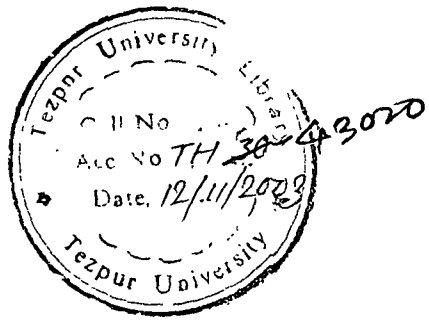
# A STUDY ON THE HEALTH OF PUBLIC SECTOR INDIAN TEA INDUSTRY WITH SPECIAL REFERENCE TO ASSAM

**THESIS**
**SUBMITTED TO**
**TEZPUR UNIVERSITY**
**FOR AWARD OF THE DEGREE OF**
***DOCTOR OF PHILOSOPHY***
**ON MANAGEMENT SCIENCES**






**RAJIB KUMAR BHATTACHARYYA**

*Dedicated*

*to my parents*

*Sjt. Bijoy Kr. Bhattacharyya & Sjta. Anu Pama Bhattacharyya*

*The inspiration behind this work*

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This is to Certify that the thesis entitled "A STUDY ON THE HEALTH OF PUBLIC SECTOR INDIAN TEA INDUSTRY WITH SPECIAL REFERENCE TO ASSAM" by **Sri Rajib Kumar Bhattacharyya** is a bona fide work carried out under my guidance and supervision.

This work has not been submitted to any other University or Institute for any Degree or Diploma.

26-03-2001

**(Madhab C. Bora)**

Tezpur
Dated 26-03-2001

# P R E F A C E

*Camellia thea* or Tea as a plantation industry has been the backbone of economy of Assam. It is also an important contributor to Indian National economy. It earns a substantial amount of foreign exchange and provides employment to millions, directly and indirectly. Development of ancillary industries like plywood, coal, transportation, ferliliser etc. depend heavily on the healthy growth of tea industry.

In the Seventies of the last century many State Governments have ventured into the tea plantation industry directly. Government of Assam established Assam Tea Corporation Ltd. in 1972 to carry out tea plantation and marketing business. But unlike the units in the private sector, the Corporation has been unable to exploit the favourable conditions of tea plantation in Assam and has continuously been incurring losses. In this thesis efforts have been made to throw light on the status of the fifteen tea gardens of the Corporation at the time of their take over, progress over the years as well as their present performance. It has been attempted to explore the problem areas of the Corporation and suggestions have been advanced to bring the Corporation back to its right track. In this process a comparative analysis has been made to compare the performance of the Corporation with the private sector sample tea units.

The thesis also encompasses the aspects of evolution of tea industry in India, the role of public sector in Indian economy, and the findings of a Delphi Study on health of Indian tea industry. One of the salient features of the thesis is a model suggested to define sickness in tea industry (SICKTU Model). A detailed account of the public sector tea units of India is also presented in the thesis.

I believe that this study would assist the students of tea economy in understanding the problems faced by the tea units of India in general and public sector tea units in particular. I would feel rewarded if my efforts could help the policy makers in designing practical policies for reviving the tea units, which are on the verge of closure due to chronic sickness in them.

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Date: 26/3/2001

**( Rajib Kumar Bhattacharyya)**

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( Rajib Kumar Bhattacharyya)

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# CHAPTER I

## Introduction and Overview

# CHAPTER – I

## INTRODUCTION AND OVERVIEW

### 1.1 INDIAN INDUSTRIAL SCENARIO

Traditionally India has been an Agrarian Economy. Directly or indirectly, a preponderant section of her populations are dependent on agriculture. One of the remarkable features of the typical Indian towns was its non-industrial character. However, before the arrival of the British, India was industrially more developed than some of the now advanced western countries. India was famous for its handicraft industries. The foreign rulers of India, basically the British systematically destroyed the industrial base of India. The crown wanted India to remain an agricultural country so as to meet the demand of raw materials of English industries. It was only towards the middle of the nineteenth century, with the gradual introduction of improved means of communication that Cotton, Jute, Coal and Tanning industries were started in India.

The first coal mine of India was opened in 1830. The building of railways gave an impetus to the mining industry. The railways demanded enormous quantities of coal. The Bombay spinning and weaving company started the first cotton mill in 1851. The jute industry was next in importance only to the cotton industry. The first jute mill was started in 1854. The tanning industry was prosperous mostly in Channai. During the early days of industrialization the sizes of the industrial units were considerably small. The people, who had been driven out from their old handicrafts, were absorbed in those new industries. Between 1880 and her independence, India had witnessed development of many non-traditional industries. Cotton, Jute, Coal, Petroleum, Manganese, Salt, Mica, Sulphur, Iron and Steel, Sugar, Chemicals, Cement, and Matches etc. were the prominent Indian industries during that period. However, since independence India adopted various Industrial Policies and the five year plan system. These had helped in systematic development of Indian industrial sector. With further development of information technology now India has entered into the high-tech industrial arena.

## 1.2 INDIAN TEA INDUSTRY

The tea plant was found growing in wild in the forest of Assam since long. Major Robert Bruce discovered wild tea plant growing in upper Assam, as early as in 1823. However, tea was never produced in India in commercial basis till 1835. It was only in 1833, when the Trade Treaty between Britain and China expired, the British considered seriously about the exploitation of naturally available wild tea plants in Assam for producing tea. The East India Company started the first tea garden in Assam in around 1835, which was later sold to Assam Company in 1840. The first two Tea Companies of the world were established in India in the year 1839 (Assam Company) and 1859 (Jorehaut Tea Company).

Since the establishment of these two tea companies a number of entrepreneurs started taking part in tea production commercially. Gradually tea production expanded from Assam to other parts of the country. Closely associated with tea, some other industries like Plywood, Transportation, Coal etc. also started developing in India to meet the demand of her tea industry.

At present Indian tea industry is one of the most important industry. It plays a major role in the national economy. It earns a substantial amount of foreign exchange by exporting tea. On the other hand, it provides employment to thousands of people directly and to millions indirectly. India is also the number one producer and exporter of tea in the world. Assam produces around 55 pc of total Indian tea production.

Over the years Indian tea industry has been witnessing a lot of changes. In order to control and regulate the activities of tea industry, Govt. of India has enacted various Acts and Laws from time to time. Besides, to protect the interest of the industry, it also ventured into the tea plantation directly in the seventies of $20^{th}$ century. Acute sickness in some of the tea units in India prompted the Govt. to take such steps. At present there are around 54 public sector tea units in India with a total plantation area of about 19,000 hectares.

The problem of sickness was also prevailing in tea industry of Assam. In order to protect the industry from the clutches of sickness and to safeguard the interest of

the employees of the gardens, which were on the verge of closure due to sickness, the Govt. of Assam, by passing an Act in its legislative Assembly, established the Assam Tea Corporation as a public sector tea unit in 1972. The Corporation at present has 15 tea estates under its ownership and management. Total plantation area of the Corporation is about 6,750 hectares, which is about 36 pc of total tea plantation area under public sector in India.

## 1.3 PROBLEM UNDER STUDY

Any industrial unit, whether in public sector or in private hands, is expected to operate profitably, otherwise the very object of their establishment is jeopardised. While most of the tea gardens of Assam are doing well, some of the gardens in the public sector have been incurring heavy losses for years together. The Assam Tea Corporation Ltd. is one of such loss making public sector tea unit of India having its gardens in Assam. Since its establishment for most of the years it has been incurring losses. Total accumulated losses of Assam Tea Corporation as on 1997-98 was around Rupees fifty crores. One of the key factors for attaining success in tea plantation industry is healthy per hectare yield rate. However, it is observed that the average yield of the corporation has been far below the National, State and District average yield rate. Average yield of tea of the Corporation in 1998 was only 50 pc of the State average yield rate for the year. It is noteworthy that the average yield of tea of the Corporation has been declining since its incorporation. In the first year of its operation (1973) the average yield of tea of the Corporation was 1243 Kg (with six gardens) which declined to only 930 Kg (with 15 gardens) in the year 1998.There is dissatisfaction in the minds of the employees and the creditors of the Corporation regarding its transactions. It fails to provide the basic facilities to its employees regularly. Further the dues against provident fund and gratuity are also not timely been paid. As on 1997-98, the total accumulated arrear due against provident fund has been Rs. 311.68 Lakhs. At the same time its arrear dues against gratuity has been Rs. 37.60 Lakhs. The net worth of the Corporation has turned negative long back. These tea gardens have been receiving budgetary support from the State Govt. for several years. However, such subsidy with tax -payers' money cannot continue indefinitely. These tea gardens have to be made self-dependent and economically viable.

Assam has traditionally been an agrarian economy and due to its favourable topographic and climatic conditions around 24 pc of its total cultivable land is occupied by tea. In such a situation it is highly desirable that all the units of tea industry in the State enjoy sound health. Assam Tea Corporation occupies around 12 pc of the total tea area of Assam. Therefore, it is very essential that Assam Tea Corporation should operate profitably. Otherwise, the fate of its around 16000 employees is uncertain.

Against such a background, it has been strongly felt that an in-depth study is needed to take up to explore the problem areas of Assam Tea Corporation. Considering these, a study on the functioning and managerial style of Assam Tea Corporation has been taken up to suggest measures for healthy performance of the Corporation.

## 1.4 OBJECTIVES OF THE STUDY

The aims and objectives of the study are as follows:

* To explore the problem areas of the tea gardens of Assam Tea Corporation.

* To identify the reasons behind such problems.

* To compare the management styles and functioning of loss making tea gardens of Assam Tea Corporation and some private sector profit making tea gardens.

* To analyse the performance of the gardens of Assam Tea Corporation.

* To suggest ways and means for improving the performance of the gardens of Assam Tea Corporation.

## 1.5 METHODOLOGIES

In order to satisfy the above mentioned objectives following tools are used in the study.

* A Delphi study has been conducted to understand the various aspects of the functioning of the tea units of India. The study was characterized by the use of statistical measures like mean, standard deviation etc.

* A quantitative analysis has been made on the growth of the individual gardens and the Corporation as a whole since their take over/inception.

* While growth of the Corporation has been analyzed for a period covering twenty-five years, a recent period of eight years (1990-91 to 1997-98) has been taken to see its growth pattern.

* A comparative analysis has also been made between three samples of private sector units and the units of Assam Tea Corporation . The analysis has been made in both financial and non financial terms.

* Help of various standard ratios has been taken to study the health of the Corporation in financial terms.

* A model on determination of sickness in tea industry has been suggested and certain criteria have been proposed for that purpose. Later, these criteria were fitted to see whether the Corporation falls under the category of sick tea unit.

## 1.6 SCOPE AND LIMITATIONS OF THE STUDY

Tea is a vast subject and it provides an excellent opportunity for research work. The science and economy of tea have always been a wider area of study. Out of its thousand and one areas of work, only a minute area, tea in public sector, has been considered here for study. In this study all the key parameters of the functioning of a tea unit has been attached. The factors for healthy growth of a tea unit have been identified and their growth trends have been observed. A comparative study on the functioning and growth pattern of public and private sector tea units is made in the thesis. It has also touched upon the origin and evolution of Indian tea industry. Role of public sector in Indian economy is also highlighted in this thesis.

However, this work has not covered in detail all the relevant aspects of functioning of a tea unit. The areas of labour management and technical side of production of tea including its quality management in Assam Tea Corporation Limited have not been explored here. On the other hand the functioning of the other tea estates of Assam under public sector have also not been covered. It is due to the fact that only one of the five tea estates of Tea Trading Corporation of India Ltd. and seven of the twelve tea estates of Andrew Yule & Company, the other two Public Sector tea units operating in the state, are situated in Assam. This thesis deals mainly with the financial health of Assam Tea Corporation Limited.

Another serious limitation of the study is its failure to collect financial information from sample tea units for all the years under study. The units were reluctant to provide such information. Information pertaining to two sample private sector units for two years still could not be made available.

On the other hand, the objectives of the Corporation posed a serious threat while conducting the comparative study. While private sector tea units have some clear-cut motives, the units in public sector do not have a clear-cut objective as such. As a result of that the performance between the two could not be compared on the basis of earnings.

Last but not the least limitation of the study is its dependence on provisional balance sheet of Assam Tea Corporation. The Corporation is, yet to approve its audited annual reports since 1993-94. As a result of that the provisional annual reports were consulted, the figures of which is subject to change while audited and approved. Besides the interference of the state in the activities of the Corporation could not be established with evidence, though there is an allegation that there has been high degree of Govt. interference in the activities of the Corporation.

## 1.7 OVERVIEW OF THE THESIS

The following aspects associated with the tea industry in general and public sector tea units of Assam in particular have been encompassed in various chapters of the thesis.

In **chapter I** introduction and overview of the thesis have been presented. It speaks about the problem, the objective behind the study, the methodologies used, and a chapter-wise briefing of the thesis.

In **chapter II** the role of public sector in Indian economy has been highlighted. The chapter is designed to focus on the growth pattern of the Public Enterprises in India in regard to number of enterprises, volume of investment, growth of employment, growth in sales, growth in profitability and contribution to Govt. exchequer. In addition, the chapter has thrown light on the changing status of the Public Enterprises and problems faced by them in India. Further, a general look has been given on the entry of Public Sector in Indian tea industry.

In **chapter III** a general concept on the various facets of the growth of Indian tea industry has been given. The chapter peeped through the establishment of tea units in various places of India and the establishment of earlier tea companies of the world. Studying it during "pre five year plan period" as well as during the "plan period" has highlighted the growth pattern of Indian tea industry. Further, an attempt has been made to analyze the change of ownership in Indian tea industry. The impact of various Acts and Govt. rules & regulations upon the owners of tea units in India has also been explored in this chapter.

In **chapter IV** analytical findings from a Delphi study conducted to throw light on the health of Indian tea industry have been enumerated. The study raised the issues like the goals and objectives of Indian tea industry, major problem areas creating impediments in the healthy growth of the Indian tea industry, important factors responsible for the health of a tea unit, and Govt. policies on tea.

**Chapter V** is designed to take up for discussion of two different but related topics. The first part of the chapter is devoted to deal with the problem of defining sickness in tea industry. Being in the agricultural sector, the nature of business activities of this industry is dependent mostly on climatic conditions. Therefore, the definitions of sickness associated with other industries are not suitable for tea industry. A model (SICKTU Model) for defining sickness in tea units has been

suggested here. In the last part of the chapter a discussion in brief has been made on the history of sickness in tea units of Assam which ultimately led to the formation of the premier public sector tea unit of India---Assam Tea Corporation Ltd, in 1972. A detailed discussion has been made to explore the status of the Corporation at the time of its formation both at garden level and at Corporation level. The objectives of the Corporation have also been discussed to see whether they have been achieved.

In **chapter VI** an attempt has been made to explore the present state of affairs of the Corporation. In order to get a true picture of the health of the Corporation the entire discussions have been made both in non-financial & financial terms with the help of the following tools.

1. Growth analysis of the Corporation in terms of:
   * Growth of employee strength
   * Growth of area under tea
   * Growth of production
   * Growth of yield per hectare
   * Growth of employee-area ratio

2. Growth pattern analysis of the Corporation during the recent eight years span with the indicators of area under tea, production, yield per hectare and price fetched.

3. The operational results have been explored for each garden and the Corporation as a whole since their take over/formation.

4. The Capital Structure, Pattern of Utilization of Funds, Pattern of Distribution of Revenue and Specific Ratios have been analyzed to get a true picture of the performance of the Corporation.

5. To analyze the health of the Corporation various ratios like Current ratio, Quick Ratio, Absolute Liquid Ratio, Ratio of Net Surplus to Total Income, Return on Total Capital Employed, Debt-Equity Ratio, and Solvency Ratio have been used.

6. An attempt has also been made to compare the business practices of some sample private sector tea units with that of Assam Tea Corporation. The entire discussion has been made in terms of financial and non-financial factors as stated earlier. Besides, the performance of the Corporation has been compared with the performance of a sample public sector tea unit of Sikkim.

Further, the **SICKTU Model** has also been tested to see whether Assam Tea Corporation can be studied as sick tea unit.

In **chapter VII** the problem areas of Assam Tea Corporation have been identified and discussed. The entire problems of the Corporation could well be categorized in nine groups as (i) Production problems, (ii) Organizational problems, (iii) Project related problems, (iv) Geographical problems, (v) Planning problems, (vi) Financial problems, (vii) Personnel problems, (viii) Marketing problems, and (ix) Problems related to objectives of the Corporation. Some suggestions have been advanced for achieving (a) increase in yield, (b) reduction, if not elimination, of wastage, (c) cost control , and (d) modification of organisational structure of the Corporation.

In **chapter VIII** a concluding note has been given on the functioning and problems of public sector tea units of Assam. It gives a summary of the whole thesis. On the other hand some recommendations have been made for future study on few related aspects of the topic under study.

# CHAPTER II

## Public Sector and Indian Economy

# CHAPTER – II

## PUBLIC SECTOR AND INDIAN ECONOMY

### 2.1. INTRODUCTION

"In the name of Indian socialism all that we have achieved" said Mr. Vasant Sathe, the former Union Minister of India, "is a stagnant, high cost, inefficient, non-competitive, irresponsible and unaccountable system of production. What is more, having set up the public sector we started treating it blasphemous to even question the performance of public sector units. Mere questioning was considered to be reactionary."[1] This statement is the reflection of most of the Indian intellectuals and administrators' views towards the present status of Public Enterprises (PE) of India.

The emergence of PE is a comparatively new phenomenon in the history of world economy. A few centuries back the philosophy of the States was only to protect the territorial sanctity of the country and to maintain law and order within the country. Trade was totally out of its jurisdiction, which were left free to the businessmen. Almost every country was governed by the Adam Smith's doctrine of Laissez Faire i.e., free economy. The First World War made the countries realize the value of the policy of protectionism. Therefore, they started intervention in the trade and commerce. Many revolutionary changes like October Revolution in Russia, emergence of ILO, Second World War etc. have created an atmosphere in favour of protectionism. India wanted to follow the path of speedy development in industrial field since her independence in 1947. Therefore, she adopted the policy of mixed economy assuming more and more responsibility for the industrial development of the country through the development of public sector and through proper control and regulation of private sector.

However, PE, which was once considered as the basic instrument for the economic development of India, has been performing poorly in the changing economic environment. In recent years the PEs have been unable to attain the

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(1) Times of India, Mumbai, 4th – 6th August 1986.

objectives for which they were established. In India as early as in 1991, 246 central PEs covered by the Public Enterprise Survey, with a total paid up capital of Rs. 43,034 crores, had an accumulated deficit of Rs. 15,354 crores (35.7pc). The State Government organistions are even going from bad to worse. The total loss of State Electricity Boards in 1989-90 was 4104 crores, which went up to 4169 crores in 1990-91. The position of State Transport Corporations is even worse. The loss had increased from 359 crores to 470 crores during the period from1989-90 to 1990-91. Further, the State Level Departmental Undertakings had an accumulated loss of Rs. 1711 crores in 1989-90, which went up to Rs. 1855 crores in 1990 – 91.

The term "Public Sector" is often used as a synonym of Public Enterprise in contrast with " Private Sector". In India's Five Year Plans the term Public Sector is used in a broader sense which covers all activities of the Government whether economic or non-economic, undertaken by them individually, collectively or jointly along with the initiative of private sector. However, the Bureau of Public Enterprises of India has used the term in more specific sense. In this sense it includes only economic activities of the Government, covering Departmental Undertakings , State Enterprises and the Central Public Sector Enterprises. In this thesis the term Public Sector is used in this specific sense.

Encyclopedia Britannica has viewed Public Enterprise as an undertaking that is owned by a National, State (Provincial) or Local Government, supplies services or goods at a price and is operated on a more or less self supporting basis. Such enterprise may also be international, inter state, or inter-municipal in character, i.e. owned and operated jointly by two or more national, state or local governments. The definition of PE has two dimensions, namely, *public ownership* and *business enterprise*.

**Public Ownership**

The term public ownership encompasses three aspects. *First,* it implies that major decisions would rest on distinctive social criteria to the exclusion of any personal interests. *Second*, the surplus would not accrue to a private group or individual and *Third*, it involves social accountability.

An activity to become public enterprise, the government not only owns it but should also manage it. The ownership with the government should be 51 percent or more. In some cases, this ownership may be indirect. But if the indirect ownership were through financial institutions, then a unit would not be treated as PE. Implication of control over the management, among others, are that, the Govt. has the right to appoint and terminate the services of the Board of Directors and has the power to issue mandatory directives to the Board. It is possible that the Govt. may have ownership without having management with it. This may happen when the unit is given on lease or management is handed over to a non-government body. But in reverse case, i.e. if Govt. exercise control over management without acquisition of ownership right, the unit can not be termed as public enterprise.

**Business Enterprise**

It implies that the government expects a return on the capital invested in public enterprise. The goods and services are supplied for a price. This price must cover at least the cost of production in the long run though initially it may incur losses. If a unit is always expected to run at a loss or on a subsidy, it can not be considered as a PE.

Generally Govt. adopts any one of the following three major forms of organisation for PEs.

(i) **Departmental Management**, where it is operated as a separate Govt. department

(ii) **Public corporation**, which is formed by passing a special statute of a State or Central Govt.; or

(iii) **Company form**, where the unit is formed according to the provisions of the existing Company Act.

Moreover, PE may also be a

a) **Control Board**, to look after the river valley projects;

b) **Public Trust**, to look after the ports;

c) **Semi-Autonomous Board,** where functions are governed to some extent by the concerned departments and to some extent by a Special Act of Parliament; or

d) **Commodity Board**, to work for the development of trade of a particular commodity.

## 2.2 OBJECTIVES OF PUBLIC ENTERPRISES IN INDIA

PEs are always established to attain certain social, economical and political objectives. Pandit Jawaharlal Nehru gave three reasons accounting for the establishment of public sector enterprises in India. [2]

(a) First, to acquire increasing control of the commanding heights of the economy.

(b) Second, to promote social gain or strategic value rather than merely aiming at economic performance or profitability, and

(c) Third, to secure commercial surpluses with which further capital formation can take place.

As a general rule public enterprise in India has the following two types of objectives to pursue – *General* and *specific*.

### 2.2.1 General Objectives

These are common objectives pursued in all the countries of the world irrespective of their level of development and political philosophy. It includes working for accelerated economic growth and social developments. In India the thrust is on the development of basic sectors and infrastructure growths. Moreover, avoiding concentration of wealth; reducing disparity in income; helping the under-privileged and developing of industrially backward regions are some of the general objectives of establishment of PEs in India.

### 2.2.2 Specific Objectives

Objectives specific to Indian context are:

1. Resuscitating private enterprise by helping them to grow or saving them from sinking completely. (Taking over of sick units)

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(2) Sherlekar, S.A., Sherlekar, V.S., Modern Business Organization and Management, P. 2.64 Himalaya Publishing House, Mumbai.

2. Facilitate aid and trading with East-European countries like USSR, and West Germany, which prefer to trade with and channel their aid only to PEs.

3. One of the objectives of setting up of PEs is to provide fair treatment to workers and to act as model employer.

4. Expanding and promoting new units in basic and strategic sectors of the economy through which it is possible to command and control the whole economy.

5. PE is supposed to contribute sizeable revenue to the State by mopping up profits.

6. PEs were chosen to be one of the instruments for achieving the goals of a socialistic pattern of society

7. To introduce healthy competition to the private enterprises and to provide relief to the general consumers.

8. To provide productive employment and to remove the problem of unemployment. They are used as an instrument for avoiding unemployment in sick units.

9. To implement some of the important schemes of the government which the government departments could not efficiently carry out.

10. To meet the requirements of the country for essential items like paper, steel, cement etc. as private enterprises failed to meet the demands.

11. To reduce the stress caused by outflow of valuable foreign exchange.

## 2.3 GROWTH OF PUBLIC ENTERPRISES IN INDIA

The PEs in India since independence have been playing a vital role in providing industrial base for the country. Before independence the activities of public sector were associated only with the Railways, the Port Trust, the Post and Telegraph Department, the Ordinance and Air Craft Factories, and a few State-Managed

Undertakings like Salt Factories etc. After independence India adopted socialistic pattern of society and to achieve that more emphasis were put on the development of public sector enterprises.

The growth of PEs in India has been very significant. They have considerably changed the industrial structure of the country. Their growth can be judged in terms of their number, volume of investment, employment, value of production and service, turnover and profitability. [3]

### 2.3.1 The Growth Trend

During the period of 1951 to 1995, there had been a sharp increase in the number of PEs in India. During this period the Indian economy had witnessed a 49-fold increase in the number of central public sector units. The figures given in the Table 2.1 shows the growth trend of the PEs of India during 1951 to 1995.Figure 2.1 depicts the pattern of growth of PEs during the said period. In India, during that period there were total 166 PEs engaged in manufacturing and selling goods, and 75 PEs engaged in rendering different types of services. It reveals that the government has given more emphasis on providing infrastructure base to the country, which was untouched by private entrepreneurs due to the requirement of heavy capital investment and long gestation period.

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(3) Kumar, Prashant, Public Enterprises in India, Research & Development. (1999) P.9, RBSA Publishers, Jaipur.

**TABLE – 2.1**

**GROWTH IN NUMBER OF CENTRAL PUBLIC ENTERPRISES IN INDIA**

| Year | No. Of Enterprise | Increase / Decrease | PC Increase/ Decrease |
|---|---|---|---|
| 1951 | 5 | - | - |
| 1956 | 21 | 16 | 320.00 |
| 1961 | 48 | 27 | 128.57 |
| 1966 | 74 | 26 | 54.17 |
| 1969 | 85 | 11 | 14.86 |
| 1974 | 122 | 37 | 43.53 |
| 1979 | 176 | 54 | 44.26 |
| 1984 | 214 | 38 | 21.59 |
| 1990 | 244 | 30 | 14.02 |
| 1991 | 246 | 2 | 0.82 |
| 1992 | 246 | - | - |
| 1993 | 245 | -1 | -0.41 |
| 1994 | 246 | 1 | 0.41 |
| 1995 | 245 | -1 | -0.41 |

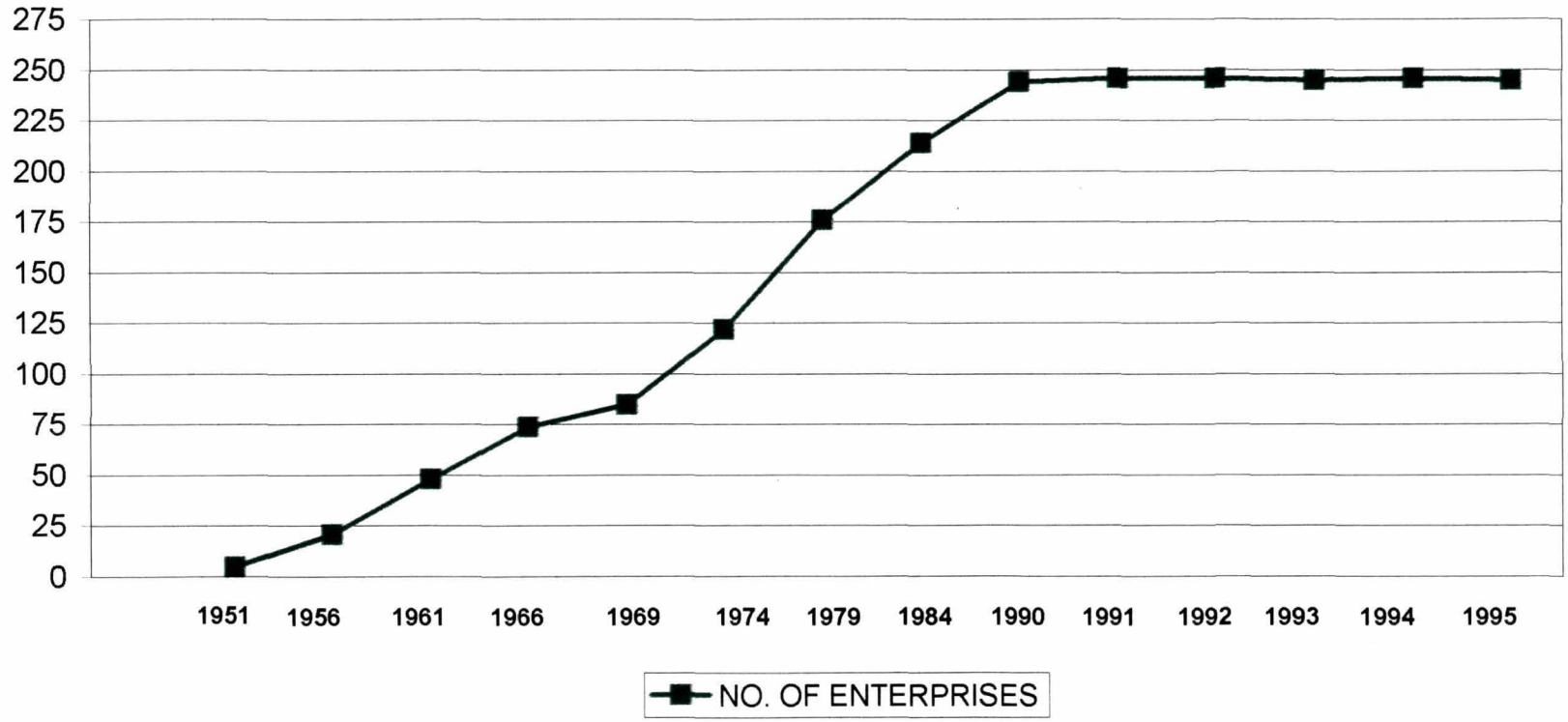
**Source: Public Enterprise Survey, Volume – I, 1994-95**

### 2.3.2 Volume of Investment

The growth in volume of investment in central public enterprises has been quite high. The investment had increased by 5945 times from Rs. 29 crore in 1951 to Rs. 1,72,438 crore in 1995. The growth in the volume of investment over the said period had shown an increasing trend upto 1990 and after that it has been oscillating from year to year. Thus the growth in the volume of investment in PEs has been positive. The growth pattern of investment in PEs in India during the period 1951 to 1995 is depicted in Table 2.2 and in Figure 2.2.

