<b>176</b>		<b>319</b>		<b>494</b>		<b>580</b>	

**Source:** Authors' calculation from NSSO unit level data (50<sup>th</sup>, 61<sup>st</sup>, 66<sup>th</sup> and 68<sup>th</sup> round)

\*Price deflators for the years up to 2009-10 are taken from NSS Report No.538: Level and Pattern of Consumer Expenditure; they represent price indices for rural and urban India with base 1987-88=100. For 2011-12 indices have been computed as a continuation of this series, with the help of CPI-AL for the rural sector.

In case of current price the MPCE has been increased in 2011-12 compare to 1993-94 (for tribes it becomes 1212.19 to 251.74 and for non tribes it becomes 1405.87 to 339.98). This can be illustrated with the help of the following diagram.

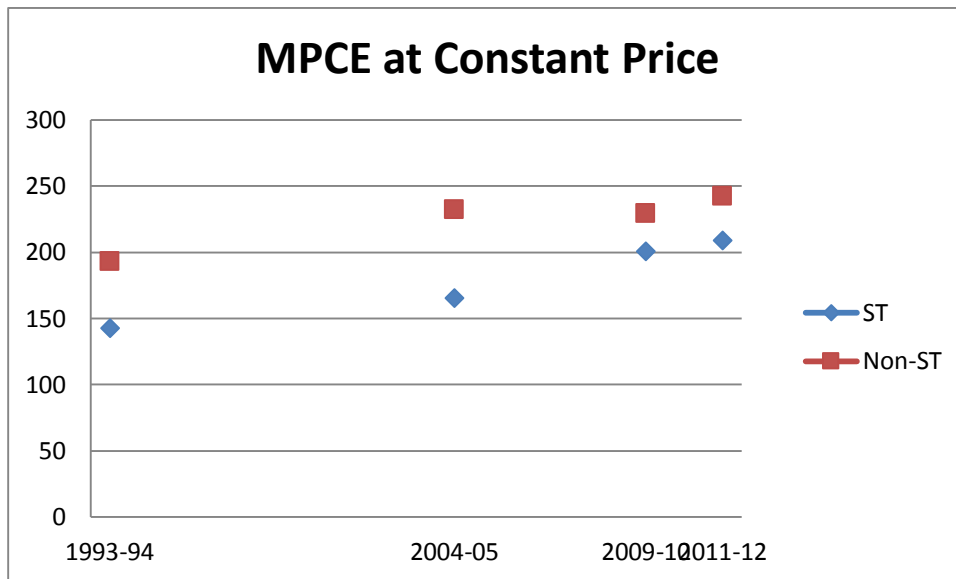
**Figure 5.2: MPCE at Current Price of Tribes and Non Tribes**



**Source:** Authors' calculation from NSSO unit level data (50<sup>th</sup>, 61<sup>st</sup>, 66<sup>th</sup> and 68<sup>th</sup> round)

Again in constant price the MPCE of tribes and non tribes has been increasing marginally. That has been depicted in the below figure.

**Figure 5.2: MPCE at Constant Price of Tribes and Non Tribes**



*Source: Authors' calculation from NSSO unit level data (50<sup>th</sup>, 61<sup>st</sup>, 66<sup>th</sup> and 68<sup>th</sup> round)*

So, the consumption expenditure of tribes has been increased more than non tribes in 2011-12 compare to 2009-10, which indicates that the two categories are converging in respect of consumption expenditure. Though in both the case of current and constant prices, the price level of tribes are less than non tribes over time.

## VI. Pattern of Consumption Expenditure:

The trends of consumption expenditure of tribes and non tribes have been analyzed in the next table. The percentage of food and non food items across tribes have been represents in the percentage form.

**Table 6.1: Percentage of MPCE of Food and Non food across ST and Non-ST**

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	50.33	49.67
	West Bengal	58.69	41.31
2009-10	ST	57.33	42.67
	Non-ST	52.26	47.74
	West Bengal	63.45	36.55

2011-12	ST	49.92	50.08
	Non-ST	50.94	49.06
	West Bengal	58.24	41.76

*Source: Authors' calculation from NSSO unit level data (50<sup>th</sup>.61<sup>st</sup>, 66<sup>th</sup> and 68<sup>th</sup> round)*

The above table gives the trend of food and non food expenditure in MPCE form across tribes and non tribes of our study area. We can see that the MPCE of food has been decreasing over time for both the categories.

