

# Tea Production in the Economic Development of Assam

Tripti Chand Daimari and Surendra Singh

## Abstract

Present paper examines the contribution of tea production in the economic development of Assam in two ways: (a) the contribution of tea in the agricultural development i.e., primary sector of economy and (b) the performance of tea production in the industrial growth i.e., secondary sector of the State. Collecting statistics of required attributes of the production namely, tea, agriculture and industrial sectors for the last forty five years (1953-54 to 1998-99), the shares of tea production in the total GDP of agricultural as well as industrial sectors have been assessed by using Kuznet's formula. It is found that, inspite of continuous increase in tea production in Assam, there is steady decline in the share of tea production to GDP of agriculture sector from 40.41 percent in 1953-54 to 28.64 percent in 1998-99 as well as to GDP of industrial sector from 52.94 percent to 20.18 percent during the same period with more temporal fluctuations are observed because of climatic changes and political instability in the State.

**Key words :** Take-off Stage, Kuznet's Growth Contribution, Primary Sector, Tertiary Sector

## Introduction

Tea is the most important non-alcoholic beverage, which is produced and consumed, in a number of tea producing as well as non-producing countries. Most of the production comes from South-East Asiatic and East African countries. India has a unique distinction of being the largest producer as well as the consumer of tea. Most of the production takes place in countries where there is hardly any demand for consumption. India finds itself in a peculiar position of being the largest producer and largest consumer. The plantation industry in India, which developed over 150 years, has a colonial origin, plantation agriculture relates more to the factory than to the farm (Banerjee, 1996).

However, it occupies a very small share of the total agricultural land about 0.8 percent in the country. In spite of its insignificant areal extent, it contributes nearly 5 percent to the National income in agriculture. Besides, tea plantation activities provide more employment per rupee of investment in the country than either in agriculture or industry. Among all the plantation crops, tea is considered to be the most well organised and labour intensive plantation crop. It employs the highest percentage of women

---

Sri Tripti Chand Daimari and Prof. Surendra Singh, Head, Department of Geography, North Eastern Hill University (NEHU), Shillong-793014, Meghalaya.

workers compared to any other industry. Its reputation being the biggest employer of women workers in India, with equal pay for equal works is another significant aspect of tea (Bhuyan 1989). Tea can be placed both under agriculture and industry. It is industry in the sense that tea is a processed and manufactured commodity, which is subject to duty. It is also an agricultural crop because it is grown on land and thus agricultural income tax is received on it. Tea plantation is, therefore, put under both agricultural and industrial rules and regulations.

There has a record annual increase in the production of tea in the world from 2535 million kg during 1989-90 to 1990-91. A noticeable increase was recorded in India (34 million kg), followed by Sri Lanka (8 million kg), and Turkey (7 million kg), with marginal increase in Malaya, Uganda, Iran and Malaysia. However, a regional variation can be observed in the country wise production. On the other hand, Indonesia and USSR have declined their production by 12 and 10 million kg respectively during the same period of time. Tea production in India has reached a record of 754 million kg in 1991. The increase in production has been able to meet the domestic demand. The North-Eastern part of the country produces about 75 percent of India's total production out of which Assam is the largest producer of tea having a share of more than 54 percent to the total production.

Keeping these aspects in mind, the present discussion is devoted towards the growth of tea cultivation and its contribution to the State's economy with the examination of its areal pattern in various sectors of economy. Tea as an agrarian activity which contributes the public sector of economy is considered as the product of physical as well as socio-economic factors. It is considered as an industrial activity of the area because of its processing, package and marketing. Therefore, it contributes to

secondary as well as tertiary sectors of the economy. On account of considering tea as raw material for tea industry in Assam, it provides sound base for the growth of allied industries also (Figure 1). Tea production being an organised sector of the State has links with other industries and a long historical background. The production and productivity of tea cultivation is still not recorded very high. Its growth is not observed satisfactorily even after the Independence of the country. However, it plays a dominant role in the economic development of the State as well as the Nation.