## FIGURE - 2.1

### GROWTH IN NUMBER OF CENTRAL PUBLIC ENTERPRISES IN INDIA



## TABLE – 2.2

### GROWTH IN VOLUME OF INVESTMENT IN CENTRAL PUBLIC ENTERPRISES IN INDIA (RS IN CRORES)

| Year | Total Investment | Increase /Decrease | PC Increase/Decrease |
|---|---|---|---|
| 1-4-51 | 29 | -- | - |
| 1-4-56 | 81 | 52 | 179 |
| 1-4-61 | 953 | 872 | 1077 |
| 1-4-66 | 2415 | 1462 | 153 |
| 1-4-69 | 3902 | 1487 | 62 |
| 1-4-74 | 6237 | 2335 | 60 |
| 1-4-79 | 15602 | 9365 | 150 |
| 1-4-84 | 35394 | 19792 | 127 |
| 1-4-91 | 99329 | 63935 | 181 |
| 1-4-90 | 113896 | 14567 | 15 |
| 1-4-92 | 135445 | 21549 | 19 |
| 1-4-93 | 147587 | 12142 | 9 |
| 1-4-94 | 164960 | 17373 | 12 |
| 1-4-95 | 172438 | 7478 | 5 |

**Source: Public Enterprise Survey, Volume – I, 1994-95**

### 2.3.3 Growth in Employment

PEs emerged as the largest employer of the available work force and to some extent has positioned themselves as model employers. It employs all categories of workers consisting of managerial, supervisory, clerical, skilled, semi-skilled and unskilled workers. These enterprises have also protected employment of workers of sick industrial enterprises through nationalization. The growth of employment as shown in Table 2.3 has been found to be fluctuating and registers a decrease of 5.25 pc during the period 1985-86 to 1994-95. The per capita emoluments have shown an increasing tendency, which increased, from Rs. 25887 in 1985-86 to Rs. 84429 in the year 1994-95. Figure 2.3 shows the pattern of growth in Employment, Emoluments, and per capita Emoluments in PEs in India.

**TABLE – 2.3**
**GROWTH IN EMPLOYMENT, EMOLUMENTS AND PER CAPITA EMOLUMENTS IN CENTRAL PEs IN INDIA.**

| Year | Employments ( In lakhs) | Increase/ Decrease | Emoluments ( Rs in Crores) | Increase/ Decrease | Per Capita Emoluments (Rs.) | Increase/ Decrease | PC Increase/Decrease | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Employment | Emoluments | Per Capita Emoluments |
| 1985-86 | 21.54 | - | 5576 | - | 25887 | - | - | - | - |
| 1986-87 | 22.11 | .57 | 6371 | 795 | 28820 | 2933 | 2.70 | 14.30 | 11.30 |
| 1987-88 | 22.14 | .03 | 7193 | 822 | 32537 | 3717 | .10 | 12.90 | 12.90 |
| 1988-89 | 22.09 | -.06 | 8683 | 1490 | 39415 | 6878 | .20 | 20.70 | 21.10 |
| 1989-90 | 22.36 | .27 | 9742 | 1059 | 43665 | 4250 | 1.2 | 12.20 | 10.80 |
| 1990-91 | 22.19 | -.17 | 10912 | 1170 | 49179 | 5514 | -.76 | 12.00 | 12.60 |
| 1991-92 | 21.79 | -.40 | 12311 | 1399 | 56508 | 7329 | -1.8 | 12.80 | 14.90 |
| 1992-93 | 21.52 | -.27 | 13983 | 1672 | 64983 | 8475 | -1.2 | 13.60 | 15.00 |
| 1993-94 | 20.70 | -.82 | 14913 | 930 | 72043 | 7060 | -3.8 | 6.70 | 10.90 |
| 1994-95 | 20.41 | -.29 | 17232 | 2319 | 84429 | 12386 | -1.4 | 15.60 | 17.20 |

**Source : Public Enterprise Survey, Volume I, 1994-95**

## FIGURE -2.2

## GROWTH IN VOLUME OF INVESTMENT IN CENTRAL PUBLIC ENTERPRISES IN INDIA

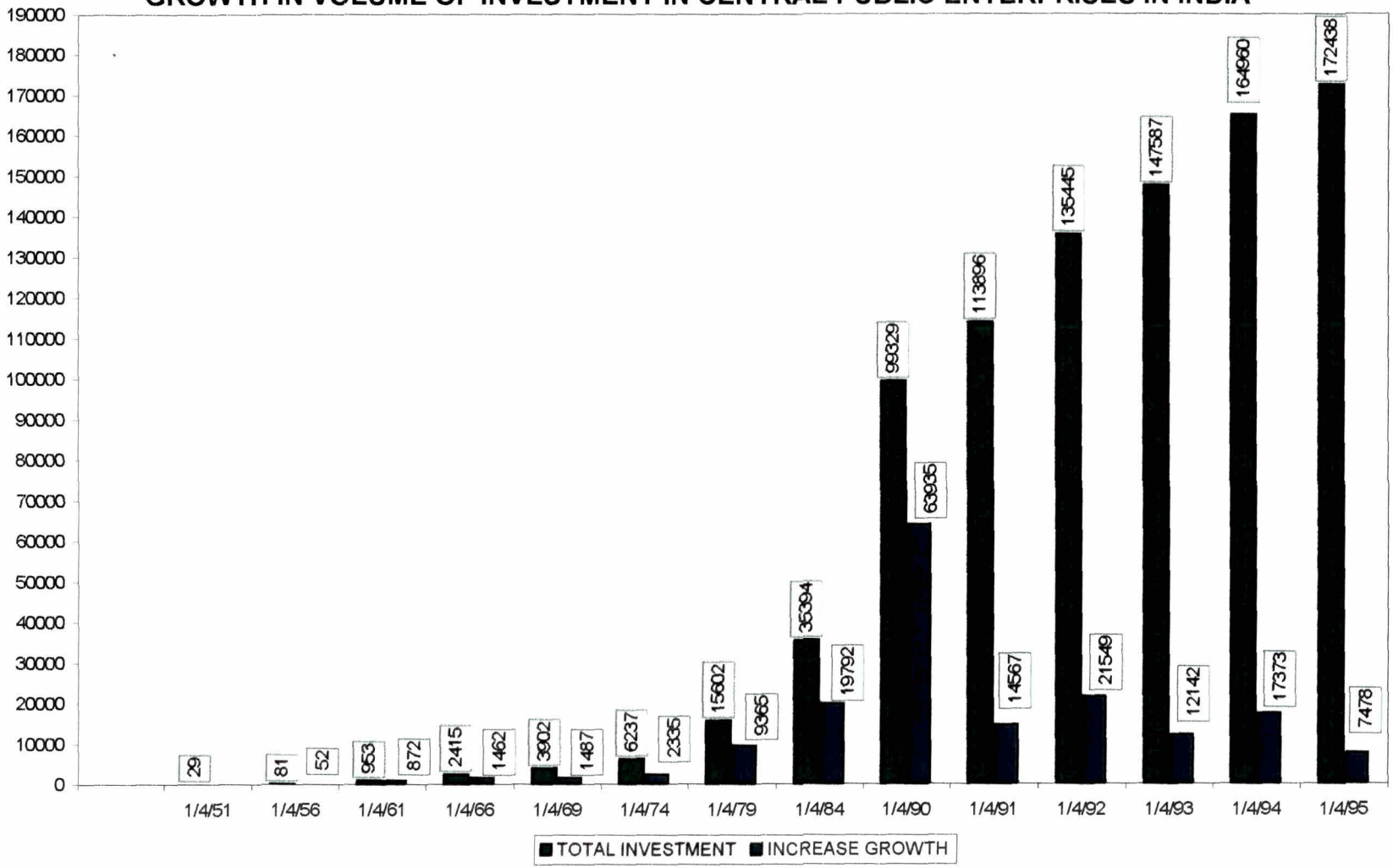
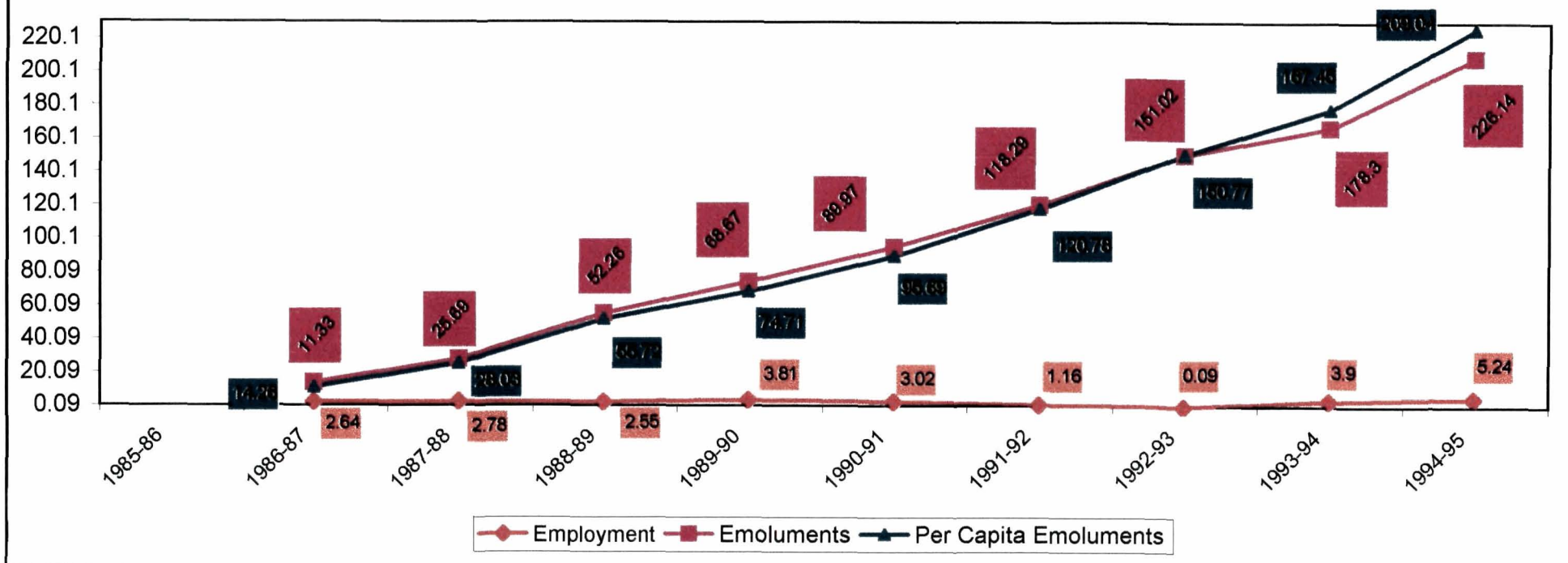


FIGURE - 2.3

**GROWTH IN EMPLOYMENT, EMOLUMENT AND PER CAPITA EMOLUMENTS IN CENTRAL PUBLIC ENTERPRISES IN INDIA**
**( PC GROWTH OVER 1985-86)**



### 2.3.4 Growth in Sales

The volume of sales of products/services of the enterprises has also been increasing during the recent periods. The total sales of the central public enterprises during the period 1985-86 to 1994–95, as indicated in Table 2.4 rose from Rs. 62360 crores to Rs. 187126 crores which is an increase of around 200 per cent. The sales of manufacturing enterprises rose by 221.50 per cent from Rs. 44532 crores in 1985-86 to Rs. 143172 crores in 1994-95.On the other hand the sales of service enterprises has witnessed an increase of more than 2.4 times from Rs. 17828 crores in the year 1985-86 to Rs. 43954 crores in the year 1994-95. Figure 2.4 indicates the growth of sales in PEs in India.

## TABLE – 2.4

**GROWTH OF SALES IN CENTRAL PUBLIC ENTERPRISES IN INDIA**

**(RS IN CRORES)**

| Year | Manufacturing Enterprise | Service Enterprise | Total |
|---|---|---|---|
| | Amount | Amount | |
| 1985-86 | 44532 (71.41) | 17828 (28.59) | 62360 |
| 1986-87 | 49701 (71.94) | 19387 (28.06) | 69088 [10.8] |
| 1987-88 | 59313 (72.98) | 21955 (27.02) | 81268 [17.6] |
| 1988-89 | 71702 (76.98) | 21435 (23.02) | 93137 [14.6] |
| 1989-90 | 82517 (77.79) | 23553 (22.21) | 106069 [13.9] |
| 1990-91 | 91816 (77.36) | 26860 (22.64) | 118676 [11.9] |
| 1991-92 | 100025 (74.70) | 33881 (25.30) | 133906 [12.8] |
| 1992-93 | 114089 (77.47) | 33177 (22.53) | 147266 [10.8] |
| 1993-94 | 122233 (77.34) | 35816 (22.66) | 158049 [7.3] |
| 1994-95 | 143172 (76.51) | 43954 (23.49) | 187126 [18.4] |
| PC Growth | 221.50 | 146.50 | 200.07 |

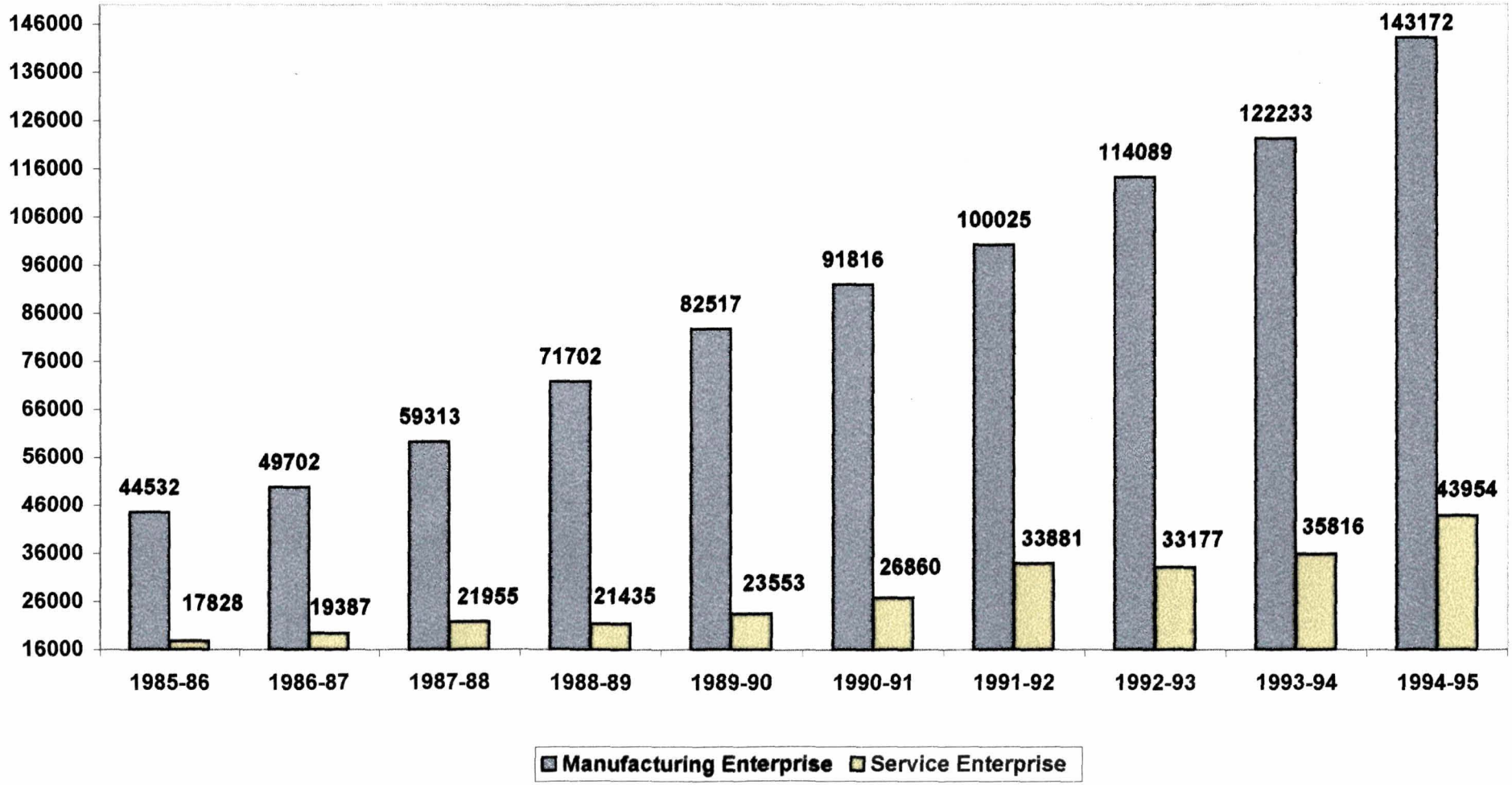
**Source: Public Enterprise Survey, Volume I, 1994-95**

*** Figures in big bracket indicate pc increase over previous year.**

**** Figures in small bracket indicate pc to total sales.**

FIGURE - 2.4

GROWTH OF SALES IN CENTRAL PUBLIC ENTERPRISES IN INDIA ( RS. IN CRORES)



### 2.3.5 Profitability

All enterprises, whether in the public sector or in the private sector must earn some amount of profit. Though the basic objective of the PEs is to render social service, but in the changing economic scenario, even the PEs are expected to earn a percentage of profit, at least to achieve their basic objectives. They can never be supported by the government's budgetary allocations only. Profit is essential for their very existence, since a loss-incurring enterprise has a little chance of survival for long. During the period 1985-86 to 1994-95 the gross profit of central public enterprises has recorded an increase from Rs. 5387 to Rs. 22516 crore. The gross profit as a percentage of capital employed has also increased from 12.31pc to 13.98pc during that period. Thus these figures along with figures of pre-tax profit and post-tax profit as indicators of the growth of public enterprises reveal a positive trend in general. But the alarming factor is that quite a few central PEs are incurring losses and only a small number of them are earning profits and compensating the losses suffered by the others. The profitability of Indian PEs during 1985 to 1995 has been shown in the Table 2.5 and in Figure 2.5.

### 2.3.6 Contribution to Central Exchequer

The contribution of the central public enterprises to the central exchequer has been increasing for the period 1991 to 1995. It contributes to the central exchequer in the form of dividend, corporate tax, excise duty, customs duty, and other duties. The amount has increased from Rs. 19520 crore in the year 1990-91 to Rs. 27415 crore in the year 1994-95, which shows an increase of about 40pc. The amount of dividend declared has increased more than 3 times during this period. Similarly, the corporate tax has increased from Rs. 1301 crores in 1990-91 to Rs. 2720 crores in 1994-95, which is an increase of around 109 pc. The excise duty on the other hand has increased from Rs. 9075 crores in 1990-91 to Rs. 12246 crores in 1994-95. It may be said that the increase in the contribution to the government exchequer has been the result of better performance of some PEs in India. The contributions of PEs to the central exchequer have been depicted in Table 2.6 and Figure 2.6.

**TABLE – 2.5**

**PROFITABILITY PROFILE IN CENTRAL PUBLIC ENTERPRISES IN INDIA**

**( RS. IN CRORS)**

| Year | No. of Enterprise | Capital Employed | Gross Profit | Pre-tax Profit | Post- tax Profit/Loss | PC of Gross Profit to Capital Employed | PC of Pre-tax Profit to Capital Employed | PC of Post-tax Profit/ Loss to Capital Employed |
|---|---|---|---|---|---|---|---|---|
| 1985-86 | 216 | 42965 | 5287 | 2172 | 1172 | 12.31 | 5.05 | 2.73 |
| 1986-87 | 214 | 51835 | 6521 | 3101 | 1772 | 12.58 | 5.98 | 3.42 |
| 1987-88 | 220 | 55617 | 6940 | 3353 | 2030 | 12.48 | 6.13 | 3.65 |
| 1988-89 | 226 | 67629 | 8572 | 4405 | 2994 | 12.68 | 6.51 | 4.43 |
| 1989-90 | 233 | 84760 | 10622 | 5293 | 3789 | 12.53 | 6.24 | 4.47 |
| 1990-91 | 236 | 102084 | 11102 | 3501 | 2272 | 10.88 | 3.43 | 2.22 |
| 1991-92 | 237 | 117991 | 13675 | 4003 | 2355 | 11.59 | 3.39 | 1.99 |
| 1992-93 | 239 | 140110 | 15957 | 5076 | 3271 | 11.39 | 3.62 | 2.33 |
| 1993-94 | 240 | 159386 | 18556 | 6655 | 4545 | 11.61 | 4.16 | 2.84 |
| 1994-95 | 241 | 161311 | 22516 | 9800 | 7217 | 13.98 | 6.07 | 4.47 |

**Source : Public Enterprise Survey, Volume I, 1994-95**

FIGURE-2.5

PROFITIBILITY PROFILE IN CENTRAL PUBLIC ENTERPRISES IN INDIA

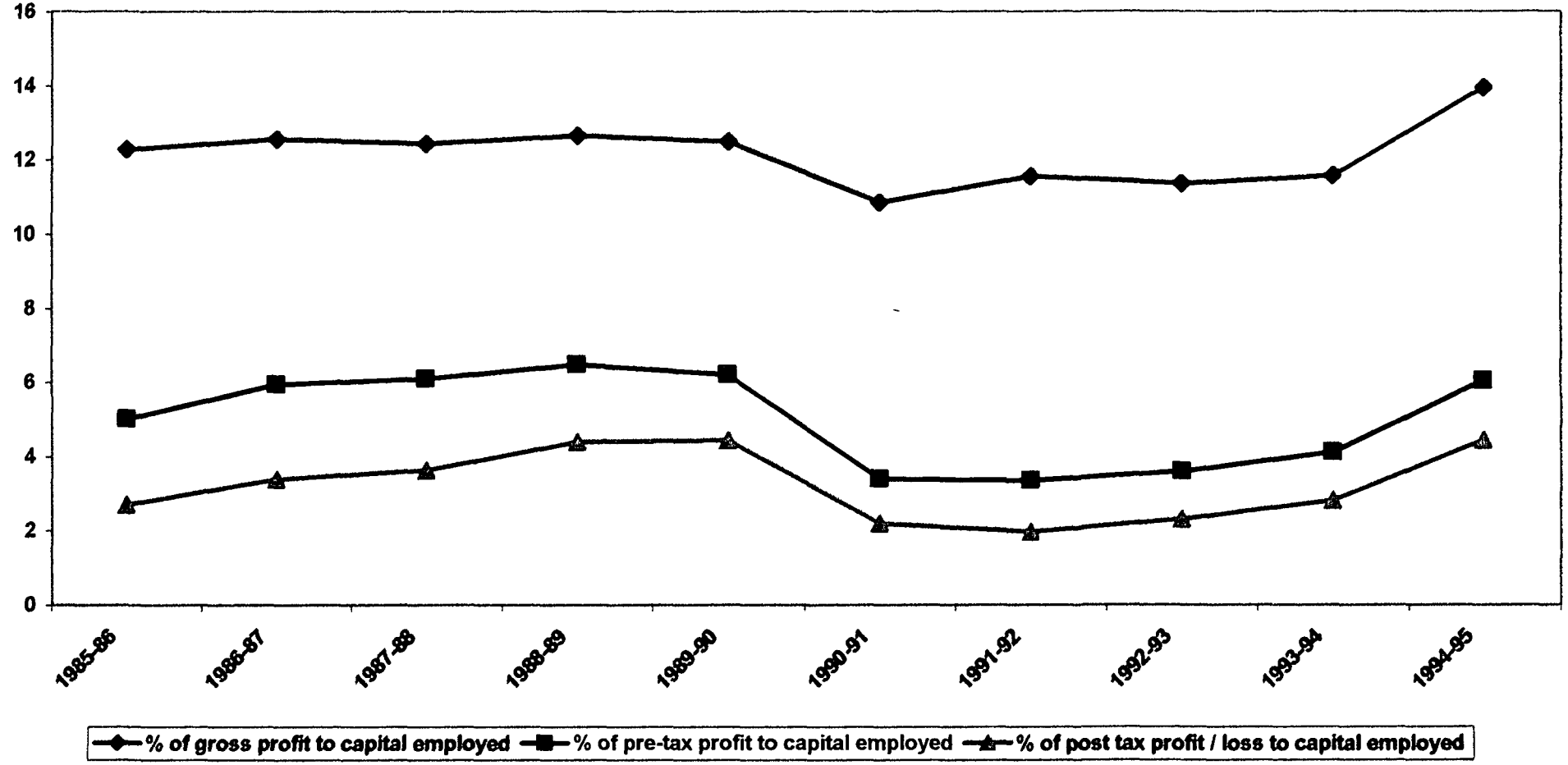


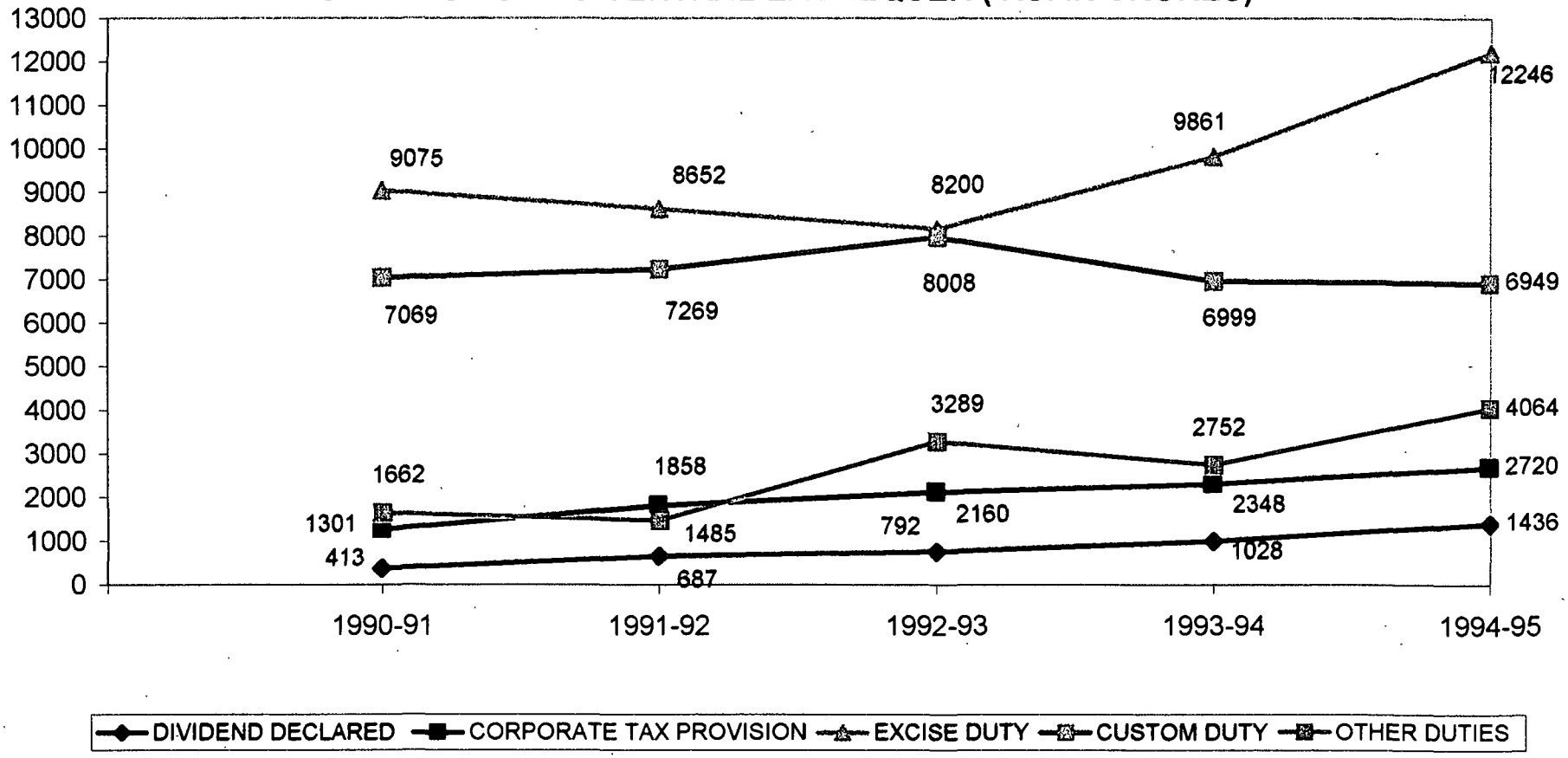
**TABLE – 2.6**
**CONTRIBUTION TO CENTRAL EXCHEQUER**
**(RS. IN CRORES)**

| Year | Dividend declared | Corporate Tax provision | Excise Duty* | Custom duty* | Other duties * | Total |
|---|---|---|---|---|---|---|
| 1990-91 | 413 | 1301 | 9075 | 7069 | 1662 | 19520 |
| 1991-92 | 687 | 1858 | 8652 | 7269 | 1485 | 19951 |
| 1992-93 | 792 | 2160 | 8200 | 8008 | 3289 | 22449 |
| 1993-94 | 1028 | 2348 | 9861 | 6999 | 2752 | 22988 |
| 1994-95 | 1436 | 2720 | 12246 | 6949 | 4064 | 27415 |