**Table 6.2: Percentage of MPCE of Food Items across ST and Non-ST**

Item	Category	Cereals	Pulses	Milk & milk product	Edible oil	Egg, fish & meat	Vegetables	Fruits	Salt sugar	Spices	Beverages	Total
1993-94	ST	38.8	1.3	1.13	3.03	3.66	4.97	0.51	1.16	1.54	2.46	75.81
	Non-ST	21.92	1.3	3.13	3.89	4.68	4.72	1.07	1.28	1.42	3.5	73.01
2004-05	ST	28.08	1.1	0.03	3.4	5.38	6.99	6.63	1.22	1.16	1.72	58.22
	Non-ST	20.47	0.84	0.03	3.93	4.58	7.59	5.99	1.48	0.88	2.08	50.33
2009-10	ST	25.86	1.85	0.02	3.55	6.19	8.26	0.7	1.48	2.27	5.21	57.33
	Non-ST	18.05	2.46	0.04	3.56	6.9	7.33	1.18	1.64	2.08	5.35	52.26
2011-12	ST	18.28	2.21	0.03	3.97	6.96	5.6	1.26	1.26	2.08	1.13	49.92
	Non-ST	16.21	2.31	0.04	4.17	7.96	5.73	1.58	1.51	2.42	1.05	50.94

*Source: Authors' calculation from NSSO unit level data (50<sup>th</sup>.61<sup>st</sup>, 66<sup>th</sup> and 68<sup>th</sup> round)*

In case of tribes the MPCE of cereals becomes 18.28% (2011-12) compare to 38.8 % (1993-94) and for non tribes it becomes 16.21 % (2011-12) to 21.92 % (1993-94) and also milk consumption decreases over time. On the other hand the

consumption expenditure of edible oil, egg, fish and meat, spices and vegetables are increasing over the point of time. According to the economic theory we know that if income increases the consumption of food has been decreased and consequently

the consumption of non food has been increased. Our study also gives the same picture for both the tribes and non tribes.

**Table 6.3: Percentage of MPCE of Non-Food Items across ST and Non-ST**

Item	Category	Pan, Tobacco, Intoxicants	Fuel, Light	Clothing	Footwear	Education	Miscellaneous goods & services	Durable goods
1993-94	ST	3.1	5.14	2.2	0.2	NA	11.3	1.6
	Non-ST	1.23	6.8	5.1	0.6	NA	12.3	1.9
2004-05	ST	4.15	8.54	3.96	0.32	2.9	14.3	3.1
	Non-ST	1.98	12.3	6.27	0.68	4.1	19.54	4.8
2009-10	ST	4.01	8.86	4.94	0.36	3.91	15.86	2.15
	Non-ST	2.01	11.56	6.21	0.59	4.18	17.65	4.96
2011-12	ST	6.14	12.54	4.98	0.62	3.69	16.83	3.51
	Non-ST	2.52	13.54	6.21	0.72	5.65	16.29	3.47

*Source: Authors' calculation from NSSO unit level data (50<sup>th</sup>, 61<sup>st</sup>, 66<sup>th</sup> and 68<sup>th</sup> round)*

The MPCE of non food for both the categories has been increasing over time but the increasing rate of tribes is much higher than that of non- tribes. Although in absolute form non tribes expend more than that of tribes in non food items but according to MPCE in 2011-12 tribes expends 1.02 % more than that of non tribes in case of non food items.

But we cannot conclude the impact of poverty and food insecurity in this context. In the next section we have been analyze these indicators which indicates the real scenario.

**VII. 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 healthy life.”(FAO 2002).

This profoundly important—and seemingly-simple—definition of food security from the World Food Summit of 1996 actually has four elements:

1. Enough food must be available to meet people’s needs.
2. People must have access to the food that is available under normal circumstances.
3. Volatility in production or prices must not threaten this availability, and
4. The quality of food that people consume must be adequate for their needs.

So food security implies access by all people at all times to sufficient quantities of food to lead an active and healthy life. It can also deal with sustainable economic growth, environment and trade.

Amartya Sen (Feb, 1986) in his book “*Food, Economics and Entitlements*” deals with the

concept of food insecurity. Food insecurity is often a source of instability in households, communities, and nations, impeding their growth and development. The below table describe the percentage of tribal and non tribal population below food insecurity line.

**Table 7.1: Percentage of household below Poverty Line**

Year	ST	Non-ST
1993-94	84.21	64.81
2004-05	43.89	30.18
2009-10	39.5	24.15
2011-12	31.6	16.9

*Source: Authors' calculation from NSSO unit level data (50<sup>th</sup>.61<sup>st</sup>, 66<sup>th</sup> and 68<sup>th</sup> round)*

For both the population categories the percentage have been diminishing over time, in case of tribes it becomes 31.6 % (2011-12) compare to 84.21 % (1993-94) and for non tribes it becomes 16.9% (2011-12) from 64.81 % (1993-94).