### Data Collection and Methods Used

So far as collection of data is concerned, it is a fact that the data of various sectors of the economy including tea production are required to justify the volume, share and growth rate of tea in comparison with the agricultural as well as the industrial sectors. For the same, data of tea production, Gross Domestic Product (GDP) of industrial sectors are collected from various agencies like the Tea Board, Kolkata, North Eastern Council, Shillong, Economic and Statistical Department, Government of Assam, Guwahati. After processing the data, tables are prepared in such a way so that they may be able to show the importance of agricultural as well as industrial sectors to the growth and development of the State economy. For the growth of various attributes related to the tea contribution, the trends are shown by considering a set of data of these attributes for the last forty five years from 1953-54 to 1998-99. The geographical pattern and distribution of the share of tea production and its relationship with population are shown by taking into account the data of two points of time: 1970-71 as base year and 1998-99 as current year. Various results of the present study are shown by preparing trend graphs of the concerned attributes.

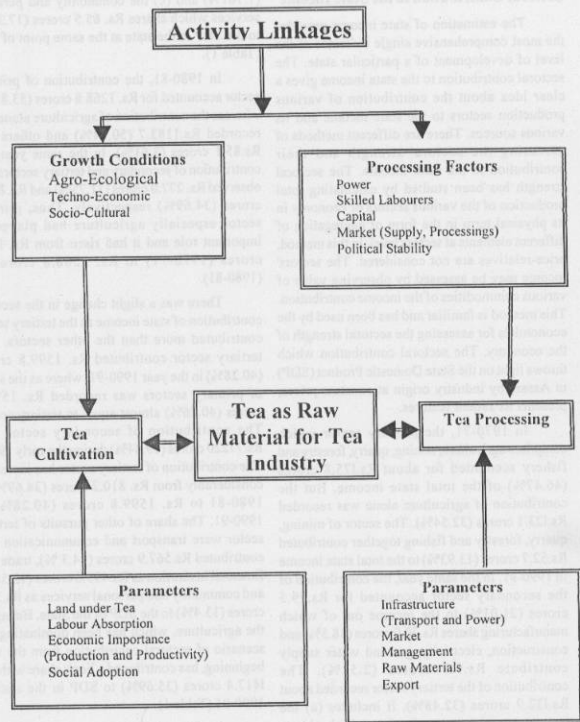


Figure 1 : Tea as Agricultural as well as Industrial Activities and its Linkages

### Sectoral Contribution to the State Income

The estimation of state income provides the most comprehensive single indicator of the level of development of a particular state. The sectoral contribution to the state income gives a clear idea about the contribution of various production sectors to the state income and its various sources. There are different methods of assessing the sectors' strength and their contribution to the state income. The sectoral strength has been studied by calculating total production of the various sectors of economy in its physical term in the form of aggregation of different elements at sectors level. In this method, price-relatives are not considered. The sectors' income may be assessed by observing value of various commodities of the income contribution. This method is familiar and has been used by the economists for assessing the sectoral strength of the economy. The sectoral contribution which throws light on the State Domestic Product (SDP) in Assam by industry origin at constant prices, presents its salient features.

In 1970-71, the primary sector which comprises agriculture, mining, quarry, forestry and fishery accounted for about Rs.175.8 crores (46.47%) of the total state income. But the contribution of agriculture alone was recorded Rs.123.1 crores (32.54%). The sector of mining, quarry, forestry and fishing together contributed Rs.52.7 crores (13.93%) to the total state income in 1990-91. In the same year, the contribution of the secondary sector accounted for Rs.79.5 crores (21.01%) to the income out of which manufacturing shares Rs.70.0 crores (18.5%) and construction, electricity, gas and water supply contribute Rs.9.5 crores (2.51%). The contribution of the tertiary sector recorded about Rs.132.9 crores (32.48%). It includes (a) the transport and communication which shares Rs.51.3 crores (13.56%), (b) the trade and financial institution with a share of Rs. 6.1 crores

(1.761%) and (c) the community and personal services which shares Rs. 65.5 crores (17.31%) to the SDP in the state at the same point of time (Table 1).

In 1980-81, the contribution of primary sector accounted for Rs. 1268.8 crores (53.85%), whereas the contribution of agriculture alone was recorded Rs.1183.7 (50.24%) and others was Rs.85.1 crores (3.61%). In the same year, the contribution of secondary and tertiary sectors was observed Rs. 277.0 crores (11.75%) and Rs. 810.2 crores (34.69%) respectively. Thus, primary sector especially agriculture had played an important role and it had risen from Rs. 175.8 crores (1970-71) to Rs. 1268.8 crores in (1980-81).