*** Actual Payment Basis**
**Source : Public Enterprises survey volume I, 1994-95**

FIGURE - 2.6

**CONTRIBUTION TO CENTRAL EXCHEQUER ( RS. IN CRORES)**



## 2. 4. ROLE OF PUBLIC ENTERPRISE IN INDIAN ECONOMY: PAST & PRESENT

### 2.4.1 Role of Indian Public Enterprises

PEs in India have played vital roles in the growth of Indian economy and in strengthening the economic base of the country as indicated below.

1) They have played an incredible role in augmenting small savings of the general public and investing them in productive purposes.

2) India had inherited an underdeveloped basic infrastructure from the colonial period. Since independence the government has not only improved the road, rail, air and sea transport system but has also expanded them manifold. Thus, the public sector has enabled the economy to develop a strong infrastructure for the future economic growth.

3) PEs in India have provided a strong industrial base by placing due emphasis on the fields of iron and steel, heavy engineering, coal, heavy electrical machinery, petroleum and natural gas, chemicals and drugs, fertilizers etc. Consumer goods industries cannot progress without the development of these industries. However, private sector does not favour these establishments because of low profitability potential associated with them in the short-run.

4) Setting-up of the industries requiring large capital investment in the public sector also help in preventing concentration of economic powers in the private hands.

5) In the pre-independence period, most of the industrial progress of the country was limited in and around the port towns of Mumbai, Calcutta & Chennai. Other parts of the country lagged far behind. Thus after independence, a large part of the public sector investment has been directed towards the backward states.

6) Industries like Bharat Heavey Electricals Ltd., Indian Oil Corporation, ONGC, etc. are playing important roles in import substitution of the country. Several

public sector enterprises have also played an important role in expanding the exports of the country.

7) Public sector enterprises in India can play a major role in reducing inequalities in the economy in a number of ways as indicated earlier.

   i) Profits of the public sector can be used directly by the government on the welfare programmes for the poorer sections of the community.

   ii) Public sector can adopt a discriminatory policy by supplying materials to small industrialists at low prices and big industrialists at high prices.

   iii) Public sector can give better wages to the staff, as compared to the private sector and can also implement programmes of labour welfare, construction of colonies and township for labourers, slum clearance etc,

   iv) Public sector can orient production machinery towards the production of mass consumption goods.

**2.4.2 Public Enterprises Under Changing Conditions**

The critics of PEs feel that though the figures and the factors given above establish that the PEs in India got to play an important role and to some extent they have been doing so; but in the changing national and international economic conditions they have failed to satisfy the requirements of growing economy. Since 1991, when the government of India opened up its economy, many sectors that were earlier reserved for public sector, were made open to private sector also. Many weaknesses of public sector came to focus when it started competing with the private sector business houses. Considering the amount of investment, the return from the public sector is quite negligible. The decreasing role of PEs in Indian economy is apparent from the fact that the percentage growth of number of PE units over previous years went down since 1991. In fact the total number of central PEs in India were revolving around 145 since then. The percentage growth in volumes of investment in central PEs in India have also been reducing since 1990.There has been a negative

trend in percentage growth in employment and since 1988-89 there has been a negative trend of growth of profit to capital. Moreover there has been a declining profitability and productivity of PEs in India, which is depicted in Table 2.7. Private enterprises seem to be making inroads into the realm of public enterprises. Over the past five years plans the investments in various public sector enterprises have been reduced to 50 pc only. It appears to have failed to occupy the commanding position in the economy.

**TABLE –2.7**

**DECLINING PROFITABILITY AND PRODUCTIVITY OF PEs IN INDIA**

| Particulars | 1987-88 | 1988-89 | 1989-90 | 1990-91 | 1991-92 |
|---|---|---|---|---|---|
| PC of gross profit (before interest and tax) to capital employed. | 12.48 | 12.68 | 12.53 | 10.88 | 11.69 |
| PC of net profit (after interest and tax) to capital employed. | 3.65 | 4.43 | 4.47 | 2.23 | 2.09 |
| PC of sales to capital employed (net block plus working capital, i.e, current assets minus current liabilities) | 146.12 | 137.72 | 125.14 | 116.25 | 114.61 |

**Source: Narain, Laxmi. "Principles & Practice of Public Enterprise Management" S. Chand & Company Ltd, New Delhi.**

The changing national and international conditions forced the government to change the plan priorities for PEs. Earlier, PEs were not expected to generate surpluses for their survival and expansion. Now the position is such that they have to justify their existence by positive results. The qualitative objective of PEs, i.e. rendering social service can only be attained if they could earn some return on their investments. A developing economy cannot be expected to provide budgetary allocation forever to compensate its loss making business concerns. The seventh plan document clearly states that:

to perform its historic task ,the public sector has to undergo basic structural changes to conform to the plan priorities of efficiency and productivity . Only in the measure that the public sector generate investible surpluses can it play its indispensable social role of providing an adequate infrastructural base for the economy, being a vehicle for the introduction and absorption of new technology in critical sectors of the economy and for achieving balanced regional growth[4].

Various studies have suggested that PEs in India should earn profits on the following three grounds.

1) Developmental requirements of the country justify the surplus target so that it could be ploughed back to make capital formation in due course of time;

2) Increasing proportion of the nation's investible funds are being used through the medium of public sector. To maintain the financial resources it is necessary to have a surplus yielding public sector; and

3) Borrowings from abroad is another heavy burden on the country's economic budget. Therefore, for long term solvency of the national economy reasonable level of surplus from public sector is essential.

The factors, which have weakened the base of the public sector in recent years and are likely to stand in the way of its future growth may be summarized as follows.

1) The environment in which the public sector has to function today is poisoned by hostile public opinion against PEs. It is because of the poor performance of some of the central government and most of the state enterprises resulting in huge losses.

2) Government has set up PE units in various sectors including low investment units without giving adequate attention to detailed scientific project planning because of socio-political factors.

(4) Seventh Five Year Plan 1985-90, Vol –1, Govt of India, Planning Commission, New Delhi, P-6.

3) Induction of incompetent people for vested interest into the management led to its inefficiencies. Moreover, the top management posts are often left unfilled for long period of time.

## 2.5 PROBLEMS OF INDIAN PUBLIC ENTERPRISES

### 2.5.1 Problems Related to Objective

Objectives are the end point for the attainment of which the enterprise works. It acts as a guide to execute action. But the PEs in India lack clarity in objectives. On the other hand the PEs have béen set up in India with multi-dimensional objectives, which are conflicting in nature. In practice it is not possible to fulfill both economic and non-economic objectives simultaneously. Therefore, it is indeed a great problem to judge their efficiency properly and correctly.

### 2.5.2 Project Related Problems

For attaining success in a venture, the preparation of its project unbiased and scientifically is of utmost importance. But the PEs in India are facing a lot of problems in preparation of its project reports. Often political interference is observed in selection of location for PEs. The decision of Central Government to break–up the MIG aircraft project into two parts to be located in Nasik and Koraput (2000 km apart) clearly indicates to it. These decisions are made under the pressure of the big political bosses. Sometimes the costs are underestimated and benefit inflated. Further, several projects which were taken up earlier have been affected considerably by the inflation that took place in the wake of increase in cost of various ingredients The cost of some of the projects has gone up by even 100pc or more.

### 2.5.3 Organizational Problems

Government has not yet laid down the criteria for selecting one form of organisation or the other for various PEs. In the Industrial Policy Resolutions no categorical statement was made regarding the choice of the form of organisation. On the other hand in almost all forms of organisations, initiative and operational autonomy, so essential for effective operations of industrial and commercial enterprises, are lacking.

### 2.5.4 Production Problems

The production organisation of many PEs is not very sound. The CPU (Committee on Public Undertakings).[5] in one of its annual reports [6] found that highly sophisticated plants and machineries were being operated on obsolete and outmoded techniques of production planning and control. Underutilization of capacity is another production problem of PEs in India. The CPU in its report stated, "Government should immediately analyze the reasons for this persistent underutilization of capacities in various undertakings and take remedial measures in respect of each of them." Moreover multiplicity of products, inefficient inventory management, low profile of R & D activities, inefficient materials management etc. are additional production related problems of Indian PEs.

### 2.5.5 Financial Problems

It is a fact that the financial performance of Indian PEs is not up to the desired level of satisfaction. The poor financial performance of PEs with its gigantic investment has not only thrown the national planning process out of gear but has resulted in higher and higher doses of taxation every year. The major financial drawback of the PEs is that they are over-capitalised. In this regard the report of a study team on public sector undertaking, 1967,[7] mentioned that "the causes leading to over-capitalisation can be traced to inadequate planning, delayed and avoidable expenditure during construction, surplus machine capacity, tied aid leading to compulsion to purchase of imported equipments on a non-competitive basis, expensive turn-key contracts, bad location of projects and the provision of housing and other amenities on liberal scale."

Besides, the pricing policy of the PEs is faulty. They are not guided by the profit earning principles. Political considerations in this regard are further aggravating the problem.

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(5) A Standing Committee of Parliament on PEs, created in May 1964.

(6) CPU, "Role and Achievements of Public Undertakings." op. cit, P-232 as cited in "Administration of Public Enterprises" by Jagdish Prakash, P-560.

(7) Report of the Study Team on Public Undertakings, 1967, P-200, as cited In "Administration of Public Enterprises" by Jagdish Prakash, P-562

Many of the PEs continues to follow the traditional pattern of budgeting forms and procedures. The ARC (Administrative Reform Committee) [8] has pointed out that PEs do not prepare comprehensive business-type budgets. The system of classification of expenditure adopted in the budgets does not link expenditure to activities and end results. On the other hand the PEs suffer from the problems of raising financial resources and they are extremely dependent on the governments budgeting appropriation. Again PEs do not always pay enough attention to the problem of working capital management. Besides, inadequate attention on cost accounting, heavy burden on social overheads, unfavourable debt-equity ratio etc are causing impediments in the progress of PEs.

### 2.5.6 Personnel Problems

The success of an organisation depends largely on how efficiently the personnel are managed. They are the backbone of any enterprise. It has some added importance in context to the PEs because of their large size and complexity of organisation. But unfortunately personnel management is one of the weakest aspects of Indian PEs. It is observed that absence of interest and stake of the employees is a major cause of unsatisfactory performance of PEs. In many cases it is found that manpower is in excess of actual requirements in most of the units. On the other hand their labour productivity rates are very low. Besides, inadequate communication with the lower cadres is also affecting the health of Indian PEs. To reduce communication gap between management and workers devices like employees suggestion scheme, workers participation in management etc. are rarely implemented. Further, many of the PEs do not have proper training scheme for their employees. In addition to these, reports of various studies reveal that the problems of low morale of public sector executives, flight of talent from PEs to private enterprises, indiscipline, lack of professionalism in management, vacant position of top management, strained employer-employee relations etc. are some of the personnel problems of Indian PEs.

### 2.5.7 Marketing Problems

Quite a few marketing problems of Indian PEs are also creating impediments in their healthy growth. They cannot face the competition from private enterprises in

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(8) "Administration of Public Enterprises" by Jagdish Prakash, P-563.

the distribution system and advertising campaign. The competition for market share between Modern Bakeries of Kanpur and other private bakeries, between Scooters India Ltd. and Bajaj Auto, between National Textile Corporation of India and other private textile units establishes this fact. Besides, they follow poor quality control system as a result of which the products of many PEs are not of desired quality and specification.

### 2.5.8 Control and Public Accountability Problems

The PEs are not given effective authority to attain its objectives and are not encouraged to take decisions for which they are held responsible. The government control covers widespread aspects of the activities of PEs. At present, the Finance Ministry and the Minister-in charge of the undertaking and the Parliament or the Assembly exercise control. The present orthodox audit control system followed in PEs is also responsible for delayed decision-making procedure.

## 2.6 TEA INDUSTRY IN PUBLIC SECTOR IN INDIA

Since independence the Government of India has been involving itself in the development of its tea industry. It also assumed the responsibility of maintaining and advancement of the industry by directly entering into the tea plantation and manufacturing in the Seventies of the last century. The State Governments of the main tea producing states of the country like Assam, West Bengal and Tamil Nadu, etc. also got into action by establishing their respective Tea Corporations. The basic reason behind the establishment of such PEs in tea sector was to protect the interest of the labourers of the tea units which were on the verge of closure either because of the sickness in them or because the owners of such tea units were unable to run them profitably.

Because of the adverse impacts of world wars on tea industry and legal provisions enacted by the Government after India's independence, some foreign tea companies could not continue their business profitably in India. They started shifting their business to newly started and more profitable tea industry in Africa by selling their Indian holdings to some new entrepreneurs. These new owners of tea business were inexperienced in the industry and mostly because of inefficient management, they too failed to run the gardens profitably. It resulted further changes of

ownerships and at one stage they turned out to be unviable and were either on the verge of closure or were closed.

Indian government having adopted a socialistic principle consequently ventured into the tea manufacturing industry by taking over ownership and management of some weak tea units from the hands of private individuals. The first two public sector tea Corporations in India, established by the central government were " TEA TRADING CORPORATION" (1971) AND " ANDREW YULE & COMPANY" (1979). The former was originally established to market packet tea in India and abroad and later it acquired some tea gardens in Assam and West Bengal and eventually it was converted into a subsidiary of the State Trading Corporation of India. The latter was originally a Sterling Company before being taken over by the Government of India.

Besides these two Central Govt. units, eight State level Public Sector Units are also in operation in Indian tea sector. They are (1) West Bengal Tea Development Corporation (2) Arunachal Pradesh Forest Corporation Limited. (3) Manipur Plantation Crops Corporation Ltd. (4) Temi Tea Estate (5) Uttarakhand Tea Development Project (6) Tamilnadu Plantation Corporation Ltd. (7) Tirperah Tea Corporation Ltd. and (8) Assam Tea Corporation Ltd. These Tea Corporations run and manage a total of 54 tea estates covering an area of 19,172.23 hectares tea cultivation. Out of these, Assam Tea Corporation Ltd. owns 14 tea estates covering an area of 6735 hectares which is around 35pc of the total tea cultivated area owned by the Tea Corporations in India. The two Central Govt. Public Sector Units dealing with tea cultivation and trading in Assam manage 7 tea estates having a tea-cultivated area of 4322 hectares. Thus out of the total tea cultivated areas owned by public sector units in Assam, Assam Tea Corporation Ltd owns and manages around 61pc of the tea cultivated area. Considering the number of employment, and total cultivable area occupied, by Assam Tea Corporation Ltd. it is very much essential that it performs in a healthy manner. The functioning and various aspects of Assam Tea Corporation Ltd are analyzed in chapter VI.

Some pertinent data regarding number of gardens, gross area, area under tea, production and number of workers of the public sector tea companies in India as available form Assam Directory & Tea Areas Handbook (64th Edition) 1996-97, are presented in Table 2.8.

## 2.7 CONCLUSION

It is seen from the above discussions that PEs in India have played a significant role in the attainment of socio-economic objectives of the nation. Its importance in nation building activities are still relevant, though their number, share in total capital investment, and gross domestic product have been reducing in recent years. This is more so because of its inherent limitations as stated above. In view of poor performance of PEs and the worldwide trends of lessening the role of state in the economic life, there has been extensive talk about privatization of PEs.

Many scholars feel that all problems of PEs can be effectively dealt with if these units are handed over to the hands of private individuals. It will help in promoting competitive efficiency of these units. Moreover, according to them, it will reduce political interference, produce higher quality products, provide better quality service, reduce wastages and optimize resources. The supporters of privatization advocate that due to difference in managerial styles followed in private enterprises the existing PEs will be able to perform well after privatisation since many of the public sector problems lie in the managerial practices followed there.

But some studies conducted in recent times have rejected the plea that privatization is the only alternative for the poor performing public sector units. In this context the remark made by Pranab Bardhan and John E.Roemer is significant. They said, "our claim is that competitive markets are necessary to achieve an efficient and vigorous economy, but that full-scale private ownership is not necessary for the successful operation of competition and markets. Contrary to popular impression, this claim has not been yet disproved by either history or economic theory." [9] Therefore,

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(9) Bardhan, Pranab., Roemer, John E. "Market Socialism : A case for Reservation," Journal of Economic Perspectives, Vol. 6, No. 3 1992, PP. 101-2.

for a better and efficient economy mere transfer of ownership will not do but there is need for creation of strong competitive market. In the context of a developing economy like India, which adopts a planned development process for the attainment of socialistic pattern of society, PEs are must.

Hence, rather than abolishing the sector completely, efforts should be made to rejuvenate it by all possible means. In this regard SWOT analysis should be undertaken for all public sector units. For any organisation to survive and prosper, it is mandatory that an analysis of the organizations strengths and weaknesses should be carried out. This will show the areas where the unit is strong and where it is weak. This will also provide the management a clear picture so as to enable them to decide how to make the most of their strengths and how to tackle the weaknesses. On the other hand opportunities are those that an organisation should always be on the look out in order to make the most out of them. Threats are what they should watch out and try to convert them into opportunities.

**TABLE – 2.8**
**PROFILE OF PUBLIC SECTOR TEA CORPORATIONS OF INDIA**

| Corporation | Gardens Owned | Gross Area ( Hectare ) | Area Under Tea ( Hectare) | Production (Kg) | Workers |
|---|---|---|---|---|---|
| TEA TRADING CORPORATION OF INDIA LTD. ( A Government of India Enterprises) Regd. Office – 7, Wood Street, Calcutta - 16 | 1. PATHINI T E. Dist – Karimganj Assam | 2,374.00 | 810.83 | 2,00,000 | N.A |
| | 2. LOOKSAN T.E. Dist – Jalpaiguri, West Bengal | 747.56 | 423.03 | 4,11,000 | 889 |
| | 3. PASHOK T.E. Dist – Darjeeling, West Bengal | 330.88 | 305.70 | 41,000 | 959 |
| | 4. VAH TUKVAR T.E. Dist – Darjeeling, West Bengal | 506.87 | 197.08 | 10,000 | 666 |
| | 5. POTONG T.E. Dist – Darjeeling, West Bengal | 411.93 | 138.44 | 80,000 | 307 |
| **TOTAL** | **5** | **4,371.29** | **1,875.08** | **7,42,000** | - |
| | 1. BASMATIA T.E. Dist – Dibrugarh , Assam | 374.05 | 268 21 | 6,50,000 | 565 |
| | 2. DESAM T.E Dist – Tinsukia, Assam | 477.97 | 324.54 | 8,00,000 | 838 |
| | 3. HOOLUNGOOREE T.E. Dist – Jorhat , Assam | 478.75 | 403.34 | 5,00,000 | 1,005 |
| | 4. KHOWANG T.E. Dist – Dibrugarh , Assam | 994.00 | 930.34 | 19,10,000 | N.A. |
| | 5. MURPHULANI T.E. Dist – Golaghat , Assam | 440.76 | 350.52 | 4,50,000 | N.A. |

**NA : Not Available**

**TABLE – 2.8 (Contd.)**
**PROFILE OF PUBLIC SECTOR TEA CORPORATIONS OF INDIA**

| Corporation | Gardens Owned | Gross Area ( Hectare ) | Area Under Tea ( Hectare) | Production (Kg) | Workers |
|---|---|---|---|---|---|
| ANDREW YULE & COMPANY ( A Government of India enterprise) Regd. Office – 8, Dr. R.P. Sarani, Calcutta - 01 | 6. RAJGARH T.E. Dist – Dibrugarh , Assam | 2,374.00 | 810.83 | 2,00,000 | N.A |
| | 7. TINKONG T.E. Dist – Tinsukia , Assam | 747.56 | 423.03 | 4,11,000 | 889 |
| | 8. BANARHAT T.E. Dist – Jalpaiguri , West Bengal | 330.88 | 305.70 | 41,000 | 959 |
| | 9. KARBALA T.E. Dist – Jalpaiguri , West Bengal | 506.87 | 197.08 | 10,000 | 666 |
| | 10. CHOONABHUTTI E.E. Dist – Jalpaiguri , West Bengal | 411.93 | 138.44 | 80,000 | 307 |
| | 11. NEW DOOARS T.E. Dist – Jalpaiguri , West Bengal | 374.05 | 268.21 | 6,50,000 | 565 |
| | 12. MIM T.E Dist – Darjeeling, West Bengal | 477.97 | 324.54 | 8,00,000 | 838 |
| **TOTAL** | **12** | **7,639.03** | **5,782.90** | **1,01,52,842** | - |

**TABLE – 2.8 (Contd.)**
**PROFILE OF PUBLIC SECTOR TEA CORPORATIONS OF INDIA**

| Corporation | Gardens Owned | Gross Area ( Hectare ) | Area Under Tea ( Hectare) | Production (Kg) | Workers |
|---|---|---|---|---|---|
| WEST BENGAL TEA DEVELOPMENT , CORPORATION ( A government of West Bengal undertaking ) Regd. Office – Skyamkunj, 3rd floor, 12 B Lord Sinha Road Calcutta - 71 | 1. MOHUA T.E. Dist – Jalpaiguri, West Bengal | 98.33 | 41.48 | Green Leaf | 133 |
| | 2. HILLA T.E. Dist – Jalpaiguri, West Bengal | 707.50 | 310.00 | 4,50,000 | 779 |
| | 3. RANGAROON T.E. Dist – Darjeeling, West Bengal | 156.01 | 89.93 | 20,000 | 195 |
| | 4. PANDAM T.E. Dist – Darjeeling, West Bengal | 521.00 | 35.32 | 40,000 | 266 |
| | 5. RUNGMOOK.CADERS Dist – Darjeeling, West Bengal | 716.13 | 526.30 | 2,00,000 | 3,315 |
| **TOTAL** | **5** | **2,198.97** | **1,003.03** | **7,10,000** | **3,315** |
| ARUNACHAL PRADESH FOREST CORPORATION LTD. ( A government of Arunachal Pradesh undertaking) Regd. Office – Post Box No –123 Itanagar Arunachal Pradesh | 1. MOPA T.E, KANDUBARI Dist – Tiran , Arunachal Pradesh | NA | 100.69 | Green Leaf | NA |
| | 2. LONGARAN T.E. Dist – Changlang, Arunachal Pradesh | NA | 50.00 | Green Leaf | NA |
| | 3. MEDO T.E. Dist – Lohit, Arunachal Pradesh | NA | 85.97 | Green Leaf | NA |
| | 4. TUPI T.E. Dist – Tirap, Arunachal Pradesh | NA | 75.00 | Green Leaf | NA |
| **TOTAL** | **4** | **NA** | **311.66** | **NA** | **NA** |

**TABLE – 2.8(Contd.)**
**PROFILE OF PUBLIC SECTOR TEA CORPORATIONS OF INDIA**

| Corporation | Gardens Owned | Gross Area ( Hectare ) | Area Under Tea ( Hectare) | Production (Kg) | Workers |
|---|---|---|---|---|---|
| MANIPUR PLANTAION CROPS CORPORATION LTD. (A government of MANIPUR UNDERTAKING) Regd. Office- Imphal | 1. MANIPUR T.E (Jiriburi Division), Dist- Imphal, Manipur. | 425.00 | 250.00 | Green leaf | 432 |
| **TOTAL** | **1** | **425.00** | **250.00** | - | **432** |
| TEMI TEA ESTATE (owned by the government of Sikkim) Regd office –Temi, Sikkim | 1. TEMI T.E. Dist- South Sikkim, Sikkim | 224.30 | 172.00 | 1,00.00 | 400 |
| **TOTAL** | **1** | **224.30** | **172.00** | **1,00.00** | **400** |
| UTTARKHAND TEA DEVELOPMENT PROJECT ( A government of U.P undertaking Regd office – Nainital U.P ) | 1. CHAMPAWAT, KAMSANI, SIMGARHI, VIJAYPUR AND GHORAKHAL T.Es Dist- Nainital, Uttar Pradesh | 800.00 | 110.00 | Green leaf | 200 |
| **TOTAL** | **1** | **800.00** | **110.00** | - | **200** |
| | 1.CHERAMBADI TEA DIVISION Dist-Nilgiri, Tamilnadu | NA | 331.09 | NA | NA |
| | 2. CHERANCODE TEA DIVISION Dist- Nilgiri, Tamilnadu | 372.02 | 372.02 | NA | NA |
| | 3. COONOOR TEA DIVISION Dist- Nilgiri , Tamilnadu | NA | 202.24 | NA | NA |