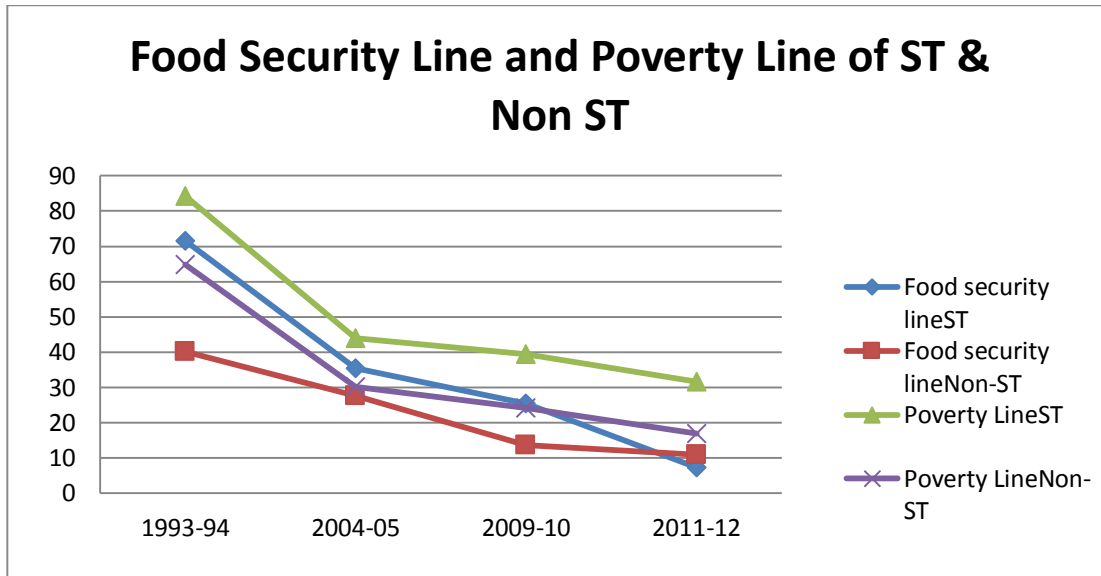
**Table 7.2: Percentage of household below Food Security Line**

Year	ST	Non-ST
1993-94	71.54	40.23
2004-05	35.5	27.68
2009-10	25.47	13.6
2011-12	7.36	10.98

*Source: Authors' calculation from NSSO unit level data (50<sup>th</sup>.61<sup>st</sup>, 66<sup>th</sup> and 68<sup>th</sup> round)*

The same results have been seen in case of food security also. But this diminishing rate is higher in case of tribes compare to that of non tribes which actually depicts the convergence scenario between the two categories.

**Figure 7.1: Food Security Line and Poverty Line of ST & Non St**



*Source: Authors' calculation from NSSO unit level data (50<sup>th</sup>, 61<sup>st</sup>, 66<sup>th</sup> and 68<sup>th</sup> round)*

The status of poverty (and food insecurity) is measured by using the methodology of Foster, Greer and Therbecke (1984) as

$$PI_{\alpha} = \frac{1}{N} \sum_{i=1}^q \left( \frac{PL - E_i}{PL} \right)^{\alpha} ; \alpha = 0, 1, \text{ and } 2$$

Where, PL is the poverty line and  $E_i$  is the expenditure of the  $i$ -th household.

When,  $\alpha = 0$ ,  $PI_0$  implies the incidence of poverty

$\alpha = 1$ ,  $PI_1$  implies the depth of poverty

and  $\alpha = 2$ ,  $PI_2$  implies the severity of poverty

Similarly we can calculate food insecurity, food insecurity gap (FIG) and square food insecurity gap (SFIG).

The next table illustrates the poverty scenario of tribes and non tribes through different indicator.

**Table 7.2: Poverty Indicator**

Indicator	1993-94		2004-05		2009-10		2011-12	
	ST	NON- ST	ST	NON- ST	ST	NON- ST	ST	NON- ST
Head Count ratio	0.9	0.69	0.53	0.34	0.42	0.27	0.38	0.25
Poverty Gap	0.2	0.09	0.12	0.08	0.09	0.06	0.05	0.04
Square Poverty Gap	0.05	0.01	0.04	0.03	0.03	0.02	0.01	0.03

*Source: Authors' calculation from NSSO unit level data (50<sup>th</sup>.61<sup>st</sup>, 66<sup>th</sup> and 68<sup>th</sup> round)*

These three indicators give the positive result on poverty evaluation. That means none only percentage of population below poverty line decreases but also but also the gap between the two categories also decreases.