There was a slight change in the sectoral contribution of state income as the tertiary sector contributed more than the other sectors. The tertiary sector contributed Rs. 1599.8 crores (40.28%) in the year 1990-91, where as the share of primary sectors was recorded Rs. 1598.9 crores (40.26%) almost equal to tertiary sector. The contribution of secondary sector was Rs.7722.0 crores (19.44%) during the early 1990s. The contribution of tertiary sector has increased considerably from Rs. 810.2 crores (34.69%) in 1980-81 to Rs. 1599.8 crores (40.28%) in 1990-91. The share of other pursuits of tertiary sector were transport and communication that contributed Rs.567.9 crores (14.3 %), trade and financial institution as Rs.499.6 crores (12.58%) and community and personal services as Rs.53.3 crores (13.4%) to the SDP of the State. But again the agriculture, which has been dominating the scenario of sectoral contribution from the very beginning, has contributed a lion's share with Rs. 1417.4 crores (35.69%) to SDP in the state in 1990-91 (Table 1).

As far as the average annual sectoral growth of the economy is concerned, the tertiary sector has a steady growth rate of nearly 60.04

**Table-1: State Income from Major Heads of Economy and its Changes (at constant price)**

(Rs in crores)

Sl. No	Major Heads of Economy	1970-71	1980-81	1990-91	Average Annual Growth 1970-71 to 1990-91
<b>A Primary Sector</b>					
1	Agriculture	123.1 (32.54)	1183 (50.24)	1417.4 (35.69)	1294.3 (52.57)
2	Mining, Quarry, Forestry, Fishing	52.7 (18.93)	85.1 (3.61)	181.5 (4.57)	128.8 (12.22)
<b>B Secondary Sector</b>					
3	Manufacturing	70.0 (18.93)	163.4 (6.93)	531.0 (13.37)	461.0 (32.92)
4	Construction, Electricity, Water Supply & Gas	9.5 (2.51)	113.6 (4.82)	241.2 (6.07)	231.7 (121.94)
<b>C Tertiary Sector</b>					
5	Transport & Communication	51.3 (13.56)	316.0 (13.41)	567.9 (14.30)	516.6 (50.85)
6	Trade & Financial Institutions	6.2 (1.61)	265.1 (11.56)	499.6 (12.58)	493.5 (397.90)
7	Community & Personal Services	65.5 (17.32)	229.1 (9.72)	532.3 (13.40)	466.8 (35.63)
<b>Total</b>		378.0 (100.0)	2356.0 (100.0)	3971.0 (100.0)	3593.0 (100.0)

N. B. Values in Parentheses Show the Percentages

Source : Statistical Hand Book, Assam, 1973, 1975, 1996, Directorate of Economic and Basic Statistics of North-Eastern Region, N.E.C. Ministry of Home Affairs, 1995, Govt. of India, Shillong.

percent during the last two decades (1970-71 to 1990-91). It is due to the overall development of transport and communication, increase in exports, opening of different financial institutions like bank loan facilities, co-operative societies, etc. which rose nearly four times in 20 years. In the primary sectors, the average annual growth of agriculture was recorded Rs .1294.30 (52.57%)

which shows that the average annual growth rate of primary sector to state income has come down significantly over the years due to natural calamities and political instability in the state. However, in spite of several initiatives, the average annual growth of secondary sector was recorded Rs. 692.7 crores (43.57 %) during the same period of time.

So far as economic activities related to tea production are concerned, they play a dual role in the economy of Assam by contributing in its primary as well as secondary sectors. Therefore, it has been strengthening the agricultural sector of primary activities and the manufacturing sector of secondary activities of the economy. These sectors are significantly bigger and contribute a larger share to the state's economy as 35.69 percent and 13.37 percent respectively during the early 1990s. A significant increase of Rs. 1294.30 crores (52.57% annually) in agricultural sector and of an increase of Rs.461.0 crores in manufacturing sectors (32.92% annually) have been noticed during the last 20 years (1970-71 to 1990-91). Since tea is a major component for the contribution to these both sectors, it is true that there are perhaps noticeable changes in tea production and its allied activities which significantly contribute to the growth of these sectors. The performance of tea should be studied considering it as a major component of agriculture as well as non-agriculture sectors separately.