**TABLE – 2.8 (Contd.)**
**PROFILE OF PUBLIC SECTOR TEA CORPORATIONS OF INDIA**

| Corporation | Gardens Owned | Gross Area ( Hectare ) | Area Under Tea ( Hectare) | Production (Kg) | Workers |
|---|---|---|---|---|---|
| TAMILNADU PLANTATION CORPORATION LTD. | 4. DEVALA TEA DIVISION Dist-Nilgiri, Tamilnadu | N.A | 323.68 | N.A | N.A |
| | 5. CUDALUR TEA DIVISION. Dist-Nilgiri, Tamilnadu | N.A | 326.50 | N.A | N.A |
| | 6. KOTAGIRI TEA DIVISION. Dist-Nilgiri, Tamilnadu | N.A | 213.29 | N.A | N.A |
| | 7. NELLIYALAM TEA DIVISION. Dist-Nilgiri, Tamilnadu | N.A | 332.90 | N.A | N.A |
| | 8. PANDANTHORAI TEA DIVISION. Dist-Nilgiri, Tamilnadu | N.A | 158.20 | N.A | N.A |
| | 9. PANDIAR TEA DIVISION. Dist- Nilgiri, Tamilnadu | N.A | 80.82 | N.A | N.A |
| **TOTAL** | **9** | N.A | **2,340.74** | N.A | N.A |
| TIRPERAH TEA CORPORATION LTD.Reg office – 162,B.B Ganguli street Calcutta-12 | 1.LUXMI LUNGA T.E Agartala | N.A | 352.42 | N.A | N.A |
| | 2.TUFANILONGA T.E Agartala | N.A | 239.42 | N.A | N.A |
| **TOTAL** | **2** | N.A | **591.84** | N.A | N.A |

**TABLE – 2.8 (Contd.)**
**PROFILE OF PUBLIC SECTOR TEA CORPORATIONS OF INDIA**

| Corporation | Gardens Owned | Gross Area (Hectare) | Area Under Tea (Hectare) | Production (Kg) | Workers |
|---|---|---|---|---|---|
| ASSAM TEA CORPORATION LTD. (A Government of Assam Undertaking ) Regd. Office – R.G. Baruah Road. Guwahati –05 Assam. | 1.AMLUCKIE T.E. Dist – Nagaon Assam | 1,515.07 | 615.08 | 7,50,000 | 1,174 |
| | 2.CINNAMORA T.E. Dist – Jorhat Assam | 1,846.61 | 725.59 | 6,27,400 | 2,256 |
| | 3.SYCOTTA T.E Dist –Jorhat Assam | 2,017.97 | 868.97 | 6,65,100 | 2,445 |
| | 4. BHOLAGURI T.E Dist –Sonitpur Assam. | 248.44 | 109.00 | 1,69,202 | 226 |
| | 5.DEEPLING T.E. Dist- Sibsagar Assam. | 528.06 | 333.29 | 3,63,000 | 1,176 |
| | 6.DEFOO VALLEY T.E Dist –Nagaon Assam. | 549.21 | 312.96 | 4,46,000 | 754 |
| | 7.RAJABARIE T.E Dist- Sibsagar Assam. | 501.05 | 148.81 | 1,16,750 | 339 |
| | 8.NEGHERITING T.E Dist- Golaghat Assam. | 1,163.34 | 553.60 | 4,17,200 | 1,248 |
| | 9.MESSAMARA T.E. Dist –Golaghat Assam. | 705.00 | 435.60 | 2,64,500 | 828 |
| | 10.RUNGAMATTY T.E Dist- Golaghat Assam | 637.17 | 406.02 | 3,08,150 | 807 |
| | 11.LOONGSOON T.E Dist- Nagaon Assam. | 877.91 | 514.93 | 5,32,000 | 1,029 |
| | 12.LONGAI T.E Dist – Karimganj | 1,709.35 | 742.13 | 5,87,900 | 1,056 |
| | 13.ISA BHEEL T.E Dist- Karimganj Assam. | 1,019.30 | 571.81 | 4,81,000 | 1,084 |
| | 14.NAGINIJAN T.E Dist- Jorhat Assam | 1,403.29 | 397.19 | 3,18,900 | 1,070 |
| **TOTAL** | **14** | **14,775.77** | **6,734.98** | **60,47,102** | **15,492** |

# CHAPTER III

## Growth of Indian Tea Industry

# CHAPTER - III

## GROWTH OF INDIAN TEA INDUSTRY

### 3.1 ORIGIN OF TEA

It is very difficult to draw precisely about the year when tea was first used as a beverage. Up till now no one could tell how it was discovered that tealeaves could be used to make a palatable drink. The legendary origin of tea was found in the Chinese source in approximately 2737 BC. Reference of tea as a medicinal plant was found for the first time in SHEN NUNG'S pen ts 'ao or Medical Book. Ch'a Ching or Tea Classic, written in 780 A.D. by LU YU is considered to be the first book on tea. Written at the request of the tea merchants, the book covers among other things the qualities and effects of the beverage. The second book exclusively on tea, the ch'a p'a, was written by KU YUAN-CH ' ING, a Chinese Scholar, during the rule of Ming Dynasty (1368-1644 AD)

The word "cha"(Tea) is supposed to be taken from the word t'u. On the other hand, the word t'e (tay) was taken by the Englishmen from the Chinese Fukien dialect. They pronounced it as t-e-a. Probably British got that idea of pronouncing the word t'e in Amoy port, where they first established their trade link with China in 1644 AD.

Though the popular belief is that China is the motherland of tea, scholars such as Samuel Baildon[1], who wrote extensively on tea industry of India, believed that somehow Chinese had obtained the tea plant for cultivation from a source outside China, which may be India. Samuel Baildon argued " there was but one species of tea--the Indian--and that the inferior growth and smaller leaves of the China tea were the result of the transportation of the plant far from home into an uncongenial climate and into unfavourable conditions of soil and treatment. Later on many researches were conducted to find out the birth place of tea and now it is considered that probably the first wild tea plant was found in the forests of the Shan State of

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(1) Baildon. Samuel, Tea in Assam, Calcutta, 1877

Northern Siam, Eastern Burma, Yunnan, Upper Indo-China, and British India before the demarcations of the present political boundaries of China and India was made. Hence it can be said that the original birthplace of tea was the portions of Southeast Asia, which includes China and India.

### 3.2 TEA IN INDIA

Various studies and literatures reveal that India had its own wild tea plant in its Northeastern sector under the native rulers. But they were discovered only after British brought tea plant from China to be planted in India. The British East India Company in this pursuit brought a few China tea seeds to Calcutta from Canton in 1780 AD. and were handed over to the then Governor General Warren Hastings. Hastings sent a few seeds to Mr. George Bogle to be planted in Bhutan, and Lieutenant Colonel Robert Kyd planted a few in his private botanical garden in Calcutta. Those were the first cultivated tea plant grown in India. At that time Sir Joseph Banks (1743–1820), a scientist, suggested British Government on methodical cultivation of tea. He identified Bihar, Rangpur(Now Sibsagar,Assam), and Cooch Bihar as the most suitable areas for tea cultivation. But because of the objections of the East India Company, these schemes were not implemented. The East India Company thought that their profitable tea trade with China might be affected adversely by doing that.

Subsequently Major Robert Bruce came to Rangpur with the object of expanding trade of East India Company beyond its traditional business zones. There, in 1823 he discovered wild tea trees growing in nearby hills of Singfo Communities. He immediately entered into agreement with Singfo Chief for supply of tea plants and tea seeds. In 1824, the Singfo Chief delivered tea plants and seeds to Mr. C.A. Bruce, brother of Major Robert Bruce.

During that period a strong sentiment was created in the minds of the English people to start own tea cultivation in the British India. In the year 1833, the trade treaty between Britain and China expired and China refused to renew it. There was a speculation that China, after Japan, might close the ports for the British trade entirely. Under these uncertainties the British government started thinking the possibilities of cultivating tea in the British India. As a result of it Governor General Lord William

Charles Bentinct appointed a high level committee in 1834 to inquire into the possibility of introducing China tea plants into India. The committee started looking for areas where tea could be grown and it sent Mr. George James Gordon, its secretary, to China to study cultivation and manufacturing process of tea and to secure tea seeds, plants and workmen. The Committee found Assam as the best place for tea cultivation and Mr. Gordon brought first lot of Chinese tea to Assam. Though tea plants were discovered much earlier in Assam, still the British government went on to plant Chinese variety because the officials were not sure whether the newly discovered Assam variety were pure tea plants or not. Another reason behind the decision to bring Chinese variety and not to use Assam variety for government experimental purpose was the division amongst the members of the Committee. It may be because of the fact that the Committee thought" a wild plant is not likely to give as good produce as one that has been cultivated for centuries". (2)

The commission decided to send the seeds from China to be planted in upper Assam, Kumaon, Dehradun and the Nilgiri Hills. The first tea garden in Assam was set up at Koondilmukh, at the confluence of the Koondil river and the Brahmaputra river, near Sadiya. But unfortunately the Brahmaputra River washed it away after some time. There after the shrubs were removed to Jaipur of upper Assam, which was later sold to the Assam Company in 1840. Another attempt of planting Chinese tea in India was made in Chabuwa in the year 1837, but that too failed because of diseases.

### 3.3 FORMATION OF PREMIER TEA COMPANIES OF THE WORLD

In 1839 British took over the control of upper Assam from native king Purander Singha. It helped them to take up the tea plantation activity in the area more freely and extensively. During that time some European and Indian capitalists formed the Bengal Tea Association in Calcutta in February 1838. The main motive behind its establishment was to culture and manufacture tea in Assam. The initial capital of the company was Rs. 10 Lakhs. Simultaneously another private company was formed in London for the same purpose. Both of them were latter merged to form the Assam

(2) Ukers.H. Willam, All about Tea, New York, 1935 page 140

Company in the year 1839. It started functioning from 1st June 1839. The initial capital of the company was £ 50,000 with 1,000 shares of £ 50 each.

Since the formation of Assam Company, tea plantation expanded considerably in India. In March 1840 practically all the plantations of East India Company except those at Chabuwa and Dinjoy and two other small gardens in Assam were handed over to the Assam Company rent-free for ten years. In 1841 the first government sale of tea in India took place in Calcutta. Mackenzie Lyall & Company conducted the auction.

The Assam Company under the provisions of the Assam Waste Lands Rule of 1838, took lease from the government the jungle lands where the tea bushes were available. The Rule provided waste lands for 20 years rent-free occupation, to be followed by an increasing scale of rent for the next 25 years, at the end of which period the land would be assessed at a rate not higher than that of the neighbouring rice lands.(3)

In 1840 the company had around 2,638 acres of land under tea and 10,202 1b of tea were shipped to London. It started making profit in 1848 and in 1849 a few other gardens were opened including one in Tingri. By 1850 all the debts of the company were cleared and from 1852 it started paying true dividend.

There was practically no competition during that time as except a few small gardens with East India Company, no other enterprise was there in tea business. In 1849 East India Company had disposed off its remaining gardens including that of Chabuwa to a Chinese businessman for a value of around Rs. 900.00. James Warren, a merchant of East India Company, who was trading in dried fruits, spices, and other agricultural produces, later purchased these gardens.

In 1853, Mr. Mills, a judge of Saddar Court, was deputed to Assam as Officer on special duty. He in his report mentioned about the existence of only nine private

(3) Griffits.Sir Pervival, the History of the Indian tea industry, Widened and Nicolson, London, page 63

tea gardens in Assam--three in Sibsagar district and six in Lakhimpur district.[4] According to some other historical reports, in 1859, there were 51 tea gardens, owned by private individuals, available in Assam. Of these ten were in Lakhimpur district, fifteen were in Sibsagar district, three were in Darrang district, and the remainders were in Kamrup and Nagaon districts. These included the garden of Cinnamora started by Williamson brothers in 1853. They started the garden with 720 acres of land, which produced 45,000 1b of tea in 1857 with two hundred acres of land under tea cultivation. In 1851, Henry Burkinyoung, the then head of the affairs of Assam Company in Calcutta, started plantation near Numaligarh of Assam.[5]

Later on, a new company, the Jorehaut Tea Company was incorporated in June 29, 1859 with a capital of £ 60,000, divided into 3,000 shares of £ 20 each. Mr. William Roberts, the earlier Managing Director of the Assam Company, was the first Chairman of the Jorehaut Tea Company. It used most of its capital in purchasing the gardens. It purchased Cinnamora at £ 27,000, Oating at £ 3,000, and Kaliabor at £ 5,000 from Mr. Williamson. It purchased Numaligarh garden from Mr. Burkinyoung, at £18,000. At the time of inception the Cinnamora garden had 34 acres of land with an estimated yield of 86,400 Ib; the Numaligarh garden had 289 acres of land with an estimated yield of 11,200 lb; the Oating garden had 99 acres of land with an estimated yield of 6,640 lb; and the Koliabor garden was taken over with 100 acres of land having an estimated yield of around 52,160 Ib. The total area under tea of the company was 831 acres with a total estimated yield of 1,56,400 Ib. as on 1859. [6]

### 3.4 TEA IN OTHER PARTS OF INDIA

Like Assam the British also did tea plantations in other parts of the country. In 1840 some Assam variety of tea seeds and some China plants taken from the botanical garden of Calcutta were planted in Chittagoan ( Presently in Bangladesh).

(4) Griffiths. Sir Pervival, the History of the Indian tea industry, Weiden Feld and Nicolson, London, page 69

(5) Griffiths. Sir Pervival, the History of the Indian tea industry, Weiden Feld and Nicolson, London, page 70

(6) Antrobus. H. A., History of the Jorehaut Tea company –1859- 1946., page 36

But this venture could not succeed due to unfavourable climate there. In Dehradun tea cultivation was started in 1842. In 1855 the Assam indigenous tea was found in Sylhet and Cachar. Later on tea was also found growing in wild in Khasi and Jaintia Hills. The first tea garden in Sylhet was started in Malnicherra under the direction of Mr.Sweetland of Telaghur. The first tea garden in Cachar was started in Mauza Barsanjan in 1856.

In Darjeeling, tea cultivation was started under the guidance of Chief Government Official Dr. A Campbell. There, it was first cultivated at Tukvar, Canninng, Hopetown, Kurseong flats, and between Kurseong and Pankhabari in the year 1856.

Tea cultivation was restarted in South India in the first part of Eighteen Seventies. Captain Mann started tea plantation in Nilgiri Hills with a few Chinese variety of tea in the year 1861.

Chota Nagpur area of North India started producing tea on commercial lines from1867. The Dooars area of North Bengal entered into the tea map in 1874. Tea was first planted there in Galaldhoba.

### 3.5 THE FIRST INDIAN PRIVATE TEA GARDEN OWNER

The Assam Company started its first tea nursery in a plot of 213 acres land on the high lands near the Gabharu Hills ( Presently at Sibsagar district in Assam). The Company appointed Maniram Dutta Barbhandar Barua (1806-1858) as its Dewan (Steward) of Chief Executive on 1st June ,1839. He was a very influential man and was considered to be the person who informed Major Bruce about the existence of "phanap" (the Singfo term for tea). Maniram Dewan was aware of the fact that tea was the future of Assam and he was very much interested in the development of the industry. He joined the Assam Company to gain knowledge of tea cultivation from which he resigned in 1845. He then started his own plantation work near Cinnamora. Dutta, [7] wrote " Although neglected by the early European historians, Maniran Dewan was the first individual to open out private tea gardens in

(7) Dutta. Arup Kumar, Cha Garam- The Tea Story, Paloma Publications, Guwahati, page 62

India, long before Lt Colonel F.S Hannay, the former Commander of 1st Assam Light Infantry in Dibrugarh, who is considered to be the first to have done so by the European historians". He also wrote that by the time Lt. Colonel Hannay came to the tea scene, Maniram Dewan already had two running gardens, Cinnamora at Jorhat and Selung (now Singlo) in Sibsagar.

## 3.6 GROWTH PATTERN OF INDIAN TEA INDUSTRY

The pattern of growth of Indian Tea Industry may be studied in two periods – pre five-year plan period and plan period.

### 3.6.1 Growth of Tea Industry in India During 1850 - 1950

The tea industry in India had witnessed remarkable developments during the period 1850 to 1950. This period is significant in two senses: first, India was under foreign rulers (upto 1947), and second, before 1951 India was not pursuing five-year plan system. Both Assam Company and Jorehaut Tea Company had been doing good business at that time. They were paying handsome dividend in the new industry. Quite a few other private tea estate owners were also earning substantial profits. It led to the entry of a number of other tea growers who had practically no idea about the industry. The historians describe this situation as tea mania.

During the early years the government took interest in the growth of tea production and was allowing the tea planters to use the land at a nominal restriction. Many a times it succumbed to the pressure of the tea lobby in relaxing laws. For example in 1855 government culminated some restrictions in the Assam Rules on the use of land. But subsequently those restrictions were relaxed because of the pressure from the tea planters. As a result of these measures and relaxations, the industry rose tremendously. As shown in Table 3.1, during the period of 1850 to 1890 the rate of growth of area, production and yield were 504 percent 1,466 percent and 4.7 percent respectively. Besides government granting loans and lands on easy terms, this period was marked by formation of Indian Tea Association on may 18, 1881, introduction of improved method of manufacture in 1870 (Mechanical Roller in 1870, Dryer in 1877 and mechanical packaging), formation of Calcutta Tea Brokers Association in 1879,

operation of daily service of paddle steamer between Calcutta and Guwahati in 1883, opening of first railway in Assam (Jorhat Provincial and Dibru-Sadia) in 1885 etc.

The Period of 1890 to 1950 witnessed both positive and negative growth for Indian tea industry. It witnessed many changes in domestic and international areas. Many revolutionary changes took place in this period, which affected the industry largely. Two world wars were fought which had all its impacts on the industry. During this period the average annual growth rate of area under tea, production and yield were 1.8 percent 6.5 percent and 2.3 percent respectively. The comparatively slow rate of growth of the industry as on the first half of the 20$^{th}$ century may be attributed to the stringent control measures of the government, increase in the area under tea cultivation, effects of world wars, slum in tea industry in 1919-20, world wide depression of 1929-32, partition of India etc. However, the industry could maintain a stable rate of growth during this period. The period was marked by the development of tea into an industry in south India towards the end of 1895, formation of United Planters Associations of South India (UPASI) at Coonnoor in 1894, establishment of Tocklai Experimental Station in 1911, signing of first International Tea Agreement by India in 1939; Enactment of the Indian Tea Control Act in 1938 and Central Tea Control Act in 1938 and the Central Tea Board Act in 1949 etc. Another major event that took place during this period was the invention of CTC machine.

### 3.6.2 Growth of Demand and CTC Tea

Perhaps the greatest gift of the Indian tea industry to the tea world was the invention of CTC (CRUSH, TEAR, CURL) machine. Mr. Mc Archer, the then Superintendent Engineer of Amgoorie Tea Estate of Upper Assam, invented the machine in the year 1931. This invention had revolutionized the entire tea industry in the sense that with the use of it more production of tea has been possible. Each average kilograms of CTC tea produces more cups of liquid tea, than the average kilogram of orthodox tea. However, the invention of CTC machine was not noticed until about mid 1950s.

**TABLE – 3.1**
**AREA, PRODUCTION AND YIELD OF INDIAN TEA BETWEEN 1850 AND 1950**

| Particulars | Year | | Percentage Increase Over 1850 | Average Annual Growth Rate | Year | | Percentage Increase Over 1890 | Average Annual Growth Rate |
|---|---|---|---|---|---|---|---|---|
| | 1850 | 1890 | | | 1890 | 1950 | | |
| Area Under Cultivation ( In thousand hectares) | 0.75 | 152 | 20167 | 504 | 152 | 316 | 108 | **1.8** |
| Production ( In million Kg) | 0.097 | 57 | 58662 | 1467 | 57 | 278 | 388 | **6.5** |
| Average Yield ( In Kg per hectares) | 130 | 373 | 187 | 4.7 | 373 | 881 | 136 | **2.3** |

**Source : Various sources as cited in " Tea Plantation Industry Between 1850 and 1992, Structural Changes ". By Dr. Gangadhar Banerjee, Published by – Lawyer's Book Stall, Guwahati, 1996, & Tea Board.**

The invention of CTC machine is considered significant because otherwise it would not have been possible to meet the ever-increasing demand of tea in the world market. It is estimated that CTC produces about double the number of cups or twice the quantity of drinking liquid per kilogram than Orthodox tea.

### 3.6.3 Indian Tea Industry During Plan Period (1951 Onwards)

After independence, the development of tea industry in India took a new turn and was marked by two significant aspects. First, with the change of governments the industry experienced a new socialistic approach from the authorities toward it; and second, the introduction of the five-year plans. A totally new philosophy of controlled development was introduced to the Indian industries, which affected the tea industry as well.

As is seen from Table 3.2,during the first five year plan period (1951-1956) the average annual growth rate of area under cultivation was 0.3 pc, production 1.7 pc, average yield 1.4 pc, export of tea 3.9 pc, value of export of tea 11.0 pc, unit value of tea 5.5 pc, internal consumption 1.6 pc and revenue from central excise was 14.3 pc.

During the second five-year plan (1956-1961) negative growth was registered in many respects. Government also did not emphasise on the other aspects of development of the industry in the second plan except in garnering revenue from it. This is supported by the fact that average annual growth rate of central excise revenue from tea during this period was as much as 47.5 pc as against 14.3 pc during the first plan. On the contrary the average annual growth rate of area under cultivation was (-) 1.7pc, production 2.9 pc, average yield 2.2 pc, export of tea (-) 2.4 pc, value of exports (-) 3.1 pc, unit value 0.3 pc, percentage of foreign exchange earnings from tea (-) 4.8 pc, and internal consumption was 8.9 pc.

Unlike in the second five-year plan, in the third five-year plan (1961-1966) the area under tea rose marginally by an average annual growth rate of 0.8 pc. Besides, average annual growth rate of production was 1.2 pc, average yield 0.4 pc, export of tea (-) 0.8 pc, value of tea exports 5.3 pc, unit value 9.0 pc, percentage of

foreign exchange earnings from tea (-) 1.1 pc, internal consumption 6.3 pc, and central excise revenue form tea 8.9 pc.

There was a steady growth, except the percentage of foreign exchange earning from tea, of Indian tea industry during the fourth five-year plan (1969-1974) period. The industry's average annual growth rate was (–)0.5 pc. Otherwise, average annual growth rate of area under cultivation was 0.5 pc, production 4.8 pc, average yield 4.2 pc, export of tea 4.2 pc, value of exports 11.9 pc, unit value 5.6 pc, internal consumption 5.6 pc, and central excise revenue from tea rose up to 40.6 pc.

The fifth five-year plan (1974-1979) was marked by a tremendous increase in the prices of tea and in order to exploit the situation the export level also went up. Government ultimately resorted to the appropriate fiscal and other measures to maintain price level of tea for the domestic consumers. The average annual growth rate of area under cultivation during the period was 0.6 pc, production 2.2 pc, average yield 1.5 pc, export of tea (-) 1.8 pc, value of export 17.4 pc, unit value 79.4 pc, percentage of foreign exchange earnings from tea (-) 0.2 pc and central excise revenue from tea rose to 9.4 pc.

The sixth five-year plan (1980-1985) had seen a steady growth of Indian tea industry except in the case of central excise revenue from tea. The average annual growth rate of central excise revenue from tea was (–) 0.8 pc. The average annual growth rate of area under cultivation was 1.8 pc, production 2.8 pc, average yield 0.9 pc, export of tea 1.7 pc, value of exports 22.6 pc, unit value of tea 19.2 pc, average percentage of foreign exchange earnings from tea 2.4 pc, and internal consumption 5.6 pc.

The seventh five-year plan (1985-1990) witnessed a steady progress made by the Indian tea industry except in case of the quantum of tea export and percentage of foreign exchange earnings from tea. The average annual growth rate of area under cultivation was 0.5 pc, production 3.1 pc, average yield 2.5 pc, export of tea (–) 0.5 pc, value of export 3.5 pc, unit value of tea 4.2 pc, average percentage of foreign exchange earnings from tea (-) 10.0 pc, internal consumption 4.1 pc and central excise revenue from tea 7.8 pc.