Consequently the food insecurity has been describes in the next table.

**Table-7.3 : Food insecurity Indicator**

	1993-94		2004-05		2009-10		2011-12	
	ST	NON-ST	ST	NON - ST	ST	NON-ST	ST	NON - ST
<b>Incidence of Food Insecurity</b>	0.74	0.44	0.41	0.29	0.27	0.16	0.08	0.11
<b>Food Insecurity Gap</b>	0.17	0.07	0.09	0.06	0.03	0.02	0.01	0.01
<b>Square Food Insecurity Gap</b>	0.04	0.01	0.03	0.04	0.01	0.00	0.00	0.00

*Source: Authors' calculation from NSSO unit level data (50<sup>th</sup>.61<sup>st</sup>, 66<sup>th</sup> and 68<sup>th</sup> round)*

The above table gives the same result as the above, i.e., gradually both tribes and non tribes become food secure in 2011-12 compare to 1993-94. But tribes has been became more food secure compare to that of non tribes. As we know Public Distribution System (PDS) facilitates the supply of food grains and this supply 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 differs in respect of Jangalmahal and drought prone region. Such as provision of getting per head rice for specially identified BPL in JangalMahal area is 2 KG/week and for

Wheat is 750 gm/week. Generally the scale of distribution for BPL is 1Kg/head/week for rice and 1125 gm/head/week of Wheat. In case of AAY, the scale for distribution of rice is 1250 gm /head/week and 750 gm /head/week for wheat. In case of Bankura, Puruliya and PaschimMidnapur BPL allots more rice than all districts of West Bengal, due to more allotment under the schemes of Jangalmahal and drought prone area. Since the BPL beneficiaries under special schemes allots more than AAY or APL, these three districts differs from the overall scenario. Since most of the households of tribes are BPL families, they benefited

more than that of the non tribes of these three districts. As a result tribes become

more food secure compare to that of the non tribes.

**Table- 7.4: Contribution of PDS in Consumption (%)**

Item	1993-94		2004-05		2009-10		2011-12	
	ST	Non-ST	ST	Non-ST	ST	Non-ST	ST	Non-ST
Rice	NA	NA	10.8	10.7	21.2	10.1	14.2	11.8
Wheat	NA	NA	10	10.3	21.1	17.7	13.3	12.1
Sugar	NA	NA	20	10.2	6.3	5.1	9.8	7.3
Kerosene	NA	NA	NA	NA	10.3	6.8	6.3	5.9
<b>Total PDS</b>	NA	NA	<b>40.7</b>	<b>41.3</b>	<b>15.2</b>	<b>10.8</b>	<b>14.7</b>	<b>10.6</b>

*Source: Authors' calculation from NSSO unit level data (50<sup>th</sup>, 61<sup>st</sup>, 66<sup>th</sup> and 68<sup>th</sup> round)*

Now, let us examine this inequality with the help of Gini coefficient. The Gini coefficient has been used to measure the inequality between tribes and non tribes of our study area. It is defined as a ratio with value between 0 and 1, i.e., the numerator is the area between the Lorenz curve across tribes and non tribes and the equality line and the denominator is the

area under equality line. It was developed by the Italian statistician Corrado Gini at 1912.

The under the assumption of log normality Gini coefficient is defined by Gini as

$$g = \frac{1}{2n^2\mu} \sum |y_i - y_j|$$

Where,  $y_1, y_2, \dots, y_n$  are the distribution of individual consumption of  $n$  samples and  $\mu$  is an average value of them.

**Table 7.4: Gini Coefficient within deciles groups of MPCE of ST and Non ST.**

	1993-94	2004-05	2009-10	2011-12
<b>ST</b>	0.33	0.38	0.16	0.32
<b>Non- ST</b>	0.00	0.15	0.13	0.20

*Source: Authors' calculation from NSSO unit level data (50<sup>th</sup>, 61<sup>st</sup>, 66<sup>th</sup> and 68<sup>th</sup> round)*

The result is shown in the above table separately for tribes and non tribes for the period of 1993-94 to 2011-12. The results reveal that in each case of the study point consumption inequality of the decile classes of MPCE of scheduled tribes are

greater than that of non tribal population of our study area.