### Contribution of Tea in Agriculture Sector

For the interpretation of results regarding the performance of tea in the share and growth of tea to the agriculture sector of the Assam State, the post-independence period of 45 years from 1953-54 (as base year because it had been the starting point of tea cultivation in Assam after independence) to 1998-99 (as current year for showing the changing trends) has been considered. According to the statistics provided by the Directorate of Economics and Statistics, Govt. of Assam, Guwahati, it is obvious that the share of total product of agriculture and allied activities has been recorded as Rs, 1598.9 crores (1990-91) which is about 40.0 percent to the total income. However, total GDP of agriculture sector has been recorded Rs.11804.56 crores (1998-99). It shows that agriculture has

dominance in the State's income, while it is fed from outside the state because of a large gap between Net Domestic Product (NDP, i.e., income) and Gross Domestic Product (GDP) of the state.

So far as contribution of tea production to GDP of agriculture sector is concerned, it has been studied by accounting the production of tea as well as other agricultural production (which includes foodgrain crops, horticulture etc) separately for comparing the results. The Kuznets formula is used to measure the growth contribution of tea in the total economic growth (Kuznet 1964). The following results have been drawn from the changing trends of agricultural attributes.

(1) There has been simultaneous increase in the volume of tea production from Rs. 120.05 crores in 1953-54 to Rs. 3380.94 crores in 1998-99. This increase of Rs. 3260.89 crores (i.e. 2716.3%, nearly 27 times, during last 46 years) has a significant impact on the agricultural sector of the State. On the other hand, an increase of Rs. 8273.32 crores from Rs. 150.30 crores to Rs. 8423.62 crores has been recorded in agriculture production except tea during the same period of time. It is a record of 5514.4 percent, 55 times during the same period of time. Therefore, there is comparatively slower growth of tea production than the agricultural production in the state.

(2) There is fast increase in the production of tea, rather than the agricultural items of the economy and, consequently, total GDP of agriculture sector has been rising fast. However, there is a record decrease in the share of tea production from 44.41 percent in 1953-54 to 28.64 percent in 1998-99. It means that tea constituted nearly two-fifth share of the total GDP during the starting period of the first five-year plan. The contribution shrinks down to nearly one-fourth in the early 1990s during the 8th plan period. On the other hand, the share of agricultural product

excluding tea rose to the same proportion because of the complementarity of these sectors to total GDP of agricultural sector.

But the most highlighting feature of the declining trend of the share of tea production is that there is a significant fluctuation in share trends. For example, it (share of tea product) was recorded lowest (18.18%) in 1973-74 and slight rise thereafter. Its highest share (46.36%) was recorded in 1954-55 (Figure 2). Perhaps, it was the time when the economy of the state was shaping toward tea cultivation. Population migration and availability of cheap labour for tea cultivation and its allied activities might have raised tea production during the middle of the 1950s. After that, the saturation point of tea workers, which checked the labour productivity and other political factors, influence tea cultivation. As a result, its share declined till the 1970s. On the other hand, immigration problems increased the population density of the state and, consequently, more food is demanded to feed the increasing population and so there was an increase in the share of agricultural products especially in food grains production.

However, an impact of green revolution may be seen on tea cultivation after 1972-73 when the share of tea products rose, giving more importance of new agricultural technology. It now competes in cropping pattern not only in Assam but other hill-states of North-Eastern Region and a raising gradually its share in the GDP. On account of changing trends in the share of tea production, there have been record fluctuations in its annual growth.

(3) The annual change of any attribute is a symbol of fluctuation in total production. It is found that there has been a record fluctuation in the changing trends of tea production from its highest value of +90.78 percent in 1977-78 to the lowest of -36.31 percent in the 1978-79 just next year. Therefore, the last part of the 1970s was

recorded as the most fluctuating period in tea production. It may be because of bad weather conditions in the state. However, in general, this trend of tea production were observed specially in the first phase of its declining share in GDP. In late 1980s and early 1990s, there was a simultaneous increase in the share and production growth of tea in the state. The year 1989-90 was recorded the year of satisfactory growth of 42.42 percent.