## TABLE – 3.2
## PROGRESS OF INDIAN TEA INDUSTRY DURING THE PLAN PERIOD

| Particulars | 1st plan | | PC Increase Over 1951 | Average Annual Growth Rate | 2nd plan | | PC Increase Over 1956 | Average Annual Growth Rate | 3rd plan | | PC Increase over 1961 | Average Annual Growth Rate |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Position as on | | | | Position as on | | | | Position as on | | | |
| | 1/4/ 1951 | 31/3/ 1956 | | | 1/4/ 1956 | 31/3/ 1961 | | | 1/4/ 1961 | 31/3/ 1966 | | |
| Area under cultivation ( In thousand hectare ) | 317 | 321 | 1 3 | 0 3 | 361 | 331 | -8 3 | -1 7 | 331 | 345 | 4 2 | 0 8 |
| Production (In million Kg) | 285 | 309 | 8 4 | 1 7 | 309 | 355 | 14 9 | 2 9 | 355 | 376 | 5 9 | 1 2 |
| Average yield (Kg per hectare) | 901 | 963 | 6 9 | 1 4 | 963 | 1070 | 11 11 | 2 2 | 1070 | 1089 | 1 8 | 0 4 |
| Export of tea ( In million kg) | 195 | 233 | 19 5 | 3 9 | 233 | 205 | -12 0 | -2 4 | 205 | 197 | -3 9 | -0 8 |
| Value of export (In crore rupees) | 91 | 141 | 54 9 | 11 0 | 143 | 124 | -13 3 | -2 7 | 124 | 157 | 26 6 | 5 3 |
| Unit value ( Rupees per kg) | 4 7 | 6 0 | 27 7 | 5 5 | 6 1 | 6 0 | -1 6 | 0 3 | 6 0 | 8 7 | 45 0 | 9 0 |
| PC of foreign exchange earnings | | | | | 24 5 | 18 5 | -24 5 | -4 9 | 18 5 | 13 5 | -27 0 | -5 4 |
| Internal consumption ( In million Kg) | 73 | 97 | 32 9 | 6 6 | 97 | 140 | 44 3 | 8 9 | 140 | 184 | 31 4 | 6 3 |
| Central excise revenue form tea ( In crore rupees) | 1 4 | 2 4 | 71 4 | 14 3 | 3 2 | 10 8 | 237 5 | 47 5 | 10 8 | 15 6 | 44 4 | 8 9 |

**Source :** **Various sources as cited in " Tea Plantation Industry Between 1850 and 1992, Structural Changes ". By Dr. Gangadhar Banerjee, Published by – Lawyer's Book Stall. Guwahati- 1996 & Tea Board.**

## TABLE – 3.2 (Contd.)
## PROGRESS OF INDIAN TEA INDUSTRY DURING THE PLAN PERIOD

| Particulars | 4th plan Position as on | | PC Increase Over 1969 | Average Annual Growth Rate | 5th plan Position as on | | PC Increase Over 1974 | Average Annual Growth Rate | 6th plan Position as on | | PC Increase over 1980 | Average Annual Growth Rate |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1/4/ 1969* | 31/3/ 1974 | | | 1/4/ 1974 | 31/3/ 1979** | | | 1/4/ 1980 | 31/3/ 1985 | | |
| Area under cultivation ( In thousand hectare ) | 353 | 362 | 2 5 | 0 5 | 362 | 374 | 3 3 | 0 7 | 374 | 408 | 9 1 | 1 8 |
| Production (In million Kg) | 394 | 489 | 24 | 4 8 | 489 | 544 | 11 2 | 2 2 | 544 | 620 | 14 0 | 2 8 |
| Average yield (Kg per hectare) | 1114 | 1353 | 21 5 | 4 3 | 1353 | 1455 | 7 5 | 1 5 | 1455 | 1523 | 4 4 | 0 9 |
| Export of tea ( In million kg) | 174 | 211 | 21 3 | 4 3 | 211 | 200 | -5 2 | -1 0 | 200 | 217 | 8 5 | 1 7 |
| Value of export (In crore rupees) | 121 | 193 | 59 5 | 11 9 | 193 | 362 | 87 6 | 17 5 | 36 2 | 77 1 | 113 0 | 22 6 |
| Unit value ( Rupees per kg) | 7 1 | 9 2 | 29 6 | 5 9 | 9 16 | 18 12 | 97 8 | 19 6 | 18 1 | 35 5 | 96 1 | 19 2 |
| PC of foreign exchange earnings | 8 8 | 6 7 | -23 9 | -4 8 | 6 7 | 5 9 | -11 9 | -2 4 | 5 9 | 6 6 | 11 9 | 2 4 |
| Internal consumption ( In million Kg) | 203 | 260 | 28 0 | 5 6 | | | | | 337 | 431 | 27 9 | 5 6 |
| Central excise revenue form tea ( In crore rupees) | 13 2 | 40 0 | 203 0 | 40 6 | 40 0 | 58 9 | 47 3 | 9 5 | 58 9 | 56 7 | -3 7 | -0 7 |

*** There was an Annual plan for the period of ( 1966-67 to 1968-69)**

**** The fifth five year plan, however terminated in 1977-78.**

**Source : Various sources as cited in " Tea Plantation Industry Between 1850 and 1992, Structural Changes ". By Dr. Gangadhar Banerjee, Published by – Lawyer's Book Stall. Guwahati- 1996 & Tea Board.**

## TABLE – 3.2 ( Contd.)
## PROGRESS OF INDIAN TEA INDUSTRY DURING THE PLAN PERIOD

| PARTICULARS | 7th plan Position as on | | PC Increase over 1985 | Average Annual Growth Rate | 8th plan Position as on | | PC Increase Over 1991 | Average Annual Growth Rate | Position as on | | PC Increase Over 1951 | Average Annual Growth Rate ( 1951-97) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1/4/ 1985 | 31/3/ 1990 | | | 1/4/ 1991*** | 31/3/ 1996 | | | 1/4/ 1951 | 1/4/ 1997 | | |
| Area under cultivation ( In thousand hectare ) | 408 | 417 | 2.2 | 0.4 | 420 | 431 | 2.6 | .5 | 317 | 431 | 36 | .8 |
| Production (In million Kg) | 620 | 720 | 16.1 | 3.2 | 754 | 780 | 3.4 | .7 | 285 | 780 | 173.7 | 3.8 |
| Average yield (Kg per hectare) | 1523 | 1729 | 13.5 | 2.7 | 1794 | 1809 | .8 | .2 | 901 | 1809 | 100.8 | 2.2 |
| Export of tea ( In million kg) | 217 | 209 | -3.7 | -0.7 | 201 | 162 | -19.4 | -3.9 | 195 | 162 | -16.9 | -.4 |
| Value of export (In crore rupees) | 771 | 1104 | 43.2 | 8.6 | 1120 | 1247 | 11.3 | 2.3 | 91 | 1247 | 1270.3 | 27.6 |
| Unit value ( Rupees per kg) | 35.5 | 52.8 | 48.7 | 9.7 | 55.15 | 77.11 | 39.8 | 8.0 | 4.7 | 77.11 | 1540.6 | 33.5 |
| PC of foreign exchange earnings | 6.6 | 3.4 | -48.5 | -9.7 | - | - | - | - | 17.6 | - | - | - |
| Internal consumption ( In million Kg) | 431 | 500 | 16.0 | 3.2 | - | - | - | - | 73 | - | - | - |
| Central excise revenue form tea ( In crore rupees) | 56.7 | 78.9 | 39.2 | 7.8 | - | - | - | - | 1.4 | - | - | - |

***** Plan was actually delayed by one year**

**Source : Various sources as cited in " Tea Plantation Industry Between 1850 and 1992, Structural Changes ". By Dr. Gangadhar Banerjee, Published by – Lawyer's Book Stall. Guwahati- 1996 & Tea Board.**

The eighth five-year plan (1991-1996) has seen positive growth in all the key indicators except in export of tea, which has gone down by 3.9 percent during that period.

It is revealed form Table 3.2 that since the adoption of first five year plan in 1951 upto the beginning of ninth five-year plan in 1997, there has been a steady growth in all the factors of growth in Indian tea industry. Only in the export sector, the country has witnessed a declining trend. The annual growth of export has been (-).4 pc. This might have been due to increase in internal consumption rate besides other factors.

## 3.7 CHANGE OF OWNERSHIP IN INDIAN TEA INDUSTRY: Entry of Indian Company

The tea industry in India was started by the British and was owned and managed by them according to their interest. The initial capital to establish the industry was subscribed in the UK. But after the Second World War Indian businessmen started purchasing some of the tea estates owned by foreign Tea Companies. During the two world wars, demand for skilled personnel in the armed force increased and consequently management staffs of the tea estates were reduced to minimum as many of them joined armed forces. Besides, cost of production increased because of the increase in the wage rates, cost of food grains and clothing etc. which were supplied by the owners to the staff and labourers. Owing to these reasons it was difficult for the foreign owners to run tea business profitably in India and they disposed of many of their gardens, primarily the sick and weaker ones to the Indian new business class.

After independence the new government in India tried to boost the tea industry by taking some development measures of brining the non-tea area under grant area, imposed heavy burden of export duty, excise duty and local taxes on the produce, enacted various legislations and framed status to be implemented by the owners of tea estates. All these measures by the Indian government were not in the interest of the foreign companies and some of the owners of small tea estates found them unbearable. Those owners, who were already badly affected by the impact of

the world wars, could not follow these new government measures and consequently many of them left India and many of their gardens were taken over by inexperienced Indian businessmen.

An analysis of some of the legislations of Indian Government, which affected the tea industry in changing its ownership from foreign nationals to Indian nationals, is presented below.

### 3.7.1 The Capital Issues Control Act (1947)

This Act provided that the Joint Stock Companies operating in India whether registered in India or abroad (which issued stock in India) will have to obtain official permission for bonus issue of all types of securities. This created a lot of difficulties for the foreign tea companies operating business in India in maintaining their interest.

### 3.7.2 The Export Import Control Act ( 1947)

This Act specified the conditions of payments (cash, installments or long term credit) under all goods, which could be imported and also decided the countries from where the commodities could be purchased by specifying the foreign exchange. In view of the above, some of the foreign companies found difficulties in expanding tea cultivation.

### 3.7.3 The Minimum Wages Act ( 1947)

The Minimum Wages Act controlled the wage rate of the tea labourers. It provided that wages in the tea plantation industry were to be fixed and notified by the respective governments from time to time. The foreign tea companies feared that the profit would go down because they were to incur high expenditures on salary and wages of the employees.

### 3.7.4 The Factory Act ( 1948)

This Act limited the permissible hours of work of a factory labour. The foreign companies feared the possibility of low production of tea under the implementation of the Act and found it unprofitable to run business in India.

### 3.7.5 The Plantation Labour Act (1951)

This Act imposed heavy burden of conditions on the tea plantations of 25 acres or more where 30 or more persons were employed on any day of the preceding twelve months. The Act provided that the owners of such gardens must provide facility for supply of wholesome drinking water; arrangement of sufficient number of latrines and urinals maintained in a clean and sanitary conditions; establishment of hospitals and dispensaries; setting up of recreational and educational centers to the children of tea garden workers; provision of housing; regulation of employment of children and prescription of hours of work and holidays.

### 3.7.6 The Industry Development and Regulation Act ( 1951)

Under the provisions of the Act the foreign tea companies were required to register with the corresponding government agencies and obtain licence permitting them to operate. Authorities were empowered by this Act to inspect the activities of all private enterprises. In the case of unsatisfactory management, the authorities had the right to take the units over for some years. There was an apprehension at that point of time that the tea industry would be nationalized.

### 3.7.7 The Tea Act ( 1953)

The Tea Act, enacted in 1953 provided restriction on cultivation of tea in India. It also restricted the export of tea from India. As a result of this many foreign owners disposed of their estates to Indian businessman.

### 3.7.8 The Tea (Distribution and Export) Control Order ( 1957)

The order regulated the activities of the exporters and distributors of tea through a system of licensing. It required to fulfill certain conditions regarding packing, marketing etc. so that the quality of tea could be maintained. It prohibited the packing of tea in sub-standard containers and making of false and misleading statements regarding the tea in the container.

### 3.7.9 The Tea Waste (Control) Order ( 1959)

The order aimed at stopping adulteration of tea. It prohibited the use of tea-waste, viz. tea sweeping, tea fluff, tea fiber or tea stalk etc. in producing tea meant for human consumption. It also laid down the manner in which tea waste was to be

disposed of. The order exerted heavy pressure on foreign tea companies in maintaining the quality of tea.

### 3.7.10 The Monopoly and Restricted Trade Practice Act (1969)

It imposes restrictions on expanding the business of big companies. The Act also aimed at curbing the monopolistic behaviour of the large tea companies. As a result of that the foreign tea giants found it practically difficult to continue their business in India.

### 3.7.11 The Foreign Exchange Regulation Act (1973)

According to the provisions of the Act, which came into force from 1st January 1974, the foreign tea companies operating in India required to convert themselves into Indian companies with Indian equity participation of not less than 26 pc. It was aimed to regulate private monopoly activities of managing agents and concentration of economic power in tea industry.

All these and many other measures yielded that the big foreign companies who once started the tea industry in India disappeared slowly and steadily from the scene of Indian tea industry. Consequently a new class of Indian businessmen emerged. Besides, some foreign tea companies merged with stronger tea companies in order to economise the expenditures, reduce cost of production and to improve the quality of tea. Most of such mergers took place in Assam because they were mostly operating there.

The changes in ownership had various consequences for the tea industry. According to report of Plantation Inquiry Commission, 1956, the Indian owners were indebted to banks at high rates of interests for purchase of foreign tea companies and experienced difficulties in managing the tea estates profitably for want of resources. The implementation of development programmes like extension plantation, replantation and infilling in a phased manner was, therefore, neglected. The labour-management relationship became strained due to failure of timely payment of wages to labourers caused by paucity of funds. The managers and subordinate staff were changed which resulted in low production and retrograde the welfare of the estates.

# CHAPTER IV

## Delphi Study on the Health of Indian Tea Industry

# CHAPTER – IV

# DELPHI STUDY ON THE HEALTH OF INDIAN TEA INDUSTRY

## 4.1 TEA INDUSTRY & INDIAN ECONOMY

Tea industry in India is one of the most important sectors, which plays a major role in the national economy. It earns substantial amount of foreign exchange for the country from its exports besides generating substantial revenue for the national exchequer by way of cess, sale tax, agricultural income tax etc. Its contribution to the national wealth exceeds Rs.1000 crore annually, and of every Rs.12/- of foreign exchange earned by the national economy, Re. 1/- is gained from tea export. Tea industry provides employment to about 10 lakhs people in the plantation directly besides providing employment to equal number in the auxiliary industries attached to the tea industry. It is the largest organized employer of women folk in the country. India produces over 800 million-kg. of tea annually and total area covered by this crop is around 4,38,000 hectares spread over the provinces of Assam, West Bengal, Tamil Nadu and Kerala. Manipur, Arunachal Pradesh, Tripura, Sikkim, Karnataka, Bihar and Himachal Pradesh also produce tea in small quantity. Assam is the major contributor to total India vis-à-vis world tea production, producing to the tune of 55 pc of total Indian tea production. Northeast India is the largest tea-producing zone in the world. At present Assam has around 845 registered tea gardens and many thousands of unregistered small tea gardens, covering an area of around 24 pc of Assam's total cultivable land (2,30,000 hectare), contributing about one quarter of the world's entire production of tea. India has a few distinctions in the tea sector. It is the largest producer and consumer of tea; it has the largest area under tea cultivation; the liquor quality of Assam tea and the flavour of Darjeeling tea are unique in the world. As such, proper functioning of this giant industry is of utmost importance to the national economy.

## 4.2 PROBLEMS OF INDIAN TEA INDUSTRY

The tea industry has not been free from constraints and it is a matter of concern that general awareness is lacking about the tea industry, which has an annual turnover of nearly Rs. 6000 crore. Its global market share has come down from 41 pc

to 18 pc over the years. Various studies have shown that the Industry is currently facing three major constraints that are causing impediments in its growth.

Firstly, the price of tea is not growing in terms of its costs of production. Between 1995 and 1997, tea prices in India moved up by 39.72 pc where as the prices of tea in other competing countries like Srilanka, Kenya and Malawi went up by 65.27 pc 49.25 pc and 62.74 pc respectively. Compared to only 55 pc increase in tea prices from 1990-91 to 1996-97, prices in fertiliser in India went up by 132 pc, coal by 109 pc, electricity by 173 pc, and wages by an average of 110 pc.

Secondly, there are constraints in plantation growth. Lack of suitable land for additional plantation restricts the growth of production. Since independence of India, area under tea has gone up by only 38 pc whereas the demand for tea has gone up by many times. Between 1986 and 1997 production rose by over 30 pc while cultivated area went up by only 7.4 pc.

Thirdly, there are problems associated with slow rise in productivity. Land for tea could hardly be increased, as it is a limited resource. Hence only alternative is to increase the yield rate. This is again hard to achieve at a constant pace. The industry currently has 42 pc of its total bushes of above 50 years of age, 37 pc average bushes in north India and 59 pc in South. It means a steady decline of yield rate per bush. On the other hand, according to some planters, the replantation leads to an average loss in crop, and consequently, it affects the income and profitability, because replantation contributes to a payback period of well over 20 years. However, currently the average annual rate of replantation in India is only 0.4 pc.

Many researchers have pointed out production of poor quality tea as the major cause of deteriorating condition of Indian tea industry. Many gardens resort to marketing of substandard tea, which is detrimental to the interest of the domestic consumers and image of the Indian tea abroad.

In this context it is worth mentioning that according to a report published by the Indian Tea Association recently, India would need additional 6097.95 crore rupees in order to embark on the path of progress by increasing productivity and production

of quality tea. Of the required fund of Rs. 6097.95 crore, about Rs. 3435.90 crore would be needed for field development, Rs. 980.28 crore for new machineries etc., Rs. 900.00 crore for welfare and Rs. 550.00 crore for market development, besides other expenses on R&D and HRD. The report further said that of the above expenses about Rs. 3039.68 crore would be capital expenditure while the rest of Rs. 3058.27 crore would be revenue expenditure. The Association feels that if the additional funds could be obtained and invested, the industry would be able to produce 1,111 million kg of tea, thereby leaving an exportable surplus of 287 million kg of tea by the year 2006.

Table 4.1 and Figure 4.1 given below present a gloomy picture of the Indian Tea Industry during the second half of last century. The industry has been passing through a difficult time and there is need for serious studies and researches in this regard so that appropriate measures could be suggested to bring it back to its original place of prosperity & pride. This is against such a background that a Delphi study was conducted during September 1997 to September1998 to know about the various aspects of the tea industry.

### 4.3 DELPHI STUDY

The word 'Delphi' connotes the oracle at Delphi in ancient Greece for predictions about the future. It is a statistical device used to arrive at a consensus on a given problem. According to Limstone and Turoff [1] " Delphi may be characterised as a method for structuring a group communication process so that the process is effective in allowing a group of individuals, as a whole, to deal with a complex problem". Very briefly speaking, Delphi consists of sending a series of questionnaires to the panelists on matters related to the problem, making a statistical analysis of the responses, feeding back the aggregate group responses to the panelists to revise their views while keeping them anonymous to each other.

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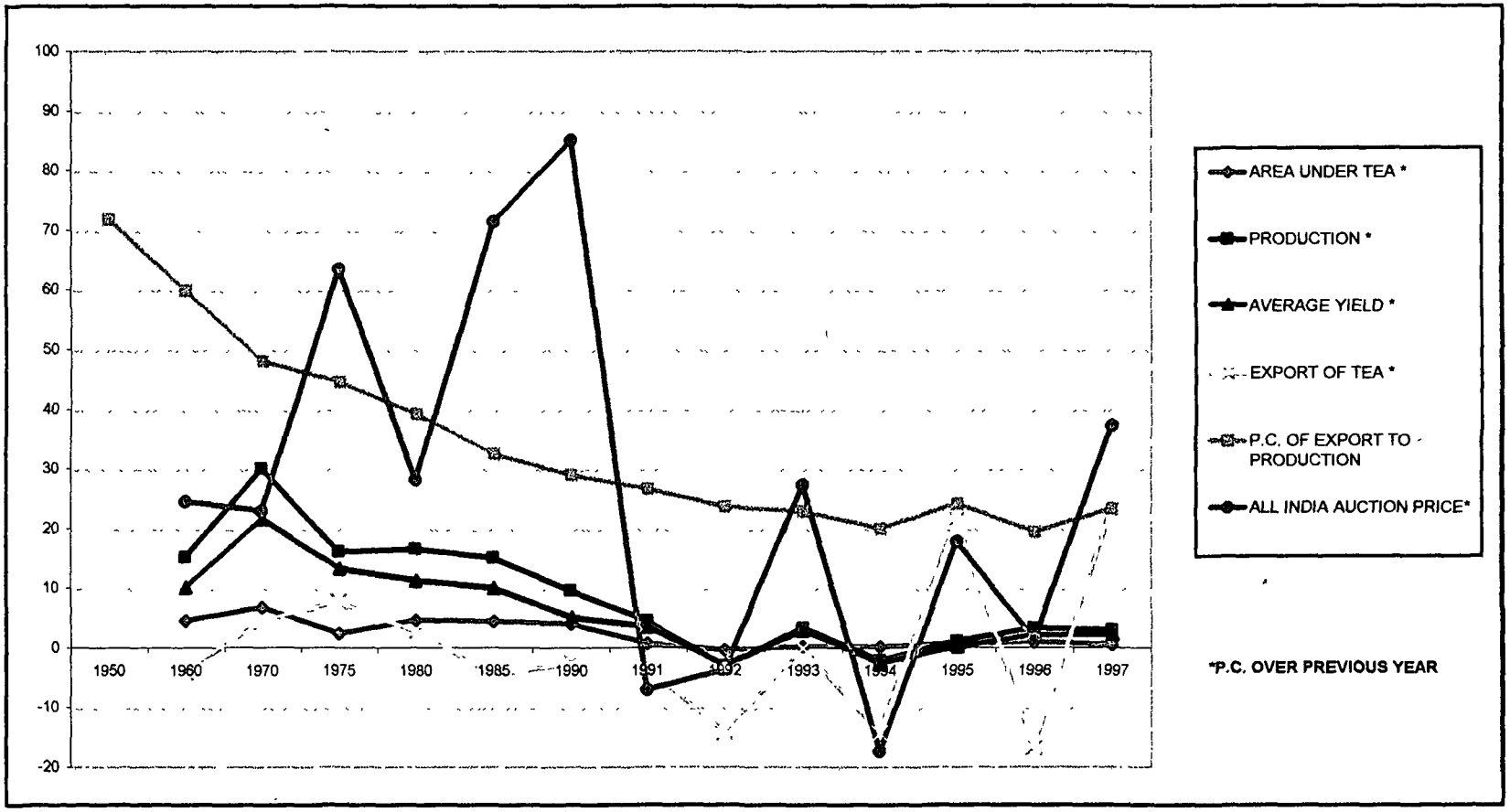
(1) Linstone, H.A., and Turoff, M., The Delphi Method: Techniques and Applications, 1975, Addison – Wesle Publishing Company.

FIGURE - 4.1
CHANGING SCENARIO OF INDIAN TEA SINCE INDEPENDENCE



A small monitor team conducts the Delphi exercise. Questionnaires are prepared and sent to a large respondent group of participants. The participants are usually asked to make an evaluation of the problem under consideration according to some type of rating scheme. Upon receipts of responses to the first round questionnaire the monitor team sumarises the results by computing some statistics of the group response. Based on the first round responses, a second round questionnaire is prepared and sent to the participants, thus giving each participant an opportunity to reexamine his views based upon the feed back of group responses. As the round proceeds, a group consensus evolves. As a general rule the statistical variance in the ratings declines as the rounds proceed.

### 4.3.1 Issues Raised in the Study

As stated already the present study has been conducted to know the views of the resource persons on the factors affecting the functioning of Indian tea industry. An attempt was made to arrive at a consensus regarding the following four aspects of Indian tea industry.

1. Goals & objectives of Indian tea industry; their desirability and feasibility.

2. Major problem areas that are creating impediments in the healthy growth of the Indian tea industry; their criticality.

3. Important factors responsible for the health of a tea garden; their importance.

4. Govt. policies on tea; their positive & negative impacts.

### 4.3.2 General Administration of the Study

The panelists were selected from various fields associated with tea industry. Those include Academicians, Economists, Tea Association Members, Tea Researchers, Government Officials, Trade Union Leaders, Planters & Producers, and Tea Officials etc. Altogether nation-wide 71 persons were contacted for taking part in the study and 22 of them participated in it.

In the beginning of the exercise, the panelists were asked to give comments on the issues raised. In the second round, after carefully re-arranging the views of the

panelists, without changing the themes, the statements were sent back to the panelists, to rate the points regarding desirability, feasibility, criticality importance and impact with the help of a scale provided in a tabular form. (Table 4. 2)

On receiving the responses of second round in the form of scores, the mean, mode and standard deviation of the scores against each of the views were calculated. These findings were then sent to the panelists for revising their earlier score in the light of group response. The responses obtained after third round of the study were then reprocessed and the final mean, mode and standard deviation were calculated.

## 4.4 GENERAL OBSERVATION OF THE STATEMENTS

On the basis of the outcomes of the third round the opinion of the panelists on the four issues raised are discussed below.

### 4.4.1 Objectives of Indian Tea Industry

Table 4.3 presents the objectives of Indian tea industry according to their desirability and feasibility as obtained after round three of the Delphi study. Mean, standard deviation of scores obtained by each statement and the percentage of panelists rating the statements in different ranges are indicated against each statement round wise. Though the demarcations in the statements have been made strictly following the mean value, the differences in most of the cases are in small fractions. It is observed that the panelists have rated all the objective statements as *Highly Desirable*, which fall in the categories of *Highly feasible*, and *Feasible*.

a) As evidenced by the mean value of the rating factors of Table 4.3, three factors have been rated as highly desirable and highly feasible; and remaining seven factors have been rated as highly desirable and feasible.

b) The objectives like contribution to the exchequers, maintaining cordial working environment and coordination with the govt. and creation of business network among the entrepreneurs are rated highly feasible as well as highly desirable.

**TABLE – 4.2**

**NUMERICAL SCORES FOR RATING OF THE VIEWS**

| Basis | Scale Reference | Range | Definition |
|---|---|---|---|
| Desirability | Undesirable (UD) | 1.0– 2.0 | • Will have negative effect with little or no positive effect on National Economy.<br>• It may be detrimental to the society.<br>• Growth of Tea Industry will be hampered.<br>• Will endanger Industry's stability.<br>• Will lead definitely to Industry stagnation. |
| | Desirable (DE) | 2.1 – 3.0 | • Will have positive effect with minimum negative effect on National Economy.<br>• Society will be benefited at large.<br>• Justifiable in conjunction with other items.<br>• Will help growth of Tea Industry.<br>• Will reduce Industry's instability. |
| | Highly Desirable (HD) | 3.1 – 4.0 | • Will have positive effect and little or no negative effect on National Economy.<br>• Society will be benefited mostly.<br>• Justifiable on its own merit.<br>• Ensures rapid growth of Tea Industry.<br>• Will have positive contributions to the Industry's stability. |

**Contd.**

| Basis | Scale Reference | Range | Definition |
|---|---|---|---|
| Feasibility | Infeasible (IF) | 1.0 – 2.0 | • Indication that this can not be achieved.<br>• Existing technology is inadequate.<br>• Large-scale increase in available resources would be needed.<br>• Warrants many major policy changes by the Government. |
| | Feasible (FE) | 2.1 – 3.0 | • Some indications that this can be achieved.<br>• Existing technology needs to be expanded.<br>• Available resources may have to be supplemented.<br>• Warrants a few minor changes in policy by the Government. |
| | Highly Feasible (HF) | 3.1 – 4.0 | • Can be achieved easily.<br>• Necessary technology is presently available.<br>• Definitely within available resources (Financial, Physical, Managerial, Organisational)<br>• Does not warrant any policy changes by the Govt. |
| | Not Critical (NC) | 1.0 – 2.0 | • Will not retard the Industry's growth.<br>• Should be dropped as an item to consider.<br>• Will not create any other problem.<br>• Delay in solving this problem does not have any effect on the Industry's growth.<br>• Effects will be localised. |

**Contd.**

| Basis | Scale Reference | Range | Definition |
|---|---|---|---|
| Criticality | Critical (CR) | 2.1 – 3.0 | • May retard Industry's growth.<br>• Does not have to be fully resolved.<br>• May create many interrelated problems.<br>• Delay in solving may retard the growth.<br>• Effects may spread to the major segments of the Industry. |
| | Very Critical (VC) | 3.1 – 4.0 | • Will retard Industry's growth.<br>• Must be resolved, dealt with or treated.<br>• Will give rise to many interrelated problems.<br>• Delay in solving this problem will retard the growth of the Industry.<br>• Effect will spread to the entire Industry. |
| | Unimportant (NI) | 1.0– 2.0 | • No priority.<br>• Has little impact on major problem areas.<br>• Can not overcome even minor problem areas but may create new problem areas.<br>• Can not be implemented.<br>• Can achieve minor objectives only in conjunction with other policy actions. |

**Contd.**

| Basis | Scale Reference | Range | Definition |
|---|---|---|---|
| Importance | Important (IM) | 2.1 – 3.0 | • Second order priority.<br>• Significant impact but not until other factors are treated.<br>• Can overcome major problem areas with association of new minor problem areas.<br>• Can be implemented overcoming minor difficulties.<br>• Can achieve major objectives in conjunction with other policy actions. |
| | Very Important (VI) | 3.1 – 4.0 | • First order priority.<br>• Has a direct bearing on major problems.<br>• Can definitely overcome major problem-areas.<br>• Can be implemented easily.<br>• Will achieve major objectives. |

| | SCALE REFERENCES | RANGE |
|---|---|---|
| Impact | Highly Negative Impact | 1.0 – 2.0 |
| | Negative Impact | 2.1 - 3.0 |
| | Marginally Negative Impact | 3.1 – 4.0 |
| | Marginally Positive Impact | 4.1 – 5.0 |
| | Positive Impact | 5.1 – 6.0 |
| | Highly Positive Impact | 6.1 – 7.0 |

(c) Tea Board and other bodies had been persisting on the target production of 1000 million kg of tea by the year 2000 AD. But the panelists, though acknowledged such a target as a highly desirable objective, they did not consider it to be highly feasible and rated it at the bottom of the feasibility scale. However, at the end of 2000 AD India could not produce 1000 million kg of tea.