The overall scenario depicts that the tribes are in a converging path which has been illustrated in the final section of our study.

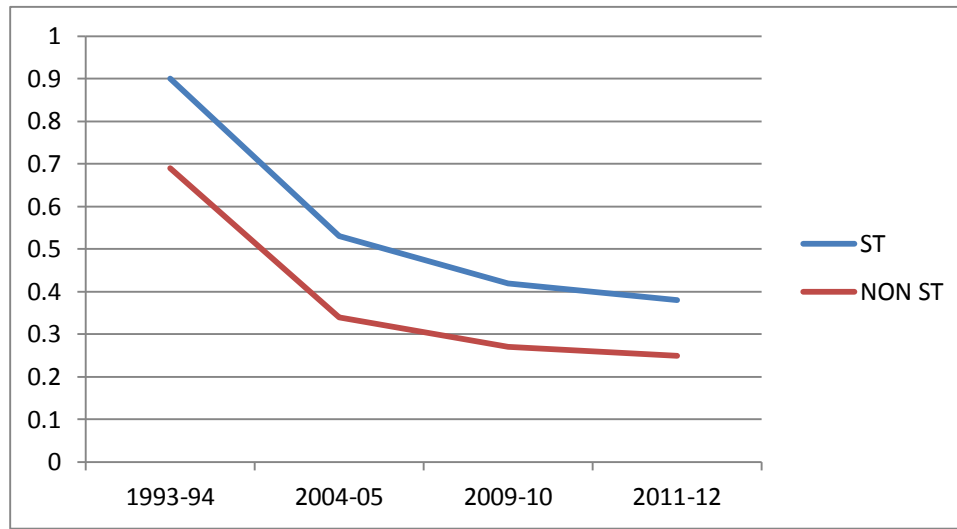
### VIII. Convergence and Conclusion:



In our analysis we have studied the consumption expenditure of tribes and non-tribe in new way. Over time the tribes becomes more food secure, compare to

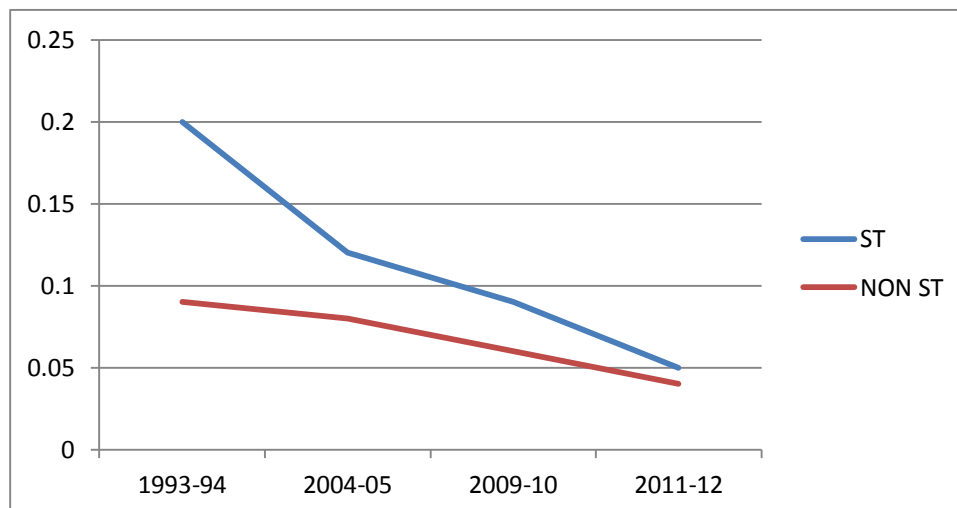
non-tribes. This point can be illustrated with the help of gap analysis i.e., through Poverty gap and Food insecurity gap.