During the post-independent period of 45 years as considered for the present case, an average annual growth of 122.31 percent was recorded for agricultural products excluding tea, which was significantly higher than the average annual growth of tea production (60.36%). It means that foodgrain production was increased faster in the state. The fluctuations in the growth pattern of agricultural product have specific characteristics like: (a) the negative growth is observed only in a few years of the study period, (b) the fluctuation is in the upper sector of the growth pattern graph (Figure 2) and (c) the degree of fluctuation in the agricultural products can be seen lesser than the fluctuation in tea products in Assam because the demand of agricultural food products is continuous, while tea is influenced by trade activities and international market price mechanism.

(4) The interaction factor of annual growth of both the sectors shows that tea cultivation contributes positively specially during the first five year plan period and the early 1990s when both sectors flourished together. But the period of early 1980s was considered as conflicting trend of tea production growth. The periods of the four years of early phase of growth (1953-54 to 1956-57), the three years of middle phase (1974-75 to 1977-78) and the two-years of early 1980s (1983-84 to 1984-85) have been considered the time of positive values of interaction factor. It means both the sectors of agriculture, tea as well

## Trends of Tea and Agricultural Production in Assam 1953-54 to 1998-99

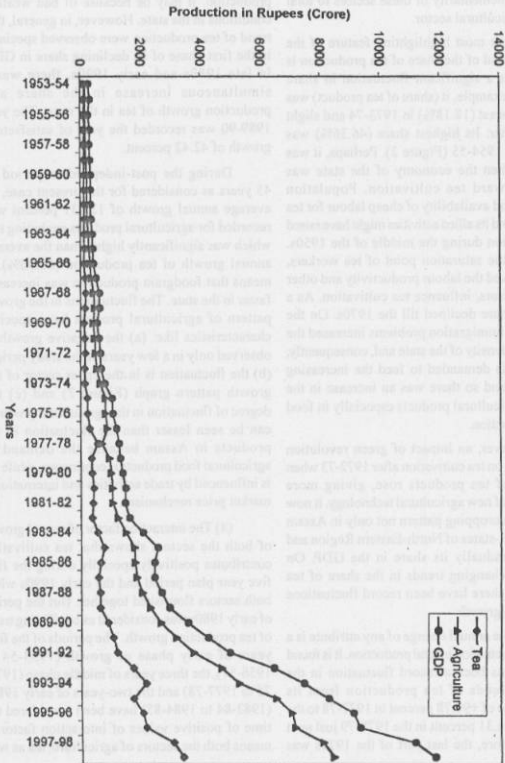


Figure : 2

Table 4 : Per Capita Tea and Agricultural Production in Major Tea Producing Districts and its Change (1971-1991)

Districts	Tea Production (,000 Kg)		Agri. Production (,000 Kg)		Population (,000 Persons)		Tea Production (Kg per Capita)		Ag. Production (Kg per capita)		Annual % change in per capita (1971 to 1991)
	1971	1991	1971	1991	1971	1991	1971	1991	1971	1991	
Darrang	41283 (18.43)	80907 (21.37)	286055 (16.57)	469488 (14.01)	1736 (12.95)	2723 (19.77)	24.00	30.00	165.00	172.00	1.25 0.21
Goalpara	2422 (1.08)	5410 (1.36)	141849 (8.22)	217403 (6.48)	664 (5.86)	668 (4.85)	4.00	8.00	214.00	325.00	5.00 2.59
Kamrup	2557 (1.14)	4774 (1.20)	148034 (8.57)	630268 (18.80)	883 (16.35)	2000 (14.52)	1.00	2.00	79.00	315.00	5.00 15.00
Lakhimpur	919.19 (41.11)	150486 (37.90)	474993 (27.57)	44735 (13.27)	2123 (19.44)	2656 (19.29)	43.00	57.00	224.00	167.00	1.62 -1.40
Nagaon	7423 (3.31)	11870 (2.98)	249184 (14.44)	543402 (16.21)	1681 (14.90)	1893 (13.75)	4.00	6.00	148.00	282.00	2.50 4.70
Sibsagar	55289 (24.72)	102982 (25.93)	239884 (13.90)	782503 (23.35)	2292 (19.19)	1251 (18.24)	24.00	41.00	105.00	311.00	3.50 9.80
Cachar	22736 (10.16)	40605 (10.22)	185618 (10.75)	262954 (7.84)	131 (9.82)	1215 (8.8)	20.00	33.00	164.00	216.00	3.00 1.60
Total	223659 (99.98)	397034 (99.99)	1725617 (100)	3350753 (99.99)	9510 (100)	12406 (100)	23.52*	32.00*	181.45*	270.09*	

N.B. 1. Agricultural Production includes major crops only.