(d) The panelists opine that with the present level of resources and expertise, India would not be able to continue to be the number one producer of tea in near future.

(e) The study reveals that the creation of opportunity for ancillary industry development, employment generation, socio-economic development of community, quality development and promotion of Indian tea as a health drink etc. are all highly desirable objectives. But the panelists do not consider them as highly feasible.

(f) Though the panelists have rated most of the objectives as highly desirable, highly feasible and feasible, objectives related to creation of business network (Point 3, Table 4.3) has been considered undesirable and infeasible by 7 pc and 14 pc of the panelists. At the same time maintaining cordial working environment with the workers and relationship with Government and implementing agencies for maintaining territorial integrity (Point 2, Table 4.3) has been considered infeasible by 6 pc of the panelists.

### 4.4.2 Problem Areas of Indian Tea Industry

Table 4.4 presents the problem areas of the Indian tea industry ranked according to their criticality. Mean and standard deviation of scores obtained by each statement and the percentage panelists rating the statements in different ranges are indicated against each statement round wise.

## TABLE – 4.3
## OBJECTIVE STATEMENTS AND THEIR RATINGS

| Objectives | Desirability Score | | | | | | | Feasibility Score | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | % Panelists Rating after 3rd round | | | Mean | | Std Dev | | % Panelist Rating After 3rd Round | | | Mean | | Std Dev | |
| | HD | DE | UD | 2nd Round | 3rd Round | 2nd Round | 3rd Round | HF | FE | IF | 2nd Round | 3rd Round | 2nd Round | 3rd Round |
| 1) To contribute to the national and state exchequers by generating income and earning foreign exchange, besides helping ancillary industries growth | 67 | 33 | --- | 3 48 | 3 48 | 59 | 59 | 53 | 47 | -- | 3 11 | 3 11 | 47 | 47 |
| 2) To maintain cordial working environment and harmonious relations with Govt and Implementing agencies and local people for maintaining territorial integrity | 53 | 47 | --- | 3 30 | 3 27 | 46 | 46 | 47 | 47 | 06 | 3 10 | 3 10 | 54 | 54 |
| 3) To create a business network among the entrepreneurs so that the industry can be kept sustainable in the long run | 73 | 20 | 07 | 3 40 | 3 40 | 64 | 64 | 53 | 33 | 14 | 3 04 | 3 01 | 73 | 71 |
| 4) To create opportunity for developing ancillary industry | 33 | 47 | --- | 3 22 | 3 22 | 72 | 72 | 40 | 53 | 07 | 3 02 | 3 00 | 62 | 59 |
| 5)To provide employment opportunities to all levels of service status-from workers to executives covering local people and weaker section of under-developed region | 40 | 60 | --- | 3 11 | 3 11 | 59 | 59 | 20 | 73 | 07 | 2 94 | 2 94 | 70 | 70 |
| 6) Improving the health, indigenous customs, traditions, educational and socio-economic well being of those employed in the industry and of those outside the industry | 67 | 33 | --- | 3 31 | 3 31 | 46 | 46 | 20 | 80 | 07 | 2 83 | 2 87 | 48 | 45 |
| 7) To increase productivity and quality at cost contentment | 73 | 27 | --- | 3 53 | 3 53 | 45 | 45 | 20 | 73 | 06 | 2 86 | 2 86 | 63 | 63 |
| 8)To emerge as a number one producer and exporter of tea in the global market | 93 | 07 | --- | 3 83 | 3 83 | 30 | 30 | 13 | 87 | 40 | 2 78 | 2 81 | 36 | 35 |
| 9) To promote Indian tea as a health drink | 53 | 47 | --- | 3 19 | 3 19 | 73 | 73 | 27 | 67 | -- | 2 68 | 2 76 | 64 | 55 |
| 10) To achieve the targeted production of around 1000m kg Of tea by 2000 AD to meet the domestic consumption and export target | 73 | 27 | --- | 3 33 | 3 33 | 59 | 59 | 07 | 53 | -- | 2 22 | 2 22 | 62 | 62 |

(a) The points regarding problem areas that were presented to the panelists for rating have been rated either as *very critical* or *critical.* The study reveals that the problems associated with Indian tea industry centered on two main areas- (i) problems associated with productivity (ii) problems associated with managerial, legal, and financial aspects.

(b) The study reveals that the industry is currently having a slow rate of uprooting and replanting. It focuses on two important problems; first, land is not being properly utilized and second, with more and more old bushes the yield will reduce still further. Low productivity is closely related with other problems like pests and diseases and inefficient managerial practices, including poor labour management.

(c) Another impediment to healthy functioning of Indian tea industry is poor legislative measures currently in force for the betterment of the industry. It is also felt that these available measures have not also been strictly implemented. There has been laxity on the part of the monitoring and implementing agencies. Moreover, deteriorating working atmosphere and unhealthy trade unionism is also responsible for the sorry state of affair of the industry.

(d) On the financial front, the banks treat the industry at par with the other industries. But being in the agro-based sector, tea industry is not in a position to fulfill the requirements of the banks all the time for obtaining loans. Moreover, subsidies provided by the Government on labour welfare expenditures are quite inadequate.

(e) The study also reveals that inadequate drainage facility in the catchments areas of river Brahmaputra and Barak, besides inadequate soil conservation measures are mostly responsible for lower production rate and subsequent adverse effects.

(f) Though going by the mean values, the panelists appear to have rated all these problems as very critical and critical; problems related to pests & diseases, poor H.RD, faulty bringing up of tea, slow rate of uprooting and high tax rate (points 3,4,5,6,7 of Table 4.4) have been considered not critical by 7pc, 14pc, 21pc, 7pc and 7pc panelists respectively.

## TABLE – 4.4

## PROBLEM STATEMENTS AND THEIR RATINGS

| Problem Areas | Criticality Score | | | | | | |
|---|---|---|---|---|---|---|---|
| | % Panelist Rating After 3rd Round | | | Mean | | St Dev | |
| | VC | CR | NC | 2nd Round | 3rd Round | 2nd Round | 3rd Round |
| 1) Low labour productivity despite improvement in their living conditions and health care facilities | 64 | 36 | -- | 3 40 | 3 38 | 0 55 | 0 53 |
| 2) Inadequate drainage in the catchment areas of river Brahmaputra & Barak | 50 | 50 | -- | 3 19 | 3 14 | 0 61 | 0 59 |
| 3) Pests & diseases like termites, poria, helopeltis and improper weed control | 57 | 36 | 07 | 3 07 | 3 10 | 0 59 | 0 57 |
| 4) Poor HRD Communication gap, not been able to educate the workers | 53 | 33 | 14 | 3 10 | 3 10 | 0 69 | 0 69 |
| 5)Faulty bringing up of young tea and limitation in bush frame in mature tea | 57 | 22 | 21 | 3 03 | 3 10 | 0 90 | 0 87 |
| 6) Slow rate of uprooting and replanting of high yielding varieties | 64 | 29 | 07 | 3 09 | 3 08 | 0 73 | 0 71 |
| 7) High rate of tax , duties and cess | 53 | 40 | 07 | 3 11 | 3 06 | 0 71 | 0 67 |
| 8) Legislative incompetence and insistence on implementation of time-worn Acts and Rules | 43 | 43 | 14 | 2 89 | 2 99 | 0 89 | 0 81 |
| 9) Deteriorating working atmosphere and unhealthy trade unionism particularly in NE India | 40 | 27 | 33 | 2 96 | 2 91 | 0 93 | 0 91 |
| 10) Persistence in maintenance of old system of administration with inefficient management in some gardens | 33 | 47 | 20 | 2 86 | 2 86 | 0 74 | 0 74 |
| 11)Tea being an agro based industry, financial term loans from banks are not meeting the required quantum and the rates of interest including working capital costs are high | 36 | 50 | 14 | 2 79 | 2 77 | 0 60 | 0 59 |
| 12) Inadequate soil conservation measures | 21 | 57 | 22 | 2 65 | 2 65 | 0 86 | 0 86 |
| 13) Lack of efficient implementation of available agro technology by the estates | 28 | 36 | 36 | 2 59 | 2 54 | 0 82 | 0 77 |

### 4.4.3 Important Factors for Healthy Functioning of Indian Tea Industry

The important factors for healthy functioning of tea industry obtained from the Delphi study, and ranked according to their importance are presented in Table 4.5. Mean and standard deviation of scores obtained by each statement and the percentage panelists rating the statements in different ranges are indicated against each statement round-wise.

(a) It is found that the panelists are almost unanimous regarding the importance of the factors. All the factors are rated as *very important.*

(b) The factors may well be discussed under five groups, viz, Managerial, Agricultural, Financial, Market, and Government.

(1) On the *Managerial* front, there is need for efficient managerial staff, capable of long and short term planning and effective labour deployment for increasing productivity. Moreover there is need for sound labour management relationships for maintaining industrial peace.

(2) On *Agricultural* front, the study reveals that to increase productivity of bushes, proper planting materials should be used and optimum spacing be maintained. It is essential for increasing the yield of the bushes. This would also help in maximum utilization of land and would economise use of agricultural inputs in the plantation area. Moreover, quality cultural practices like proper pruning, drainage and irrigation, weed and pest control along with planting of shade trees are must to increase yield per hectare. On the other hand to maintain quality and to avoid wastage while producing tea, modern technologies should also be adopted instead of old methods.

(3) The panelists have emphasized on easy availability of funds at reasonable rate of interest to implement desirable programmes on the one hand and meaningful investment and high plough back of profits on the other. At this point relevance can be drawn to the fact raised by the panelists regarding the high tax structure as the problem of Indian tea industry. Conclusion can be drawn that the high tax structure might take away majority share of its profits setting aside only a meager portion to be ploughed back.

(4) One of the basic out come of the study has been its focus on the important factor of *market* demand and price of tea. The panelists feel that to have a constant inflow of fund there is need for steady increase of price of tea. Growth of the industry depends largely on demand for tea. It is felt that government should endevour to create more and more opportunity and exploit market potentials abroad.

(5) The panelists strongly believe that *government* and the implementing agencies should come out with enforceable schemes instead of the worn out and impractical Acts. These schemes should also be based on international perspectives.

The panelists have also focused on the research aspects on tea. They feel that each and every unit of the industry should have access to the research institutions on tea on the one hand and the tea research institutes should have links with similar institutes abroad and other commodity research institutes in India. Significantly 7pc of the panelists do not consider co-operation from the government as important factor for the growth of the industry ( Point 10, Table 4.5)

**4.4.4 Government Policies on Tea**

Tables 4.6 presents various government policies on tea according to their impact as obtained after round three of the Delphi study. Mean, standard deviation and percentage panelists rating the policies in different basis are indicated against each policy round wise.

## TABLE – 4.5

## IMPORTANT FACTORS AND THEIR RATINGS

| Important Factors | Importance Score | | | | | | |
|---|---|---|---|---|---|---|---|
| | PC Panelist Rating After 3rd Round | | | Mean | | St. Dev. | |
| | VI | IM | NI | 2nd Round | 3rd Round | 2nd Round | 3rd Round |
| 1) Efficient , motivated, trained and professional management | 93 | 07 | -- | 3.67 | 3.70 | 0.37 | 0.35 |
| 2) Cordial labour management relationship backed by disciplined, cultured accountable and dedicated work force. | 93 | 07 | -- | 3 61 | 3.64 | 0.40 | 0.39 |
| 3) Quality cultural practices, e g. Pruning, Drainage, Weed control, Pest control, irrigation etc. | 86 | 14 | -- | 3.61 | 3.62 | 0.36 | 0.39 |
| 4) Adaptation of modern technology in field and factory. | 80 | 20 | -- | 3.59 | 3.60 | 0.36 | 0.36 |
| 5) Just & proper planning at all levels and effective labour deployment to achieve high standard of work. | 73 | 27 | -- | 3.56 | 3.58 | 0.45 | 0.44 |
| 6) Use of quality planting materials and optimum spacing for planting and shade trees in order to increase production and productivity. | 86 | 14 | -- | 3.54 | 3.57 | 0.41 | 0.39 |
| 7) Meaningful investment and high plough-back of profit. | 79 | 21 | -- | 3.53 | 3.51 | 0.38 | 0 38 |
| 8) Favourable market demand and prices. | 67 | 33 | -- | 3.43 | 3.43 | 0.49 | 0.49 |
| 9) Adequate financial support at reasonable rate of interest to implement desirable programs. | 47 | 53 | -- | 3.28 | 3.28 | 0.49 | 0.49 |
| 10) Co-operation from Govt. | 53 | 40 | 07 | 3.26 | 3.28 | 0.59 | 0.57 |

(a) It may be observed in Table 4.6 that the policies are grouped into three impact zones, viz., Marginally positive, Marginally Negative and Negative. Of the 13 policy statements, the panelists do not see any of them to have highly positive, positive and highly negative impacts on the functioning of Indian tea industry.

(b) It is observed from the study that the panelists are not quite satisfied with the present policies of the government towards tea. The issues raised under the problem area clearly point towards this aspect.

(c) On the positive front the panelists feel that only the Export policy and policy of Dispute settlement have marginal impact, but those too need revisions. But, 15 pc of the panelists have opined that the export policy have highly positive impact on Indian tea industry (Point1, Table 4.6)

(d) The panelists strongly feel that the Taxation policies of the government are not conducive for the smooth sailing of the industry and it has a marginally negative impact on the industry. This may be worth considering on the part of the government to see if tax relaxation could lead to the healthy growth of the industry and thus long-term benefit could be obtained.

(e) Other important policies on tea having marginally negative impact include policy of checking tea garden labour population, providing loan to the gardens, policy on practices of Tea Board etc. The panelists feel that these policies are to be reassessed by the government and appropriate actions should be taken for their suitable amendments.

(f) The study also reveals that the government policies on tea is influenced by politics, and are not based on international perspective. Lack of proper co-ordination between the central government and the states regarding tea is felt which hampers the growth of the industry. Moreover, *Inspector Raj*, excessive control and suppressions hamper the management in smooth running of the gardens.

(g) The results further show that the inappropriate policy of maintaining law and order in the industry, especially in the insurgency-ridden areas of North- East, has caused great damage to the industry. Extortion and security expenditures are exerting great strain on the financial health of the tea units out there.

(h) The government policy has been to generate employment opportunities in the tea sector and it essentially and unnecessarily relates all facilities to the employment and welfare aspects of labour. At the same time adequate attention has not been given to the factors like HRD support, labour wages, mechanization, power supply etc. Some of the panelists feel that Government policies are blindly pro-labour. It does not encourage productivity related wages and incentive system. It gives the right to hire but not fire.

(i) The panelists also suggest that the policy of fixation of land ceiling is not appropriate.

(j) Finally, the panelists could not arrive at a consensus regarding the government policies. This is evident form the value of standard deviation against each policy statement presented in Table 4.6.

## 4. 5 THE OVERALL RESULTS OF THE STUDY

The exercise resulted in bringing out the opinions of the experts of Indian tea industry as regards to the objectives of the industry; problems faced by the industry, important factors for healthy growth and Government policies on tea. Though a group consensus was not achieved in case of many of the statements, in most of the statements there is a converging trend for a group consensus.

Looking at the results of the first issue of the third round of questionnaire it is noticed that the primary goal of the Indian tea industry should be to increase production so as to emerge as the number one producer and exporter of tea. But with the present level of expertise it would not be possible to do so. The study further shows that the industry is capable of and willing to contribute substantially for the socio-economic betterment of the country. In the second issue the results reveal that the industry is seriously suffering from low productivity along with high tax burden

## TABLE – 4.6

## GOVERNMENT POLICY STATEMENTS AND THEIR RATINGS

| Government Policy Regarding Tea | Impact Score | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | PC Panelist Rating After 3rd Round | | | | | | Mean | | St. Dev. | |
| | HN | NE | MN | MP | PO | HP | 2nd Round | 3rd Round | 2nd Round | 3rd Round |
| 1) Export | -- | 08 | 08 | 31 | 38 | 15 | 4.97 | 4.97 | 0.99 | 0.99 |
| 2) Dispute settlement. | -- | 31 | 07 | 31 | 31 | -- | 4.06 | 4.06 | 1.15 | 1.15 |
| 3) Control or supervision on statutory dues of labour. | 14 | 29 | 29 | 14 | 14 | -- | 3.39 | 3.48 | 1.32 | 1.28 |
| 4) Tea Board. | 15 | 31 | 23 | 23 | 08 | -- | 3.29 | 3.32 | 1.26 | 1.23 |
| 5) Taxation | -- | 54 | 36 | -- | 07 | -- | 3.16 | 3.19 | 3.93 | 0.80 |
| 6) Co-ordination between state and central government on tea. | 15 | 50 | 21 | 07 | 07 | -- | 3.13 | 3.13 | 1.21 | 1.21 |
| 7) Tea in general. | 29 | 21 | 29 | 14 | 07 | -- | 3.00 | 3.11 | 1.46 | 1.42 |
| 8) Providing Loans to the gardens . | 24 | 31 | 31 | 08 | 08 | -- | 3.09 | 3.09 | 1.09 | 1.09 |
| 9) Checking Tea Garden labour population. | 14 | 36 | 43 | -- | 07 | -- | 3.03 | 3 02 | 1.05 | 1.05 |
| 10) Inspection of tea garden. | 36 | 28 | 36 | -- | -- | -- | 2.74 | 2.87 | 0.84 | 0.95 |
| 11) Employment generation in tea sector. | 36 | 36 | 14 | 07 | 07 | -- | 2.79 | 2.79 | 1.04 | 1.04 |
| 12) Fixation of land ceiling | 28 | 36 | 36 | -- | -- | -- | 2.71 | 2.71 | 0.74 | 0.74 |
| 13) Maintaining law & order in the industry. | 38 | 38 | 24 | -- | -- | -- | 2.49 | 2.49 | 0.91 | 0.91 |

and inconsistent government policies posing a serious threat to its anticipated growth. In the third issue the results show what the industry needs to achieve the desired levels of the objectives. Basically the panelists want the results of the research institutions to be applied in the units along with a good working atmosphere. Finally in the fourth issue, the outcomes show that there is need for serious thinking on the part of the government regarding its policies on tea and make them practical. Emphasis should be given on policies regarding Tea Board and try to make it more industry friendly.

In summary, the Delphi panelists feel that more attention should be paid on Government policy making, research activities and on provision for easy finance.

## 4.6 CONCLUSION

The Delphi Study provided a platform for acquiring views of panelists from divergent areas on various issues related to the healthy functioning of Indian tea industry. The study helped in focusing on a wide spectrum of views of many informed individuals regarding goals and objectives, major problems, important factors and government policies on tea industry of India.

The study report would be an incomplete one if the short-comings of the Delphi Study is left untouched. Delphi has certain drawbacks and all the common drawbacks of it may well be there in this report as well. The following is a list of major deficiencies of Delphi Study.

1. The inability to make the Delphi objectives specific.

2. The inability to identify and motivate many informed individuals to participate.

3. The inability to stimulate response.

4. The inability to appreciate and highlight consensus and divergence.

5. The inability to refrain from imposing monitor team's views and perceptions of a problem upon the respondent group by over-specifying the structure of Delphi.

As stated earlier the common drawbacks of Delphi may also be there in this report. But utmost care has been taken to remove them so as to make this a complete report. However, all the statements incorporated here are individual views of the panelists and they are not the views of the establishments the panelists represent and neither these are taken from any published report or documents. Hence it is hoped that this report will help the authorities and policy makers as basic document in formulating the future policies regarding the Industry.

# CHAPTER V

## Sickness in Tea Industry & Formation of ATCL

# CHAPTER- V

# SICKNESS IN TEA INDUSTRY & FORMATION OF ASSAM TEA CORPORATION LIMITED

## 5. 1 INTRODUCTION

Public Corporations are the tools in the hands of the Government to participate directly in the business activities along with the private sector. It is, in fact, one of the various forms of Public Enterprises. The Central or State Government establishes these Corporations, either individually or jointly with each other, by an Act of the Parliament or State Legislative Assembly(s). The Acts, establishing the Corporation itself defines the objectives of their formation. Since Corporation is a form of Public Enterprise, the basic objectives of Corporation and Public Enterprise as a whole, regarding which discussions in length has been made in chapter II, are the same.

Besides the objectives like providing fair treatment to the employees, promoting new units in various sectors of economy, generating revenue for Government, introducing healthy competition to the private sector etc., the Corporations are primarily established by the government by taking over the sick units to protect some of the units of an industry from sinking completely. They are used as an instrument for avoiding unemployment in the sick units as well as to provide productive employment, which is an essential requisite for a Government with socialistic outlook The Government tries to revive such sick units to make these units operate as profit making establishments. It is in this context, an attempt will be made in the following paragraphs to throw light on the problem of sickness in Indian industries as a whole and sickness in tea industry in particular.

## 5.2 INDUSTRIAL SICKNESS IN INDIA.

The problem of sickness in industries in India has been very acute which has adversely affected the health of Indian economy. It has been a matter of worry for the government as well as the financial institutions, besides the entrepreneurs. Many industrial units had to close down because of sickness. A host of other problems like aggravation of the unemployment problem, loss of production, blockage of funds in

non-performing assets, loss of manpower etc., a few to be mentioned, are associated with it.

The term "sickness" has been interpreted differently by different sections of the society. These interpretations vary according to the size and nature of the industry and also by the outlook of the interpreters.

According to the provisions of the sick Industrial Companies (Special Provisions) Act, 1985, "Sick industrial company" means an industrial company (being a company registered for not less than seven years) which has at the end of any financial year accumulated losses equal to or exceeding its net worth and has also suffered cash losses in such financial year and the financial year immediately preceding such financial year. For the purpose of this definition " cash loss" means loss as computed without providing for depreciations; "net worth" means the sum total of the paid-up capital and free reserves; and "free reserves" means all reserves, credited out of the profits and share premium account, but does not include reserves credited out of revaluation of assets, write-back of depreciation provisions and amalgamations. Initially the Act did not include Government companies under its purview; but since December 1991, the public sector companies were also brought within the purview of the Act.

With a view to encouraging amalgamation of sick industrial units with the healthy ones, by granting suitable incentives, therefore, the Government of India, in the year 1977, classified a sick unit as one whose accumulated losses exceeded 50pc of its aggregate paid up capital and reserves and the company was not financially viable. (1)

Reserve Bank of India in its letter of 8th June 1989 addressed to all commercial banks, had defined a sick small scale unit as " A small scale industrial unit should be considered as sick if it has, at the end of any accounting year, accumulated losses

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(1) R.Viswanathan, Industrial Financse, S. Chand & Company, New Delhi, 1982, P.256.

equal to or exceeding 50 percent of its peak net worth in the immediately preceding five accounting years". [2]

The study team of the State Bank of India [3] defined a sick small-scale unit as one " which fails to generate internal surplus on a continuing basis, and depends for its survival on frequent infusion of external funds".

According to Joshi [4] the term lending institutions classify an industrial unit as sick after taking into account any of the following symptoms :

(i) Continuous default in meeting four consecutive half-yearly installments of interest or principal in respect of institutional loans.
(ii) Continuous cash losses for a period of two years or continued erosion in the net worth, say by 50 per cent.
(iii) Mounting arrears on account of statutory and other liabilities for, say, a period of one or two years.

From the above discussions it can be observed that there is lack of consensus on the basis of defining the sick unit, whether it is in large-scale sector or small-scale sector. The problem of defining sick unit arises mainly because the definition depends on the purpose of defining and no one definition suits all purposes. According to Gupta[5], the viewpoints on sickness at various levels are different,

(i) At the *political and government level* in India, sickness gets forced recognition as an immediate problem only when an enterprise closes its door or is on the brink of closure;

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(2) Reserve Bank of India Bulletin, March 1991 (Supplement), Bombay, P.80.
(3) State Bank of India, Financing of small scale Industries: Report of the Study Team, Bombay, 1975, p.38.
(4) V.K Joshi, Management of Industrial Sickness, Kuber Associates, Jaipur, 1987, PP.6-7.
(5) L.C. Gupta, " Financial Ratios for Monitoring Corporate Sickness", Oxford University Press, Delhi, 1983, PP.5—6.

(ii) The *lending institutions* look at the problem from the viewpoint of recovering their money and regard an enterprise as sick if the recovery of their dues seems uncertain;

(iii) The *shareholder* would most probably rate an enterprise as sick when no dividends are paid and the prospect of receiving dividends in the foreseeable future appear bleak, with share price falling precipitously below par; and

(iv) So far as the *public* is concerned, it is the large and acutely sick companies facing closure, which attract the greatest public attention.

## 5.3 DEFINING SICKNESS IN TEA INDUSTRY IN INDIA

The problem of sickness in Indian tea industry is not new. In the past, many tea units were closed down because of the problem of acute sickness. The major reason behind the transferring of ownership and management of many tea gardens from foreign owners to Indian owner was this problem. Instances are there where government have taken over the ownership & management of many tea gardens just to protect the interest of their employees because those units were on the verge of closer due to acute sickness.

Though the problem of sickness has been associated with the tea industry for long, still no serious attempt has been made to define the term sickness in the context of tea unit. The concept of sickness attached with industry as a whole is not suitable for defining sickness in tea industry. This is primarily because tea is in the plantation sector and the health of this industry depends heavily, beside other factors, on weather for a particular period in a particular area. Change in the weather condition of an area for a particular period cause a great deviation in the yield of the tea unit for that period which might cause poor financial condition leading to the unfulfillment of any of the criterion of sickness as stated above.

However, in this respect reference can be drawn to section 16B(1) of the Tea Act, 1953. In Chapter III (A) of the Act, a discussion is made on the powers of Central government to cause an investigation to be made in relation to a tea undertaking or unit. The Central Government can undertake an investigation of the tea undertaking or unit if in its opinion. (6)

a) The tea undertaking or, the tea unit has made losses in three out of five years immediately preceding the year in which such opinion is formed; or

b) The average yield of the tea undertaking, or, the tea unit, during three years out of five years immediately preceding the year in which such opinion is formed, has been lower than the district average yield by twenty five pc or more; or

c) The person owning the tea undertaking, or the tea unit, have habitually defaulted in the payment of wages or provident fund dues of workers and other employee, or rent of the land, or duties of excise, or such other dues as they are under an obligation to pay under any law for the time being in force, or

d) The tea undertaking, or, the tea unit, is being managed in a manner highly detrimental to the tea industry or to public interest.

Though section 16 B (1), chapter III of the Tea Act, 1953, does not specifically states the above criteria to be the bases of defining sickness in a tea unit, or the symptoms of sickness in a tea unit, still these could well be considered as the yardsticks for determination of the health (sickness) of a tea unit.