**Fig-8.1: Head Count Ratio**



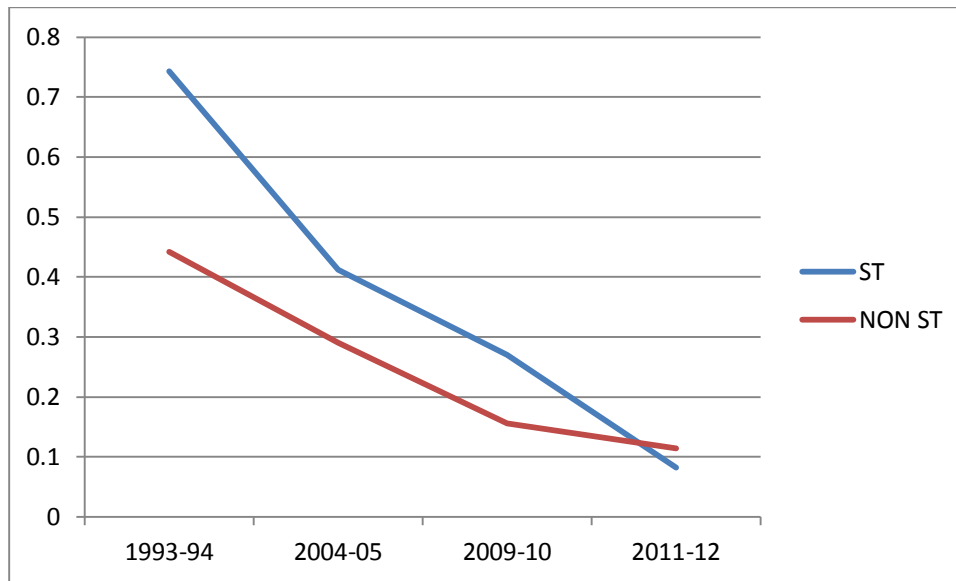
*Source: Authors' calculation from NSSO unit level data (50<sup>th</sup>, 61<sup>st</sup>, 66<sup>th</sup> and 68<sup>th</sup> round)*

**Fig8.2: Poverty Gap**



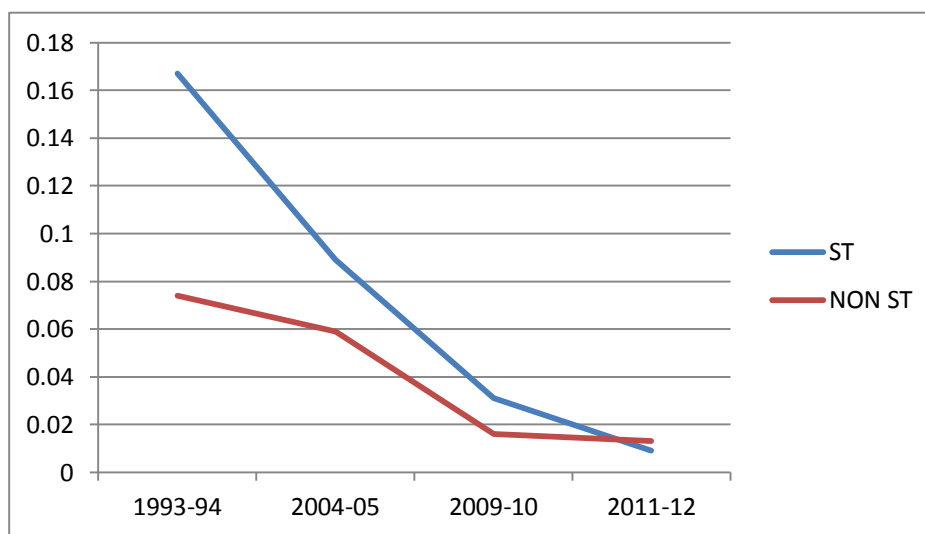
*Source: Authors' calculation from NSSO unit level data (50<sup>th</sup>, 61<sup>st</sup>, 66<sup>th</sup> and 68<sup>th</sup> round)*

**Fig- 8.3: Incidence of Food Insecurity**



*Source: Authors' calculation from NSSO unit level data (50<sup>th</sup>.61<sup>st</sup>, 66<sup>th</sup> and 68<sup>th</sup> round)*