2. Darrang District is considered as it was in 1971 (includes Sonitpur district).

3. Sibsagar District (includes N.C. Hills, Karbi Anglong, Jorhat and Golaghat.

4. Lakhimpur District is considered as it was in 1971 (includes Dibrugarh and Tinsukia districts.

5. Annual percentage change in per capita is calculated by applying linear growth formula.

\*Per capita production figures are calculated by dividing data of tea and agriculture production by its corresponding population.

Source : The data of Tea Production are compiled from Tea Statistic, 1991 and 1992, Tea Board, India. Agricultural Production data are taken from Basic Agricultural Statistics, Statistical Wing, Directorate of Agriculture, Govt. of Assam, Gauhati.

as food grains have flourished together. The same interaction pattern may also be observed in the last part of 1980s as well as 1990's.

(5) So far as contribution of the growth of tea production to the over all growth of GDP in agriculture sector is concerned, the value of interaction factor of sectoral growth is multiplied by the annual change of GDP. This index of tea contribution to GDP growth highlights that (a) The periods of first four years (1953-54 to 1957-58) and the last 24 years (1974-75 to 1998-99) have a positive impact in the GDP growth of agriculture sector. The contribution of the growth of tea production in the growth of GDP was recorded more than 8.0 percent annually in first four years while the contribution of this sector is insignificant in the last 24 years period except the year 1986-87 when the total GDP was recorded as Rs. 2436.09 crores in the state.

(b) The two years period of time 1968-69 to 1969-70 was recorded as negative effect of tea production growth in GDP when GDP in agriculture sector declined to 9.09 percent in 1968-69 and then -78.48 percent in 1969-70 because of negative growth of both its sectors, tea as well as agricultural food grains. However, the annual differential of GDP are increasing significantly in the last part of 1990's.

### Contribution of Tea in Industrial Growth

Since tea production is an integral part of the entire economy in Assam, it also contributes significantly to the industrial sector of the State's economy. Adopting the same method as used earlier for calculating their contribution of tea in agricultural growth, the performance of tea production in GDP of industrial sector has been assessed considering the same period of time (1952-53 to 1998-99). The following important trends of tea production as well as its contribution to the GDP of industrial sector are shown in the figure 3.

Undoubtedly, during the first-half of the period (1953-54 to 1973-74) that is twenty years of the time of the first phase of development in GDP of industrial sector, the industrial sector had been growing slower and its growth curve was lower than the curve of agriculture sector. Industrial sector has crossed the curve of agriculture sector in 1974-75 and it grew faster in the last phase of the growth of economy as these production curves are compared (Figure 3).

(2) So far as share of tea production in the total GDP of industrial sector is concerned, it is interesting to note that the share of tea production is declining faster over time which was recorded nearly 59.38 percent to GDP of industrial sector in the early 1950s (specially in 1954-55). It later on declined in early 1970s, and then in late 1990s. It means that the contribution of tea has been losing its ground in the industrial sector of the state. The performance of tea production shows that the other industrial activities have been increasing faster than the increase in tea production. Tea is not considered as the major activity of industrial activity because of its declining share.

The annual growth of tea production and its comparison with the growth rate of other industrial activities in the state shows that there is a large fluctuation in the annual growth of tea production as has already been studied in earlier section. However, the year 1977-78 recorded as the year of its highest growth (90.78%) while the year 1978-79 is recorded as the highest decline rate of tea production (-36.31%) in the State. It shows a fluctuating tendency throughout. On the other hand, the growth of industrial production (excluding tea) comparatively has lesser fluctuation over time.