**5.4 SICKTU MODEL**

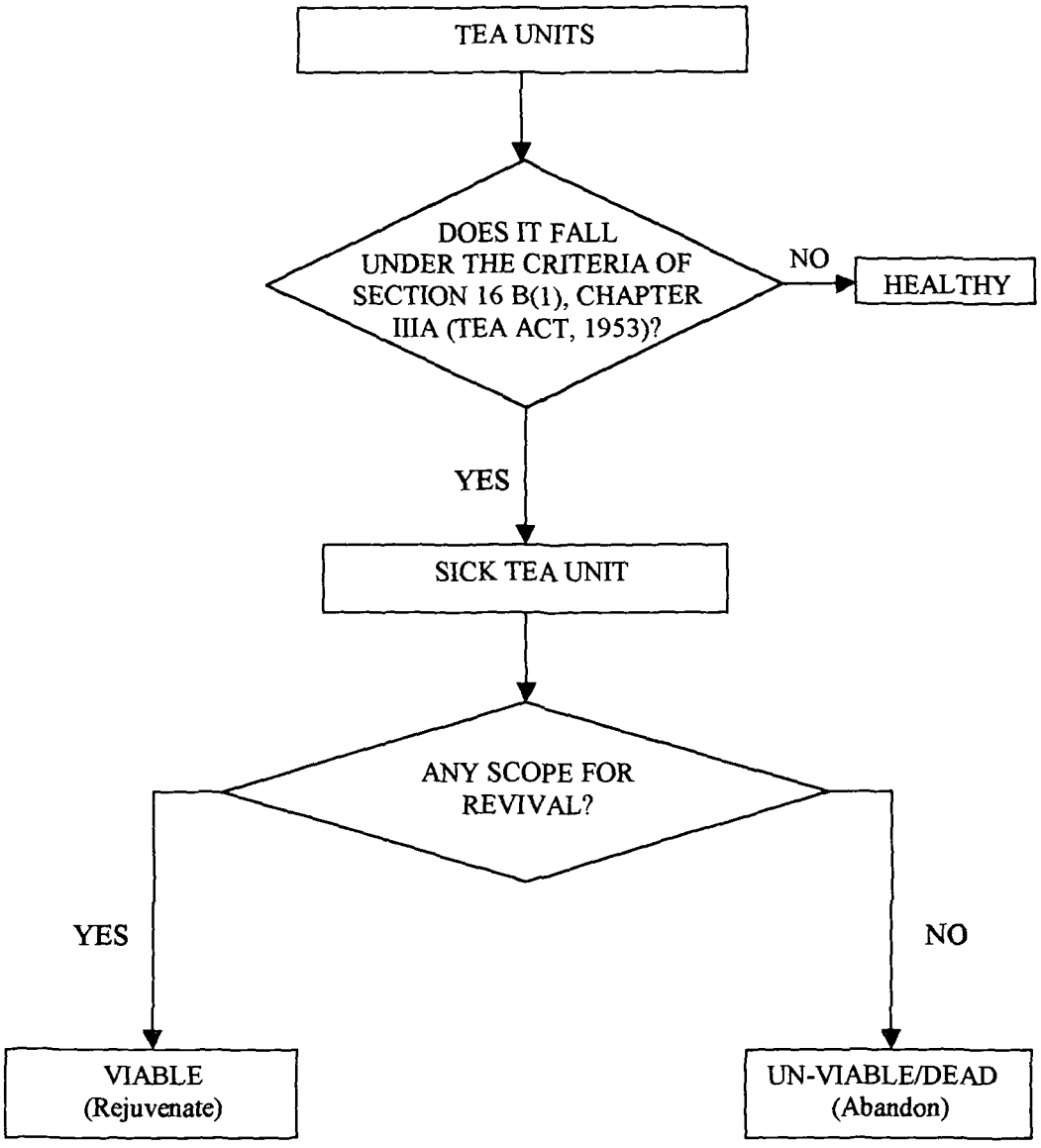
In order to determine the viability of a tea unit for smooth functioning of the industry, the entire tea units may well be classified as healthy and Unhealthy tea units. A healthy tea unit is one which does not satisfy any of the four criterion as stated in section 16 B(1), chapter III A of the Tea Act 1953 and an Unhealthy tea unit satisfies

(6) Chapter III A, Section 16 B (1) of Tea Act, 1953.

them. Accordingly, the unhealthy tea units may be considered as the sick units and the symptoms of the unhealthy tea units may also be taken as the symptoms of sick tea units. These sick tea units may further be classified as Viable & Nonviable. Based on the above assumptions, a Model of defining Sick tea unit has been suggested as shown in Figure 5.1.

**FIGURE 5.1**

**SICKTU MODEL**



A critical analysis of these four criterion reveals that they are essentially inter-related and may be considered to be in a chain of cause and effect. For example when average yield of the plants of a tea unit goes down the production of the unit will also be reduced. As a result of that the margin of profits would definitely go down or may incur loss unless it fetched a very high price on its tea. If such situation continues for three or more years it would surely make default in making payment of its dues, obligatory or otherwise, unless they are financially very strong or supported by budgetary allocations of the government in case of a government concern and relaxation of the dues by the creditors and governments in case of other concerns. The morale of the employees of such units would gradually go down, dissension among them would increase, resulting in strikes, and disturbances leading to further loss of productivity. Creditors would be forced to impose heavy restrictions on borrowings leading to the financial crisis in such units. Moreover such units would lose their talents because of high employee turnover. Such situation would certainly be detrimental to the tea industry in particular and its associates and economy in general.

As stated earlier, Government by providing budgetary allocation for government units and relaxations for private units may temporarily ease out the situation. But in the long run complementary losses are bound to occur. Complementary loss in this regard may be considered as the opportunity cost of benefits, which the society has to forego. These benefits would otherwise have been gained by the society, had the fund, which have been blocked for budgetary supports and relaxations to the loss making tea units were utilized for some other productive and socio-economic developmental projects.

## 5.5 SYMPTOMS OF SICKNESS IN TEA INDUSTRY

In addition to the above the symptoms of sickness in industries in general may also be considered in determining sickness in tea industry. They may be classified as Financial symptoms and Non-financial symptoms.

### 5.5.1 Financial Symptoms

a) **Irregularity in the Operation of Bank Account:** Sickness in a tea unit may be indicated in irregularity in operating the bank accounts. There could be shortage of liquid funds to meet short-term financial obligations. The creditors would not be paid in time and debit balance will exceed the drawing power of the unit.

b) **Non-payment of Interest on Loans:** A sick tea unit generally finds difficulties in making payment of interest & repayment of principal amount on loans taken by it from financial institutions.

c) **Excess Inventories:** Accumulation of excessive inventories like green leaves, tea in process and made tea or absence of inventory movement in large quantities may be considered as alarming. This might happen because of sickness in the unit.

d) **Underutilisation of Capacity:** Working below the break-even point or far below the installed capacity by a tea unit might be a result of growing sickness in the unit. In general a sick unit is one, which works below 25 pc of its installed capacity. [7]

e) **Return on Investment:** If a tea unit consistently fails to earn reasonable return on its investment, it may be considered as a symptom of sickness.

f) **Financial Ratios:** A tea unit with declining tangible net worth, worsening of current ratio or continued negative net working capital, worsening debt-equity ratio, declining turnover of assets, diversion of funds etc. may be termed as a sick unit.

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(7) A special correspondent: " Merger of Sick Units, some precaution'', "Economic and Political Weekly", October 15, 1977, P.1761, as cited in Business Finance – Principles and Problems by P.V. Kulkarni, Himalaya Publishing House, Mumbai, 1988. P.990.

### 5.5.2. Non-Financial Symptoms

Among the Non-financial symptoms, the prominent ones are the frequent break down of plants and machineries, low level of output as compared to capacity, low productivity etc. Frequent breakdowns in machinery may be due to inadequate maintenance or inability to replace or renovate machineries. These obsolete machineries can never be expected to produce up to the mark. On the other hand the employee morale of a sick tea unit will be very low. There will be an increasing desperation in top and middle management levels of such tea units. As a result of that absenteeism and employee turnover rate will be higher. Consumer complaints against such companies will grow. All these will lead to poor productivity.

Gradually such units suffer from mismanagement and there is a tendency on the part of the managers to look forward to subsidies, concessions etc. They do not accept the challenges boldly and try little to exploit opportunity of any kind.

## 5.6 STAGES OF SICKNESS IN TEA UNITS

It is very essential that in order to come out of sickness, timely preventive measures be taken. For that purpose various symptoms of sickness, as suggested earlier, should be carefully considered and proper time bound programmes should be taken up before the tea unit approaches the closing stage. It is observed that a tea unit develops sickness gradually and does not fall sick suddenly. Hence it would be very useful if the stages of sickness could be identified and analyzed. It would then help in taking up preventive measures in early stages itself. It is seen in many cases that efforts for revival of a sick industrial unit are made at a later stage when there is no scope for it.

In this respect it is worth mentioning that various studies had been conducted to identify the stages of sickness in other industries. It would be attempted here to see if findings of such studies could be put into use in case of tea units also. Weitzel and Jonson [8] had developed a model showing various stages an industrial unit passes

(8) W.Weitzel & E.Jonsson, Decline in organizations: A Literature Integration and Extension, Administrative Science Quarterly, Vol. 34,No1, March, 1989, P.97.

through before it ultimately closes its business. According to them five stages are associated with in sickness of an industrial unit and the corresponding organizational action. (Figure 5.2)

## FIGURE 5.2

### WEITZEL & JONSON MODEL OF STAGES OF INDUSTRIAL SICKNESS

| Stages of Sickness | Organisational Action |
|---|---|
| 1. BLINDED | Failure to anticipate or detect pressure toward entropy; decline begins |
| 2. INACTION | Failure to decide on corrective action; decline becomes noticeable |
| 3. FAULTY ACTION | Faulty decisions; faulty implementation of decisions. |
| 4. CRISIS | Given faulty-action stage, and unforgiving environment, last chance for reversal. Given forgiving environment, slow erosion. |
| 5. DISSOLUTION | Given crisis stage and unforgiving environment, rapid demise. Given forgiving environment, slow demise |

Bidani and Mitra [9] had also developed a model, showing various stages of sickness in an industrial unit before it finally closes down. They have identified four stages (Figure 5.3) of sickness before its ultimate closure, viz, healthy unit, tending towards sickness, incipient sickness, and death or closure of the unit.

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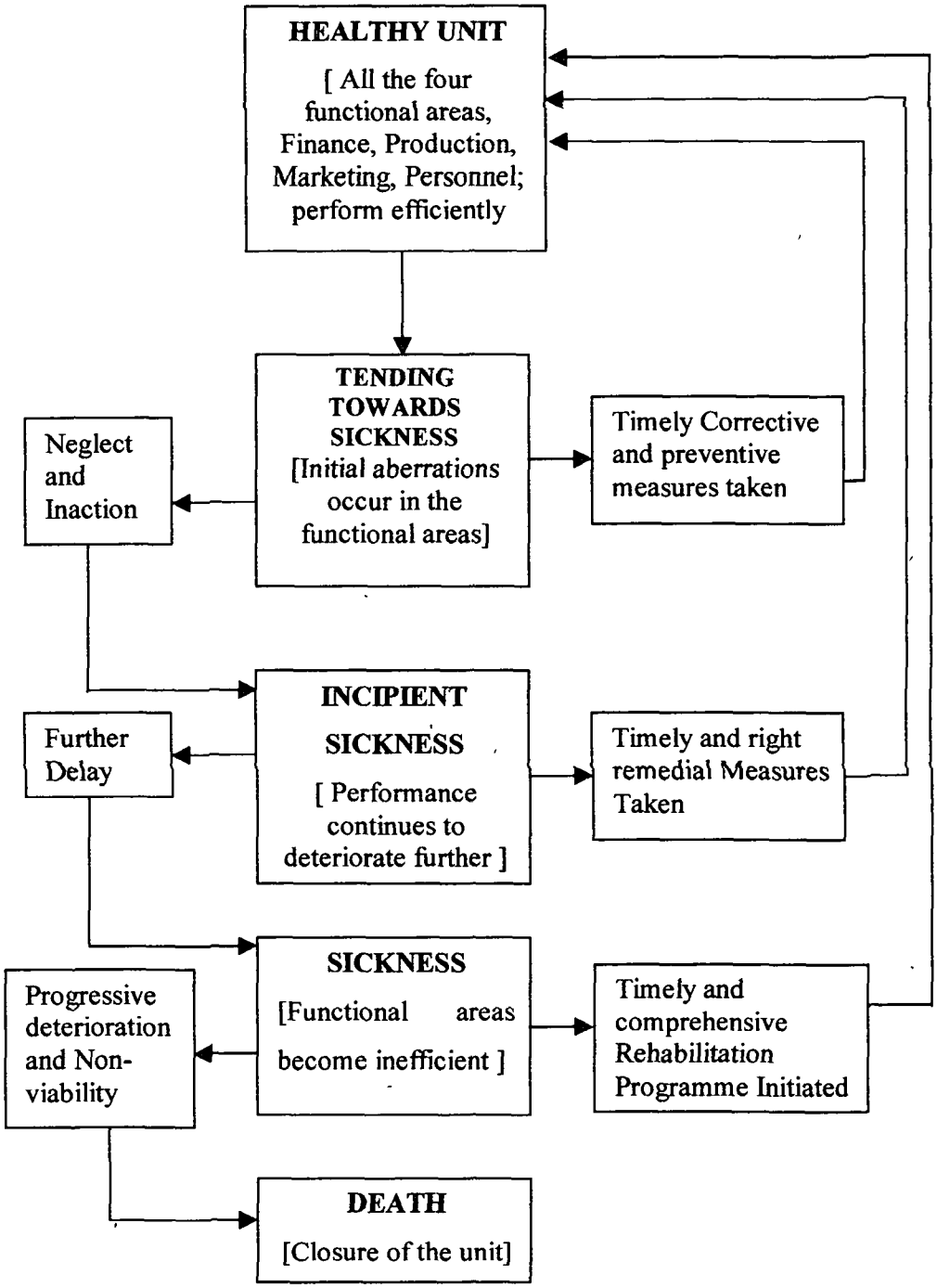
(9) S.N. Bidani & P.K. Mitra, Industrial Sickness: Identification and Rehabilitation, Vision Books, New Delhi, 1982, PP 17,31 – 33.

**Fig 5.3**
**STAGES OF SICKNESS AND RECOVERY OF AN INDUSTRIAL UNIT**
**(AS DEVELOPED BY BIDANI AND MITRA) [9]**



According to them management of the unit is responsible for coordinating the four key areas of the unit, viz, finance, production, personnel and marketing. If these key areas are properly monitored, the management would be able to discover the symptoms of sickness, if there is any, in time, and accordingly timely action could be taken.

Going by the Model of Bidani and Mitra,[9] an attempt has been made here to classify the stages of sickness in tea industry as well as to identify the precautionary measures to be taken for the revival at various stages. In this context the assumed criterion of sickness in tea unit as indicated earlier, given in section 16 B (1), Chapter III A of the Tea Act 1953 will also be considered.

### 5.6.1 Healthy Tea Unit

A healthy tea unit may be considered as one which continues to earn sufficient profit, average yield per hectare is at least at per with the district average yield and there is balance in its financial ratios like current ratio, debt-equity ratio etc. and it is also in a position to withstand any type of external and internal adverse changes. Such tea units make no default in making timely payment of its dues to the employees and the morale of the employees are high. The units enjoy a commanding position and fetch a reasonable price for their tea in the market. All the key areas of management of such units are to be sound.

### 5.6.2 Tending Towards Sickness

When a tea unit, because of internal or external factors, start suffering from problem in any of the four key areas of management, it may be said to be tending towards sickness. If a tea unit earned lower profit in the last year as compared to the previous year and estimates losses in the current year it falls in the second stage of sickness. Unlike the healthy units, the average yield per hectare of such units will show a gradual decline over the said period, which has a direct relationship with profitability of the concern.

At this point the concerned parties like management, bankers and creditors should carefully monitor the situation and the causes behind such downfall should be analysed so that timely corrective actions could be taken.

### 5.6.3. Incipient Sickness

If measures have not been taken initially to arrest the downfall of yield, the situation may worsen further and actual sickness will occur. This is the stage of Incipient sickness. In this stage the tea unit in question suffers cash loss during the last year and expected to incur cash loss during the current year, the current ratio deteriorates to less than one during the current year, tangible net worth contract, debt-equity ratio further worsen. The average yield of such unit decline further, going far below the district average yield per hectare.

Through effective system of supervision, the management of such concerns and other interested parties should be able to detect the incipient sickness. After due analysis of the situation various causes behind poor yield could be identified and accordingly corrective measures could be taken. Maximum alert is to be maintained in economic utilization of various inputs like pesticide, weedicide, fertiliser etc. Quality cultural practices like proper planting, plucking, pruning and shedding along with adequate irrigation, water supply and drainage system are to be utilized in time. Moreover economy measure should be applied in spending habits of such tea units, and wastage of various types should be avoided. With a view to preventing the unit from falling sick, management could seek cooperation of the workers associations. After taking the aforesaid steps management should review the situation periodically, so that deficiencies, if any, could be removed immediately.

### 5.6.4. Sickness

If the necessary precautionary measures are not adopted in time or if they are inadequate, slowly and steadily the unit will fall sick. Such tea units may be viable and Non-viable (Refer SICKTU MODEL). It will still continue to incur cash loss for at least three out of five years immediately preceding the year in which such opinion is formed. Its average yield per hectare still continues to be at least less than 75% of the district average yield per hectare in the same period. In this stage there will be dissentment among the employees because the unit might not be able to provide their

legitimate dues in time, absenteeism and turnover among them will be higher, in a sense their moral will go down. Obsolete machineries might cause frequent breakdowns on the one hand and there might be under utilisation of capacity on the other. The unit will not be able to satisfy the creditors and there will be irregularity in operating bank accounts. The financial ratios like Current ratio, Debt equity ratio, etc will be unfavourable for such units.

At this stage the viability of the sick unit should be studied. If the unit is found viable, early rehabilitation programme should be taken up. Emphasis should be given on economise operation by drastically cutting down the cost of operation. Cost of operation could be reduced by way of eliminating wastage, reducing employee strength to minimum, and by effectively supervising the workers. At this point the unit should try to increase yield per hectare, and utilise the vacant areas for the purpose of plantation of other crops. Slowly and steadily, extension plantation and replantation works should be taken up. The workers associations should be taken into confidence and they should be explained the rationality behind taking such corrective measures in a bid to win their co-operation. Efforts should be made to procure term loans from financial institutions at easy terms so as to utilise the fund for garden development works. Service of the consultants in this regard may also be sought. It may be hoped that by taking these steps a viable sick unit may be revived and could be brought back to a healthy position.

### 5.6.5 Closure of Tea Unit

If the sick unit is found un-viable at the first instance, it is better not to spend time, money and effort in rehabilitation works. They will not yield any dividend and ultimately the unit will close down.

At this stage many undertakings are taken over by the government by establishing public tea Corporations. In India formation of Assam Tea Corporation, West Bangle Tea Development Corporation, Tea Trading Corporation etc. were motivated by such situation of many tea units. Government with a socialistic approach does so to protect the interest of the workers of such units and also to protect the industry form going to depression, which might result form frequent sickness in some of the units of the industry.

## 5.7 SICKNESS IN TEA INDUSTRY IN ASSAM

After independence, Government of India had enacted certain legislative measures to control the activities in tea industry, which the tea owners, especially foreign tea owners, found unfavourable. They had to spend large sum of money in the welfare activities of the workers and in fulfilling other provisions of those legislations (Refer Chapter-Growth of Indian Tea Industry). As a result of that the rate of profit of such tea units went down and many gardens were sold randomly. Change of ownership to the inexperienced hands also contributed to a unhealthy situation in them. Some of these new classes of entrepreneurs with myopic attitude eyed on maximisation and immediate earning of profits without considering the long-term viability of the units. As a result of that gradually the units fell sick.

This situation was more apparent in Assam as it owns most of the tea gardens in the country. The problem of sickness was more serious in the small sized gardens as with little economic and human resources it was very mach difficult for them to cope with the changing situations. Phookan [10] observed that many of the indigenous gardens, being proprietary (individual or partnership) concerns comprised only of few acres, had not been able to reap the benefits of higher productivity and centralised efficient management. From the viewpoint of the maximization of profits, the optimum size of a tea estate is considered to be between 800 and 1000 acres, employing from 1000 to 1500 workers. On the average, the small size gardens yielding less amount of tea per acre could not withstand competition, reap profits or provide satisfactory amenities to the labourers. In addition to above factors, statutory obligations to implement the provisions of various labour laws further worsened the economic position of many such gardens.

During 1952-53 many tea gardens were reported closed in Cachar district of Assam due to sickness and many others in Brahmaputra valley were on the verge of closure. The causes attributable to this problem of the tea estates of Assam inter alia, were the mismanagement, non-investment of funds, diversion of funds, neglect of

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(10) Dr. A.C Phookan – " Personnel Administration in the Tea Industry of Assam", Archita Prakasan, Jorhat – 1984, P.303.

necessary accepted agricultural practices, and disputes among owners, planters and the like .[11]

During the seventies of the 20th century, sickness in tea industry of Assam drew attention of a large section of the people. According to Sharma [12] two strong tea labour unions of the country, namely the Assam Chah Mazdur Sangha and the Assam Chah Karmachari Parishad were very much worried about the problem of sickness in tea industry in India. In a memorandum submitted to Mr. R. Reddy, the then Union Labour Minister of State at Dibrugarh on 30.05.1975, the two Trade Unions stated that the problem of sick and mismanaged gardens had been with the Indian tea industry for quite a long period of time. A number of tea gardens had closed down after independence resulting in loss of employment and livelihood to thousands of workers, loss of production and also in loss of government revenue. Many gardens had somehow maintained their existence in a stifling atmosphere causing untold sufferings and misery to the workers and their families. Assam Chah Karmachari Parishad had also suggested the State government of Assam to take measures to transfer the sick tea gardens to the cooperative sector or to a government sponsored Corporation.

## 5.8 FORMATION OF ASSAM TEA CORPORATION LTD.

In the early sixties of the last century the Government of Assam gave the first serious thought towards the problem of sickness in Indian tea industry and about its nationalization. Considering the importance of tea industry in the economy of Assam, the then Chief Minister of Assam late B.R. Medhi led a delegation of senior citizens and bureaucrats of Assam to Central Government in order to apprise the Central leadership with the problems of tea industry of Assam. The delegation met the then Union Industry and Commerce Minister Mr. T.T. Krishnamachari and then Finance Minister Mr. C.D. Deshmukh and discussed the problem of sickness in tea industry of Assam. During their meeting with central leaders they offered two proposals - one concerning cost control and the other regarding nationalization of the industry.

(11) Dr. A.C Phookan – " Personnel Administration in the Tea Industry of Assam" – Archita Prakasan, Jorhat – 1984, P.303

(12) Dr. Bijoy Ch. Sharma – " Assam Tea Corporation – An Appraisal of its Managerial Attainment"-Thesis Submitted to Guwahati University, 1997, P.43.

Mr. Krishnamachari duly placed the two proposals offered by the delegation before the Parliament and after due discussions on them the Parliament unanimously adopted the proposal for control of production cost of tea but the second proposal for nationalization of tea industry was deferred at that time. [13]

However, considering the status of the industry at the private hands and contributions made by it to the national economy the Central government was never in the mood of Nationalisation of the industry. It was understandable from the fact that it refused to accord on any suggestion of enacting any law for nationlising the tea industry. As Phookan[14] maintained, the government of free India, from the very beginning did not accept the idea of nationalizing the tea industry. The industry was already dominated by the British Capital and thus during the post war period, nationalization of tea industry has never been a serious issue. According to the Report of the Committee on Financing of Tea Industry [15] in the late seventies of the 20th Century the Government of Assam, in its own accord, once again tried to give a shape to the issue of nationalization of tea industry. It constituted a committee vide Notification No. MI/97/65/25 dated 8.2.1968 as modified by Notification No. MI/97/65/104 dated 12.3.1969 with the Secretary to the Government of Assam, Cooperative Department as Chairman and Convener to go into the question of uneconomic tea gardens and to suggest remedial measures. Based on the findings of the investigation report, the State Government drafted the Assam Tea Estates (Prevention of Closure) Bill 1971. It sought to acquire better controlling power over management of tea gardens. The Central Government, however, did not accord approval to enact the legislation. Instead, it amended the Tea Act in 1976 empowering the Central Government to order investigation into the workings of sick and

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13) " Herai Jowa Din Bor " ( The Past Days )- Dainik Janambhumi, An Assamese Daily, Jorhat – 1.1.1995.

(14) Dr A.C Phookan, "Personnel Administration in the Tea Industry of Assam" – Archita Prakasan, Jorhat – 1984, P. 556.

(15) Report of the Committee on Financing of Tea Industry – RBI – P.35 as cited in the thesis, – " Assam Tea Corporation – An Appraisal of its Managerial Attainment"-Thesis Submitted to Guwahati University, 1997, by Dr. Bijoy Ch. Sharma.

uneconomic tea estates and, to takeover management of such tea estates, for a period of five years with extension of one year at a time, but not beyond seven years on the whole. It also empowered the Central Government to take decision for liquidation or restructuring of the managed tea estates in accordance with the provision under the Industrial (Development and Regulation) Act, 1951.

From the discussions already made it is now clear that the Government of Assam was trying hard to remove the problems associated with the tea industry. However, the question of establishing a Tea Corporation did not figure anywhere until the people of the State under the legacies of the two tea labour organsitions organized the large-scale movements.

Like many other units of the State, the tea units of Assam Company and Jorehaut Tea Company were also victims of the changing economic outlook of the Government of India. The tea gardens of these two companies were also not functioning well and the companies were interested in shifting their business to African Nations where the business was far more lucrative because of less cost of operation and availability of cheap labour force and land. It is reported by Sharma[16] in his work that Jorehaut Tea Company by that time had started tea estates in Kenya with the names of New Cinnamora and New Sycotta while partially running tea estates of Cinnamora and Sycotta in Jorhat districts of Assam.

In 1966 the Jorehaut Tea Company closed its central workshop in Jorhat and in 1971 it tried to close down its central office at Jorahat. The Assam Company on the other hand sold all its superannuated gardens indiscriminately and closed its Head Office at Nazira of Sibsagar district. These actions led to the creation of furor in the minds of the people of Assam. The two tea labour organizations started agitating against the move of the tea companies. They were logically guided by the fact that most of the tea workers will lose their jobs if the gardens are closed down or shifted to the hands of inexperienced owners.

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(16) Dr. Bijoy Ch. Sharma – " Assam Tea Corporation – An Appraisal of its Managerial Attainment", Thesis Submitted to Guwahati University, 1997,

As a part of their agitational programme, the two tea labour organizations organized a mass rally on 1.8.1970 at Bistu Ram Barua Hall of Jorhat under the Chairmanship of R.N. Hazarika, retired District Judge and the then judge of the Industrial Tribunal of Assam. The meeting adopted two resolutions in that rally.

(a) To establish a Tea Corporation in Assam so that the interest of the tea workers could be protected and,

(b) To establish a Tea Auction Center at Guwahati. The intention behind this suggestion may be to persuade the Tea Companies not to shift their Head Offices to Calcutta just for the sake of selling their produce in Calcutta Auction Center.

Subsequently, the Government accepted the proposal for establishment of a Tea Auction centre at Guwahati. But for going into the feasibility of establishment of Tea Corporation, Government set up a committee under the chairmanship of Mr. D. Das, I.A.S., the then Chief Secretary to the Government of Assam. The Committee reported in favour of establishing a Tea Corporation and subsequently the Assam Tea Corporation Limited (ATCL) was established on 9.2.1972 as a company limited by shares with its registered office in Assam.

### 5.8.1 Capital of ATCL

The Corporation was originally registered with an authorized share capital of Rs 10 crore, divided into 9,50,000 equity shares of Rs. 100/- each, and 50,000 cumulative preference shares @ 9.3% of Rs. 100/- each. Later on it was enhanced to Rs. 30 crore, divided into 29,50,000 equity shares of Rs. 100/- each, and 50,000 cumulative preference shares of Rs. 100/- each. The entire capital of the Corporation was subscribed by the Government of Assam except for an amount of Rs. 700/- originally subscribed by the promoters as mentioned in the Memorandum of Association of the Corporation.

### 5.8.2 Objectives Behind The formation of ATCL

The Government of Assam established the Assam Tea Corporation in the year 1972 as a result of a struggle by the labour organisations concerned with tea industry for a long period of time. The struggle was to protect the interest of the tea workers of the State in particular and the interest of the tea industry in general. Therefore, the primary objectives of establishment of the Corporation are [17]. (a) Safeguarding the interest of the tea industry, (b) to protect the interest of the workers (c) to increase the employment opportunities, particularly for the surplus tea labourers, (d) to avoid possible speculative trends in the acquisition and management of tea estates, and (e) to avoid concentration of tea estates in a few hands.