**Fig-8.4: Food Insecurity Gap**

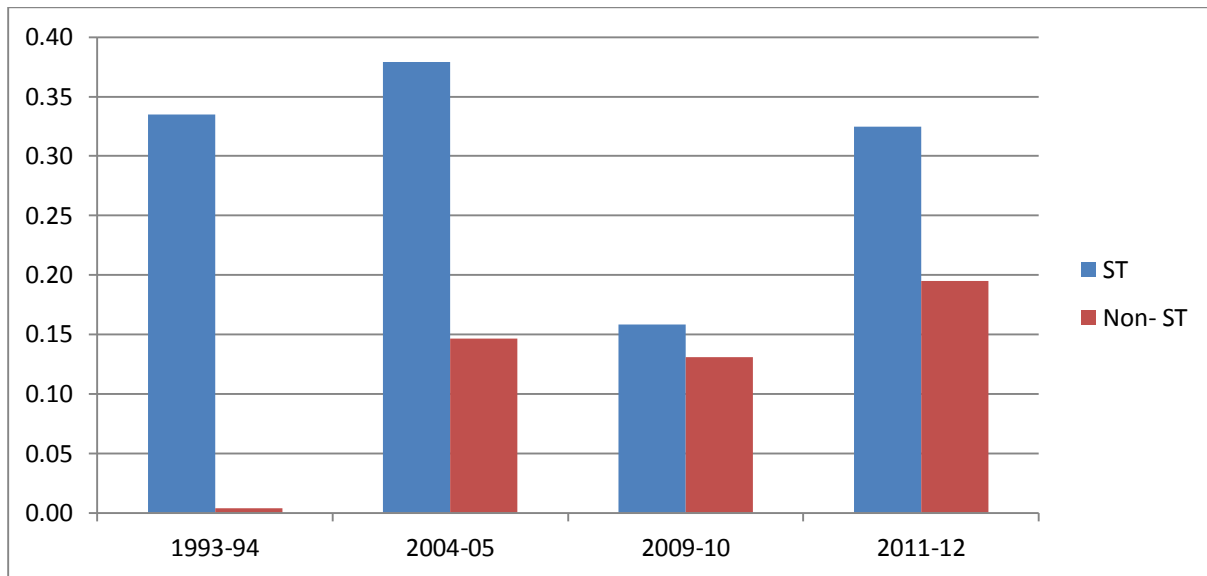


*Source: Authors' calculation from NSSO unit level data (50<sup>th</sup>.61<sup>st</sup>, 66<sup>th</sup> and 68<sup>th</sup> round)*

Our results show that due to decreasing poverty a large and perhaps growing section of the tribal population in the study district, West Bengal and the gap between the two categories is reducing over time.

Let us see the changing pattern of consumption inequality among the deciles class of MPCE across scheduled tribes and non tribes.

**Fig 8.5: Trend of Inequality across ST and NonST**



**Source:** Authors' calculation from NSSO unit level data (50<sup>th</sup>, 61<sup>st</sup>, 66<sup>th</sup> and 68<sup>th</sup> round)

In the study area consumption inequality is higher for scheduled tribes compare to non tribal population.

To an outsider studying the changing consumption pattern of the tribes anywhere in India in general and our study area in particular it is clear that though slowly yet gradually tribes are adopting more and more the consumption pattern of the non- tribes not only as a demonstration effect but also due to the Governmental Policies as a consequence of gradual reduction of their forest dependence due to the economies' policy towards expansion of agriculture, reduction in Common Property Resources lands and rapid urbanization. In terms of their lifestyle including their dwelling houses the traditional eco-friendly nature is also changing. Through the main objective of our study has been to point out the changes

in the consumption pattern of the tribes in the last decades vis-à-vis that of the non-tribal's. Yet the application of standard statistical convergence tests clearly shows an existence of increasing convergence between the two categories. Perhaps as a consequence of more and more privatization during the era of economic reforms the rate of income growth of the non-tribal's was higher than that of the tribal's whose livelihood was mainly dependent on non-marketable products available from forest resources. Again from the decile classes we conclude that overtime tribes are transforming towards the higher decile classes, which represents their well being. On the other hand tribes consume more non food products than food products whose growth rate is more than that of non tribes and consequently the gaps are also reducing over time. So

finally this paper gives concluding remarks that tribes are converging towards the non tribes in terms of consumption expenditure.