The period of early 1980s was recorded as golden time for faster growth of industrial sector in Assam. However, the decelerated growth was recorded during the same period of

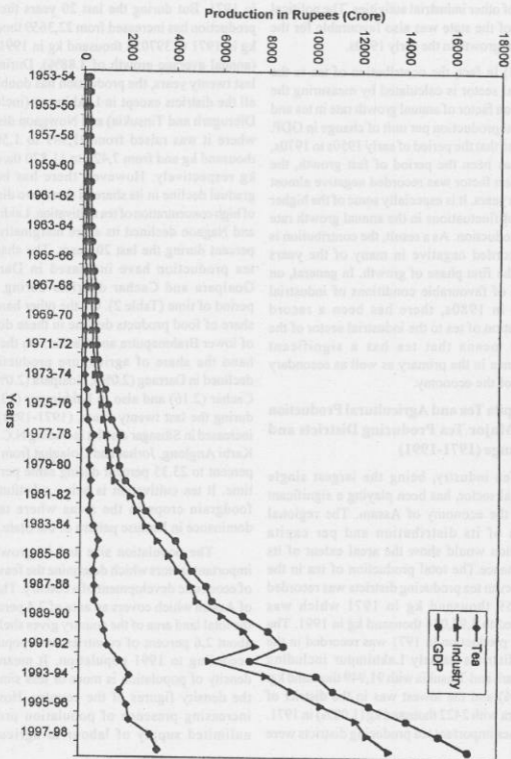


Figure : 3

time in tea production. It may be due to various factors to compensate the growth of tea with the growth of other industrial activities. The political climate of the state was also favourable for the industrial growth in the early 1980s.

(3) In fact, the contribution of tea to the industrial sector is calculated by measuring the interaction factor of annual growth rate in tea and industrial production per unit of change in GDP. It is found that the period of early 1950s to 1970s, which has been the period of fast growth, the interaction factor was recorded negative almost in all the years. It is especially some of the higher degree of fluctuations in the annual growth rate of tea production. As a result, the contribution is also recorded negative in many of the years during the first phase of growth. In general, on account of favourable conditions of industrial growth in 1980s, there has been a record contribution of tea to the industrial sector of the state. It means that tea has a significant importance in the primary as well as secondary sectors of the economy.

### **Per Capita Tea and Agricultural Production in the Major Tea Producing Districts and its Change (1971-1991)**

Tea industry, being the largest single industrial sector, has been playing a significant role in the economy of Assam. The regional pattern of its distribution and per capita production would show the areal extent of its performance. The total production of tea in the major seven tea producing districts was recorded 2,23,659 thousand kg in 1971 which was increased to 3,97,034 thousand kg in 1991. The highest production in 1971 was recorded in the three districts namely Lakhimpur including Dibrugarh and Tinsukia with 91,949 thousand kg. (41.11%) and the lowest was in the district of Goalpara with 2422 thousand kg (1.08%) in 1971. The other important tea producing districts were

Sibsagar including N.C. Hills, Karbi Anglong, Jorhat and Golaghat produced 55289 thousand kg in 1971. But during the last 20 years the total production has increased from 22,3659 thousand kg in 1971 to 397034 thousand kg in 1991 with (annual average growth of 3.88%). During the last twenty years, the production has doubled in all the districts except in Lakhimpur (including Dibrugarh and Tinsukia) and Nowgaon districts where it was raised from 91,949 to 1,50,486 thousand kg and from 7,423 to 11,870 thousand kg respectively. However, there has been a gradual decline in its share in these two districts of high concentration of tea cultivation. Lakhimpur and Nagaon declined its share marginally by 4 percent during the last 20 years. The shares of tea production have increased in Darrang, Goalpara and Cachar districts during same period of time (Table 2). On the other hand, the share of food products decline in these districts of lower Brahmaputra and Cachar. On the other hand the share of agriculture production is declined in Darrang (2.0%), Goalpara (2.0%) and Cachar (2.16) and also in Lakhimpur (13.30%) during the last twenty years, (1971-1991). It is increased in Sibsagar district including N.C. Hills, Karbi Anglong, Jorhat and Golaghat from 13.90 percent to 23.35 percent during same period of time. It tea cultivation is being substituted by foodgrain crops in the areas where tea has dominance in landuse pattern of the State.