### Reference:

- [1] Deaton, A. and J. Dreze (2002), "Poverty and inequality in India: A re-examination", *Economic and Political Weekly*, 7 September (3729-3748).
- [2] Food and Agriculture Organization (FAO). 2002, *The State of Food Insecurity*, 2001. Rome.
- [3] George P.S (1980), The changing pattern of consumer demand for food gains in India. *Indian J. Agril, Econ.*, 35(1): 53-68.
- [4] Government of India (1993-94): *Household Consumer Expenditure among Socio-Economic Groups, NSS 50<sup>th</sup> Round* (July 1993- June 1994), Ministry of Statistics and Programme Implement, New Delhi.
- [5] Government of India (2001): Office of Registrar General and Census Commissioner, Ministry of Home Affairs, Government of India, New Delhi.
- [6] Government of India (2004-05): *Household Consumer Expenditure among Socio-Economic Groups, NSS 61<sup>st</sup> Round* (July 2004- June 2005), Ministry of Statistics and Programme Implement, New Delhi.
- [7] Government of India (2009-10): *Household Consumer Expenditure across Socio-Economic Groups, NSS 66<sup>th</sup> Round* (July 2009- June 2010), Ministry of Statistics and Programme Implement, New Delhi.
- [8] Government of India (2011): Office of Registrar General and Census Commissioner, Ministry of Home Affairs, Government of India, New Delhi.
- [9] Government of India (2011-12): *Level and Pattern of Consumer, NSS 68<sup>th</sup> Round* (July 2011- June 2012), Ministry of Statistics and Programme Implement, New Delhi.
- [10] House listing and Housing Census Data,(2011),Office of the Registrar General and Census Commissioner, Ministry of Home Affairs, Government of India, New Delhi.
- [11] Iyengar, N.S, and Jain, L.R, (1973) *Projections of Household expenditures in India, The Journal of Agricultural Economics*, 28, 56-70.
- [12] Jain and Patel, R.K., (1996), *Consumption pattern of food and nonfood items in Haryana state, Indian J. Agric. Econ.*, 28(1): 56-70.
- [13] Keynes J.M, (1936), *The General Theory of Employment, Interest and Money*, Macmillan Cambridge University, Press of Cambridge.
- [14] Kumar, P and Mathur, V.C., (1996)- *Structure changes in the demand for food in India. Ind. J. Agril. Econ.*, 51(4): 664-673
- [15] Kumars (1979), *changes in consumption experiment, All India rural (1960-61 to 1973-74), Sarvekshama*, 3(2), 9-14

- [16] Kuznets, S. (1955), "Economic Growth and Income Inequality", *American Economic Review*, 45, pp1-28.
- [17] Mishra S., 2012, Food Resources Then and Now: the Perception of People of Oraon tribe in Orissa, India, *Antrocom Online Journal of Anthropology*, vol. 8.: 55-61.
- [18] Mishra, S. and Padhan, S., 2011, Traditionally and Culturally Indispensable Food Consumed by Adivasi women of Kalahandi and Koraput district, Odisha: A Descriptive Study, *Int. J. Sci. Emerging Tech.*, Vol-1 No. 1 September.
- [19] Nasurudeen, P., and Kuruvilla, A., (2006) – Sendhil, R. and Chandrasker, V., 2006, The dynamics and inequality of nutrient consumption in India. *Indian J. Agric. Econ.*, 61(3):362-373
- [20] Pandey, R.K, 1973, The analysis of demand for food grain *Indian Journal of Agricultural Economics*, 28(2), 49-55
- [21] Radhwa, G.S. and Chahal S.S., (2005)- Consumption pattern of milk and milk products in rural Punjab. *Indian J. Agric. Econ.*, 61(3): 141
- [22] Rup Kumar V. N., Authr and Mahalle, 1995, Family consumption pattern in rural sector- A case study of rural sector. *The Bihar J. Agric. Market.*, 3(2): 205-213.
- [23] Sahu, N.C. and Panda C.D., 2003, An econometric analysis of shifting cultivation in an Indian tribal village, *Berhampur University, Orissa*.
- [24] Sekar C and Senthilnath, S, (1994), Fish consumption pattern in Coimbatore city- A functional analysis, *The Bihar J Agric. Market.*, 36(4): 27-40.
- [25] Sen, Amartya, (1986), "Food, Economics and Entitlements", Helsinki: World Institute for Development Economics Research United Nations University, February.
- [26] Sharma, A.K., and Ram Kuber, (1991), Seasonal variation in consumption pattern of weaker section households with special reference to milk and risk production in Saharanpur district, *Indian J, dairy Science*, 44(8): 474-478.
- [27] Singh and Patel (1982), An Analysis of consumption pattern in rural and urban Muzaffarnagar (U.P.), *The Asian Economic Review*, 24;1 -16
- [28] Soe and Singh (2006) Household food consumption pattern and demand in North-eastern state of India. *Indian J. Agric. Econ.*, 37(4): 143-46.
- [29] Srivastava and Dongra, P., (1991), Consumption of fruits and vegetables in rural Himachal Pradesh, *Actattort.*, 270:223-230.
- [30] Zeeshan Amir and Ali Ghufraan (2015)- Change in life style and consumption pattern of rural household: An analytical study, *International journal of trade and commerce- IIARTC*, Vol.1, No.1, 36-51

APPENDIX:

Table A: Data of MPCE of tribes and Percentage Difference of Food and Non food

	1993-94	2004-05	2009-10	2011-12
MPCE at Constant price	143	166	201	209
f1-f2	73.84	26.36	23.51	-0.334

Source: Authors' calculation from NSSO unit level data (50<sup>th</sup>, 61<sup>st</sup>, 66<sup>th</sup> and 68<sup>th</sup> round)