The population size and its growth are important factors which determine the feasibility of economic development of a country. The state of Assam which covers an area of 2.4 percent of the total land area of the country gives shelters to about 2.6 percent of countries total population according to 1991 population. It means that density of population is more or less similar to the density figures of the country. However, increasing presence of population provides unlimited supply of labour to agricultural

operation and stabilises wage rate and, therefore, influences socio-economic development of the state. This situation of population growth and increasing its presence on economy largely influence the growth of development not only in India but also in entire South-Asian countries.

So far as population concentration of tea producing districts of Assam is concerned, it can be said that these seven districts accounts for a large share of state's population as 115.10 million population in 1971 which was rose to 136.67 million till 1991. If these seven districts are considered as domain of the study, it is obvious that Kamrup, Lakhimpur and Sibsagar districts include a large share of population of the domain. Undoubtedly, the size of population has been increasing in each tea producing districts of the State. But its percentage share seems decrease in most of the districts except Darrang and Lakhimpur. It means that population is concentrated in Darrang and Lakhimpur where population size was recorded moderate (Table 2).

On account of variations in concentration and growth of population, per capita production of tea as well as other agricultural products are influenced. It is noted that, in spite of increasing presence of population, per capita tea and agricultural production has been increasing constantly in all tea-producing districts except Lakhimpur district where per capita agriculture production declines from 224 kg (1971) to 167 kg (1991) because of decrease in total agricultural production with increasing population pressure. It is interesting to note that overall in these tea producing districts, per capita production of tea is increased from 19.43 kg (1971) to 29.05 kg (1991) where there is an increase of 95.25 kg per capita from 150.0 kg to 245.0 kg in agricultural foodgrains during the same period of time. As a result, there is annual increase in per capita tea as well as agricultural production in these tea-producing districts of the State.

## Concluding Remarks

There are various ways to assess the performance of the tea in the socio-economic development of the State. The role of tea in the alterations of major sectors of State's economy and its forty six years of changes are observed here. It influences agriculture, manufacturing as well as tertiary sectors of the economy in the State. The following are the main conclusions drawn from the present analysis.

1. The agricultural sector of the economy has gradually gained more strength to contribute to the State's income. The contribution of agriculture to the state's income was 32.54 percent in the early 1980s and then it declined to 35.69 percent in early 1990s because of gradual sectoral shift from primary to tertiary activities because of increasing tea production in the State.

2. There is gradual increase in tea production during post-independent period. However, its share in GDP of agriculture as well as industrial sector has been declining. It signifies the role of tea activity in the state's economy in the first phase of economic growth. But tea does not contribute much in the last phase of economic growth (after 1985-86) because of fast decline in its share. It is due to diversification and fast development of tertiary sector of the economy.

3. The regional pattern of tea distribution shows that not only tea production but also foodgrain production has been rising simultaneously in the tea producing districts of the State. It exerts the pressure of increasing population, farmers wish to increase foodgrains production in intensifying their farm activities towards foodgrains rather than tea because of immediate domestic demand for food. Tea is a commercial crop and commercialization is second step of agricultural development in the State.

## References

- Awasthi, R. C. 1975 : *Economics of Tea Industry in India with Special Reference to Assam*, United Publishers, Guwahati.
- Banerjee, G. D. 1996 : *Tea plantation in Assam*, Lawyers Book Stall, Guwahati.
- Baruah, G. P. 1981 : Labour, Management Relation in the Tea Industry, Seminar Proceedings, *Problems of Tea Industry in North-East India*, Organised by NEICSSR, Research India Publication, Calcutta.
- Bhuyan, P. K. 1989 : Assam and its Tea, *Centenary Souvenir*, ABITA, Amil Group, Guwahati : 25-31.
- Bordoloi, G. and Neog, A. K. 1986 : *Economy of North-East India: A State-Wise Analysis*, LBS Publication, Guwahati.
- Choudhuri, R. K. 1991 : *Economic Problems of Assam*, Kitab Ghar, Guwahati.
- Goswami, P. C. 1963 : *The Economic Development of Assam*, Asia Publishing House, New Delhi.
- Kutznet 1964 : Economic growth and the Contribution of Agriculture, in Eicher C. K. & L. W. Witt (eds) : *Agriculture in Economic Development*, McGraw Hill, New York.