The Memorandum of Association of the Corporation specifically states the objectives behind the establishment of it. They are stated in three categories, viz.

A. The Objectives for which the Corporation is established.
B. Objectives incidental or ancillary to the attainment of the above objects, and
C. Other objects for which the Corporation is established.

**The objectives of the establishment of ATCL**

1 (a) To acquire, purchase and take over Tea Estates in Assam that are offered for sale form time to time and which the Corporation considers profitable, with all or any of its fixed and floating assets, goodwill rights, licence, quota rights etc. and to pay for the same and to carry on the said business in such manner and on such scale as may be considered desirable;

(b) To promote, purchase, lease, take control of, manage and /or develop Tea Estates in Assam, after being fully satisfied about their economic viability, on a voluntary basis through negotiations, with a view to fulfilling one or more of the following objectives :

(17) Press Statement of M.D. of ATCL as published in The Assam Tribune, Guwahati, 2-11-1997.

(i) To safeguard the future of the Tea Industry.

(ii) To protect the interests of the workers and increase employment opportunities, particularly for surplus tea-garden labourers.

(iii) To avoid possible speculative trends in acquisition and management of Tea Estates.

(iv) To avoid concentration of ownership of Tea Estates in a few hands.

(c) To carry on the business of plantation of tea, coffee, rubber, paddy, sugarcane, cotton, fruits and other crops, plants, trees, timber and other commodities.

(d) To cultivate, grow, produce, process, manufacture and to buy, sell and resell, either as raw material or as finished product all or any of the items mentioned in paragraph 1 (c) above.

(e) To organize and carry on either directly or through authorised agents the sale as raw materials or as finished product in India or abroad of tea, paddy, sugarcane, cotton, timber, fruits and other crops, plants and trees or other commodities.

(f) To carry on at all or any of its stages the business of plantation, processing, manufacturing and marketing of all or any of the aforesaid crops, minerals, trees, plants, timber and other like commodities.

(g) To acquire by payment in cash or by any other arrangement, any property either for enabling the Corporation to grow, produce, process, manufacture, buy, sell and resell any of the crops, fruits, plants, trees, timber, minerals and other commodities mentioned in paragraph 1(c) above or for any other purpose.

(h) To organize for transportation of the Corporations goods or form subsidiaries to transport Corporation's goods.

(i) To form subsidiaries to manufacture agricultural implement or engineering goods connected with the business of the Corporation.

## 5.9 STATUS OF ATCL GARDENS AT THE TIME OF TAKE OVER

The Corporation is currently doing business with 15 tea estates in the State of Assam. In Table 5.1 and Table 5.2 the state of affairs of these tea estates at the time of take over are presented. Out of these 15 tea estates, the Corporation on behalf of the Govt. of Assam in return for a service charge manages Bidyanagar garden, situated in Karimganj district. Out of these 15 tea estates 3 gardens each are in Nagaon, Golaghat, Jorhat and Karimganj districts, 2 gardens are in Sibsagar district and one is Sonitpur district of Assam. Table 5.1 also shows the date of takeover, total area, area under tea, production, average yield, employee strength and employee area ratio of the gardens of the Corporation at the time of their take over. Table 5.2 shows the purchase price of the gardens and their vendors.

Four out of the fourteen gardens owned by the Corporation do not have their own factories. They are Rajabarrie T.E, Bholaguri T.E, Rungamatty T.E. and Messamara T.E. These four gardens send their green leaves to the respective nearest factories of the Corporation. There had been a factory at Rajabarrie T.E but it was closed down later on.

## TABLE – 5.1
## STATUS OF ATCL GARDENS
## AT THE TIME OF TAKE OVER

| Garden | District | Date of Take Over | Total Area (Hect.) | Area Under Tea (Hect) | Production (Kg) | Yield (Kg/Hect.) | Employee Strength | | | Employee Area Ratio (Persons/ Hectare) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Labour | Staff | Total | |
| AMULUCKIE | Nagaon | 30 4 73 | 1,819 02 | 533 45 | 6,85,134 | 1,248(1,173) | 839 | 24 | 863 | 1 62 |
| DEJOOVALLEY | Nagaon | 18 9 73 | 575 49 | 246 24 | 3,40,794 | 1,384(1,173) | 602 | 18 | 620 | 2 52 |
| LOONGSOONG | Nagaon | 5 3 76 | 3,562 96 | 478 67 | 4,25,000 | 887 (918) | NA | NA | 809 | 1 69 |
| RAJABARRIE | Sibsagar | 6 1 74 | 501 05 | 138 44 | 1,42,000 | 1,026 (1,238) | 247 | 9 | 256 | 1 85 |
| DEEPLING | Sibsagar | 30 12 75 | 807 94 | 312 41 | 5,27,000 | 1,687 (1,217) | 1,059 | 31 | 1,090 | 3 49 |
| NAGANIJAN | Jorhat | 28 12 72 | 1,407 84 | 351 06 | 3,35,704 | 956(1,140) | 943 | 20 | 963 | 2 74 |
| SYCOTTA | Jorhat | 30 6 73 | 778 02 | 728 55 | 9,08,574 | 1,247(1,172) | 2,132 | 40 | 2,172 | 2 98 |
| CINNAMARA | Jorhat | 30 1 73 | 819 90 | 756 05 | 9,29,735 | 1,230(1,172) | 2,400 | 90 | 2,490 | 3 29 |
| ISABHEEL | Karimganj | 8 8 75 | 1,469 60 | 544 25 | 5,91,000 | 1,086 (875) | 929 | 23 | 952 | 1 75 |
| LONGAI | Karimganj | 16 6 75 | 3,018 66 | 627 59 | 7,75,000 | 1,235 (875) | 1,486 | 36 | 1,522 | 2 43 |
| BIDYANAGAR | Karimganj | 19 6 75 | 1,610 67 | 2,29 54 | NA | NA | 306 | 11 | 317 | 1 38 |
| NEGHERITING | Golaghat | 5 5 75 | 1,163 34 | 507 36 | 3,03,488 | 598 (1,217) | 972 | 27 | 999 | 1 97 |
| RUNGAMATTY | Golaghat | 5 5 75 | 890 24 | 363 72 | 1,76,889 | 486 (1,217) | 719 | 15 | 734 | 2 02 |
| MESSAMARA | Golaghat | 5 5 75 | 430 00 | 376 28 | 1,87,402 | 498 (1,217) | 752 | 15 | 767 | 2 04 |
| BHOLAGURI | Sonitpur | 21 573 | 275 36 | 113 67 | 6,93,528 (Green leaves ) | 1387(1,551) | 121 | 9 | 130 | 1 14 |

**Source : Head Office, ATCL. & Tea Board.**
*** Figures in bracket indicates district average yield per hectare in the year of take over.**
**NA : Note Available**

**TABLE –5.2**
**PURCHASE PRICE AND VENDORS OF ATCL GARDENS**

| Gardens | Purchase Price ( Rs in Lakhs) | Vendors |
|---|---|---|
| AMULUCKIE | **42.50** | **M/S Amluckie Tea Co. Ltd, Calcutta.** |
| DEJOOVALLEY | **24.00** | **M/S Dejoovalley Tea Co. Ltd, Calcutta.** |
| LOONGSOONG | **38.00** | **M/S Brae & Chingoon Tea Estate Ltd.** |
| RAJABARRIE | **9.00** | **Smt. Aroti Barooah,Sri H.P. Barooah,Attorney** |
| DEEPLING | **27.00** | **M/S Jorehaut Tea Co. Pvt. Ltd, England** |
| NAGANIJAN | **18.00** | **M/S Jhanjei Tea Association Ltd, England** |
| SYCOTTA | **48.39** | **M/S Jorehaut Tea Co. Pvt. Ltd, England** |
| CINNAMARA | **55.11** | **M/S Jorehaut Tea Co. Pvt. Ltd, England** |
| ISABHEEL | **27.50** | **M/S Octavios Steel Ltd** |
| LONGAI | **38.00** | **M/S Octavios Steel Ltd** |
| BHOLAGURI | **8.00** | **M/S Bholaguri Tea Co. Pvt. Ltd, Assam.** |
| NEGHERITING | - | - |
| RUNGAMATTY | **42.43** | **M/S Brahmaputra Tea Co. Pvt. Ltd & Shaw Wallace Ltd.** |
| MESSAMARA | - | - |
| BIDYANAGAR | **Under Management** | **On Behalf of Court of Wards.** |

*** Source : Head Office, ATCL.**

# CHAPTER VI

## Health of ATCL

# CHAPTER – VI

## HEALTH OF ASSAM TEA CORPORATION LTD.

### 6.1 INTRODUCTION

After exploring the status of the Assam Tea Corporation Limited's (ATCL) gardens at the time of their take over it would now be appropriate to asses their health at present. In this chapter it would be tried to study the progress made by its gardens individually as well as by the Corporation as a whole over the years. Changes in the growth pattern of the gardens with regards to yield per hectare, production, employee strength and area under tea for the period from 1990-91 to 1997-98 would also be separately analysed in order to determine their present health. In addition to these, an analysis of the financial statements of the Corporation will be made with the help of various Ratios. It would be tried to evaluate the performance of the Corporation in the light of a comparative study of the performance of ATCL and Non-ATCL tea units. Performance of ATCL gardens would be compared with district, state and national averages of various aspects of Indian tea industry. Further, the performance of ATCL would also be compared with the performance of another public sector tea unit of Sikkim. Finally, it would be tried to fit SICKTU Model in case of ATCL to see if it can be considered sick.

### 6.2 GARDENWISE GROWTH ANALYSES

#### 6.2.1 Amluckie T.E.

Table 6.1 shows the progress made by the garden over the years. Form the Table it is seen that as on 1.1.1998 employee strength of the garden rose by 36 pc and area under tea went up by 15.3 pc. At the time of change of ownership number of employees appointed per hectare of area under tea was 1.62 persons; which went up to 1.91 persons per hectare as on 1.1.1998, an increase of 17.9 pc. Though, over the years area under tea went up by 15.3.pc, the production of tea, during the said period, went up by 9.2 pc only. Reason for this disproportionate growth may be attributed to the negative growth of yield per hectare, which went down by 6.1 pc during the same period.

**TABLE – 6.1**

**AMLUCKIE TEA ESTATE**

**PROGRESS OVER THE YEARS**

| Indicators | At The Time Of Take Over | As on 1.1.1998 |
|---|---|---|
| Employee Strength | 863 | 1174 (36) |
| Area under tea (Hectare) | 533.45 | 615.08 (15.3) |
| Production (Kg) | 6,85,134 | 7,48,344 (9.2) |
| Yield (Kg/Hectare) | 1,284 | 1,206 (-6.1) |
| Employee-area ratio | 1.62 | 1.91 (17 9) |

*** Figures in bracket indicate pc growth over the years**

**Source: Head Office, ATCL**

Table 6.2 shows the growth pattern of the garden during the period from 1990 –91 to 1997-98. Area under tea of the garden maintained a steady growth rate up to 1994-95. In 1995-96 the growth rate was low, though it was maintaining a positive growth. It went down marginally in 1997-98. On the other hand the garden had been maintaining a reasonable growth rate of production up to 1993-94, but it went down by 17.1 pc and 10.4 pc in 1994-95 and 1995-96 respectively. Production of tea went up again in 1996-97 by 17.1 pc but it went down in the next year by 5 pc. The disproportionate growth of area under tea and production has been the result of the unstable growth rate of yield per hectare of tea. Over the years the price fetched by the garden on its tea has been growing at a reasonable rate. It went down by 1.5 pc in 1991-92 but went up by 8.4 pc and 11 pc in the next two years. In 1994-95 it went down by 15.3 pc but again went up by 22 pc, 3.2 pc, and 49.5 pc in the next three years respectively. It is noticed from the Table that since 1994-95 the garden has not been extended with any new plantation area. Further, about 37 pc of its total tea bushes are in the age group of 50 to 100 years. (Ref. Table 7.5). It is noteworthy that none of the gardens of Corporation had taken up replantation or rejuvenation work during this period.

## TABLE –6. 2
## AMLUCKIE T.E.
## GROWTH PATTERN OF THE GARDEN
## 1990-91 TO 1997-98

| INDICATORS | 1990-91 | 1991-92 | 1992-93 | 1993-94 | 1994-95 | 1995-96 | 1996-97 | 1997-98 |
|---|---|---|---|---|---|---|---|---|
| Area under tea (Hectare) | 580.18 | 588.18 (1.4) | 594.74 (1.1) | 603.40 (1.5) | 613.45 (1.7) | 615.58 (0.3) | 615.58 (0) | 615.08 (-0.1) |
| Yield (Kg/Hectare) | 1,317 | 1,335 (1.4) | 1,401 (4.9) | 1,473 (5.1) | 1,221 (-17.1) | 1,094 (-10.4) | 1,281 (17.1) | 1,206 (-5.9) |
| Production (kg) | 8,09,794 | 8,20,895 (1.4) | 8,61,706 (5.0) | 9,06,134 (5.2) | 7,50,799 (-17.1) | 6,72,834 (-10.4) | 7,87,671 (17.1) | 7,48,344 (-5.0) |
| Price (Rs/Kg) | 39.58 | 38.98 (-1.5) | 42.24 (8.4) | 46.90 (11.0) | 39.72 (-15.3) | 48.47 (22.0) | 50.00 (3.2) | 74.74 (49.5) |
| Extension plantation (Hectare) | 1.2 | 15.94 | 8.00 | 5.33 | 4.00 | -- | -- | -- |

*** Figures given in bracket indicate pc growth over previous year.**
**Source: Head Office, ATCL**

Table 6.3 indicates the operational results of the garden since its change of ownership. It is seen from the Table that for most of the years it earned profits except for the years of 1978, 1980,1981,1985,1986,1987,1988-89,1994-95 and in 1995-96. During 1997-98 it earned a record profit of Rs. 1,80,02,476.00 and in 1994-95 it suffered a maximum loss of Rs. 47,33,976.00. As on 1997-98 total surplus balance of the garden was Rs. 8,71,43,738.00

**TABLE: 6.3**

**AMLUCKIE TEA ESTATE**

**OPERATIONAL RESULTS SINCE TAKE OVER**
**( IN RUPEES )**

| Year | Surplus/ Deficit (-) | Year | Surplus/Deficit (-) |
|---|---|---|---|
| 1973 | 2,124.00 | 1986 | (-) 8, 07,871.00 |
| 1974 | 39,04,033.00 | 1987 | (-) 9,58,242.00 |
| 1975 | 13,05,491.00 | 1988-89 | (-) 33,11,745.00 |
| 1976 | 39,85,689.00 | 1989-90 | 1,19,22 ,362.00 |
| 1977 | 43,50,427.00 | 1990-91 | 86,79,812.00 |
| 1978 | (-)1,62,085.00 | 1991-92 | 54,77,269.00 |
| 1979 | 10,74,695.00 | 1992-93 | 94,18,869.00 |
| 1980 | (-)3,07,974.00 | 1993-94* | 1,01,33,504.00 |
| 1981 | (-)5,92,933.00 | 1994-95* | (-) 47,33,976.00 |
| 1982 | 6,38,656.00 | 1995-96* | (-) 21,68,205.00 |
| 1983 | 76,18,172.00 | 1996-97* | 82,34,937.00 |
| 1984 | 71,93,785.00 | 1997-98* | 1,80,02,476.00 |
| 1985 | (-) 17,55,532.00 | **Total (Surplus)** | **8,71,43,738.00** |

***Provisional**

**Source: Head Office, ATCL**

### 6.2.2 Dejoovalley T.E.

Table 6.4 shows the progress made by the garden over the years under the ownership of the Corporation. During the period, employee strength of the garden went up by 21.6 pc. On the other hand area under tea of the garden went up by 27.1 pc. It resulted in utilization of lesser number of employees per hectare of land. Against the employment of 2.52 persons at the time of take over, the Corporation has engaged 2.41 persons per hectare area under tea as on 1-1-1998. High growth of area

under tea resulted into high growth of production of the garden (30.9 pc). However, during the period, yield per hectare of area under tea went up by only 3 pc.

**TABLE: 6.4**

**DEJOOVALLEY TEA ESTATE**

**PROGRESS OVER THE YEARS**

| Indicators | At The Time Of Take Over | As on 1.1.1998 |
|---|---|---|
| Employee strength | 620 | 754 (21.6) |
| Area under tea (Hectare) | 246.24 | 312.96 (27.1) |
| Production (Kg) | 3,40,794 | 4,46,195 (30.9) |
| Yield (Kg/Hectare) | 1,384 | 1,426 (3.0) |
| Employee-area ratio | 2.52 | 2.41 (-4.4) |

***Figures given in bracket indicate pc growth over the years**
**Source: Head Office, ATCL**

Table 6.5 shows the growth pattern of the garden from 1990-91 to 1997-98. It is observed that the area under tea of the garden remained same up to 1992-93 from 1990-91. During 1997-98, there was a decline of area under tea by 1.3 pc. The area under tea registered marginal growth during 1993-94 to 1995-96. During that period, the yield per hectare of the garden declined sharply by around 9 pc. It went up marginally during 1991-92,1993-94,1996-97 and 1997-98 but went down during 1992-93,1994-95,and in 1995-96. At this point it is noteworthy that there was hardly any extension plantation in the garden since 1993-94 and around 18 pc of the total plantation area of the garden is covered by tea bushes in the category of 50 to 100 years of age( Ref. Table 7.5). Like yield, production of the garden also went down from 4,91,189 kg in 1990-91 to 4,46,195 kg in 1997-98. The growth was positive during 1991-92, 1993-94,1996-97 and in 1997-98 but was negative during 1992-93,1994-95, and in 1995-96. From 1995-96 to1997-98 the price of tea of the garden has registered a positive growth but it had been negative during 1991-92 and 1994-95.

## TABLE – 6.5
## DEJOOVALLEY T.E.
## GROWTH PATTERN OF THE GARDEN
## 1990-91 TO 1997-98

| INDICATORS | 1990-91 | 1991-92 | 1992-93 | 1993-94 | 1994-95 | 1995-96 | 1996-97 | 1997-98 |
|---|---|---|---|---|---|---|---|---|
| Area under tea (Hectare) | 291.43 | 291.43 (0) | 291.43 (0) | 310.43 (6.5) | 316.93 (2.1) | 317.18 (0.1) | 317.18 (0) | 312.96 (-1.3) |
| Yield (Kg/Hectare) | 1,569 | 1,670 (6.4) | 1,660 (-0.6) | 1,783 (7.4) | 1,553 (-12.9) | 1,297 (-16.5) | 1,423 (9.7) | 1,426 (0.2) |
| Production (Kg) | 4,91,189 | 5,22,586 (6.4) | 5,19,554 (-0.6) | 5,58,067 (7.4) | 4,86,194 (-12.9) | 4,05,960 (-16.5) | 4,45,434 (9.7) | 4,46,195 (0.2) |
| Price (Rs/Kg) | 43.68 | 45.70 (-2.3) | 43.53 (15.6) | 46.49 (7.7) | 40.61 (-16.9) | 47.79 (28.9) | 49.72 (2.7) | 74.50 (52.2) |
| Extension plantation (Hectare) | -- | 7.75 | 6.00 | 12.00 | -- | 6.00 | -- | -- |

*** Figures given in bracket indicate pc growth over previous year.**
**Source: Head Office, ATCL**

Table 6.6 indicates the operational results of the garden since it has been taken over by the Corporation. It is seen that during 1973,1978,1980,1981,1982, 1988-89, 19949-95 and 1995-96 it suffered losses and in rest of the years it could earn profits. During the period from 1973 to 1997-98 it earned a maximum profit of Rs 69,05, 598.00 in the year 1991-92 and suffered a maximum loss of Rs. 43,79,188.00 in the year 1995-96. As on 1997-98 the total surplus balance of the garden was Rs. 4,04,76,065.00.

**TABLE - 6.6**
**DEJOOVALLEY TEA ESTATE**
**OPERATIONAL RESULTS SINCE TAKE OVER**
**( IN RUPEES )**

| Year | Surplus/Deficit (-) | Year | Surplus/Deficit (-) |
|---|---|---|---|
| 1973 | (-) 1,79,349.00 | 1986 | 3,66,325.00 |
| 1974 | 15,77,607.00 | 1987 | 1,82,441.00 |
| 1975 | 6,28,510.00 | 1988-89 | (-)1,63,460.00 |
| 1976 | 12,41,097.00 | 1989-90 | 34,08,007.00 |
| 1977 | 26,66,871.00 | 1990-91 | 67,55,375.00 |
| 1978 | (-) 2,58,840.00 | 1991-92 | 69,05,598.00 |
| 1979 | 4,83,603.00 | 1992-93 | 39,02,476.00 |
| 1980 | (-) 3,26,141.00 | 1993-94* | 59,58,234.00 |
| 1981 | (-) 4,29,712.00 | 1994-95* | (-)14,52,062.00 |
| 1982 | (-) 4,10,345.00 | 1995-96* | (-)43,79,188.00 |
| 1983 | 32,76,354.00 | 1996-97* | 14,28,021.00 |
| 1984 | 25,02,395.00 | 1997-98* | 61,17,298.00 |
| 1985 | 6,76,949.00 | **Total (Surplus)** | **4,04,76,065.00** |

***Provisional**

**Source: Head Office, ATCL**

### 6. 2.3 Loongsoong T.E.

From Table 6.7 it can be observed that over the years there has been a sharp increase in the employee strength of the garden but at the same time the growth of area under tea has been negligible. This resulted into a high growth rate of employee

area ratio. At the same time yield of the garden rose by 15.9 pc and consequently production also went up by 25.2 pc.

**TABLE - 6.7**
**LOONGSOONG TEA ESTATE**
**PROGRESS OVER THE YEARS**

| Indicators | At The Time Of Take Over | As on 1.1.1998 |
|---|---|---|
| Employee strength | 809 | 1029 (27.2) |
| Area under tea (Hectare) | 478.67 | 514.93 (8.0) |
| Production (Kg) | 4,25,000 | 5,32,259 (25.2) |
| Yield (Kg/Hectare) | 887 | 1034 (15.9) |
| Employee-area ratio | 1.69 | 2.0 (18.3) |

***Figures given in bracket indicate pc growth over the years.**

**Source: Head Office, ATCL**

Table 6.8 shows the growth pattern of the garden over the period from 1991 to 1997-98. During this period, area under tea of the garden went up by 27.47 hectares, an increase of 5.64 pc. During 1993-94 and 1994-95, the garden registered a maximum expansion of its area under tea. On the other hand yield per hectare of the garden went down by 45 kg during this period. As against an average yield of 1079 kg per hectare in 1990-91, it was 1034 kg per hectare in 1997-98, a downfall of nearly 4.17 pc. Unlike other indicators, price of tea of the garden went up sharply during the eight years. It registered a growth of 92.71 pc over the years. The price had been going up gradually till 1996-97, but in 1997-98 it went up sharply by 46.97 pc. It registered a negative growth of 11.5 pc in 1994-95. Further, the garden was extended with new plantation by 8.00, 14.50,4.00 and 4.15 hectares in 1992-93, 1993-94, 1994-95 and in 1996-97 respectively. In other years there was no extension plantation at all. One of the reasons behind poor yield rate and resultant poor operational result of the garden has been the availability of a large pc of tea bushes (62 pc) in age group of 50 to 100 years.

## TABLE –6. 8
## LOONGSOONG T.E.
## GROWTH PATTERN OF THE GARDEN
## 1990-91 TO 1997-98

| INDICATORS | 1990-91 | 1991-92 | 1992-93 | 1993-94 | 1994-95 | 1995-96 | 1996-97 | 1997-98 |
|---|---|---|---|---|---|---|---|---|
| Area under tea (Hectare) | 487.46 | 487.46 (0) | 487.46 (0) | 500.46 (2.7) | 514.12 (2.7) | 514.12 (0) | 514.12 (0) | 514.93 (0.2) |
| Yield (Kg/Hectare) | 1079 | 1138 (5.5) | 1177 (3.4) | 1412 (20.0) | 1194 (-15.4) | 983 (-17.7) | 1208 (22.9) | 1034 (-14.4) |
| Production (Kg) | 5,55,580 | 5,85,936 (5.5) | 6,06,296 (3.5) | 7,27,074 (19.9) | 6,14,956 (-15.4) | 5,05,969 (-17.7) | 6,21,827 (22.9) | 5,32,259 (-14.4) |
| Price (Rs/Kg) | 38.66 | 40.57 (4.9) | 42.52 (4.8) | 45.05 (6.0) | 39.87 (-11.5) | 47.96 (20.3) | 50.69 (5.7) | 74.50 (47.0) |
| Extension plantation (Hectare) | -- | -- | 8.00 | 14.5 | 4.00 | -- | 4.15 | -- |

*** Figures given in bracket indicate pc growth over previous years.**
**Source: Head Office, ATCL**

Going by the operational results of the garden over the years under the ownership of the Corporation ( Table 6.9 ) it is clear that the garden has been doing mixed business of profit and loss. It suffered losses in the years of 1980 to 1982 and again in 1986 to 1988-89 and in 1994-95 to 1995-96. It recorded a maximum profit of Rs 94,46,458.00 in the year 1997-98 and suffered a maximum loss of Rs 41,28,080.00 in the year 1995-96. Total balance of surplus of the garden up to 1997-98 was Rs. 2,86,63,739.00.

**TABLE – 6.9**
**LOONGSOONG T.E.**
**OPERATIONAL RESULTS SINCE TAKE OVER**
**( IN RUPEES )**

| Year | Surplus/Deficit (-) | Year | Surplus/Deficit (-) |
|---|---|---|---|
| 1976 | 23,62,811.00 | 1988-89 | (-) 31,50,167.00 |
| 1977 | 15,68,950.00 | 1989-90 | 6,91,030.00 |
| 1978 | 10,14,944.00 | 1990-91 | 46,13,897.00 |
| 1979 | 13,137.00 | 1991-92 | 29,04,016.00 |
| 1980 | (-) 6,33,512.00 | 1992-93 | 66,91,789.00 |
| 1981 | (-) 23,57,283.00 | 1993-94* | 56,01,140.00 |
| 1982 | (-) 2,11,103.00 | 1994-95* | (-) 29,45,309.00 |
| 1983 | 19,42,601.00 | 1995-96* | (-) 41,28,080.00 |
| 1984 | 18,35,277.00 | 1996-97* | 51,94,287.00 |
| 1985 | 4,78,347.00 | 1997-98* | 94,46,458.00 |
| 1986 | (-) 7,04,432.00 | **Total Surplus** | **2,86,63,739.00** |
| 1987 | (-) 15,65,057.00 | | |

*** Provisional**
**Source: Head Office, ATCL**

### 6.2.4 Rajabarrie T.E.

Since the year the garden was taken over by the Corporation, its annual production went down by more than 25,000 kg (Table 6.10), a negative growth of around 17.8 pc. At the same time annual average yield of the garden went down by around 244 kg, per hectare, a downfall of about 23.8 pc. However, during the said period, area under tea of the garden grew by 7.5 pc and employee strength grew by 32.4 pc. This high growth of employee strength has resulted into a phenomenal increase in employee area ratio. At the time of take over the garden was engaging

1.85 employees per hectare area under tea which has gone up by 23.2 pc to 2.28 employees per hectare of tea as on 1-1-1998.

**TABLE – 6.10**
**RAJABARRIE TEA ESTATE**
**PROGRESS OVER THE YEARS**

| Indicators | At the time of take over | As on 1.1.1998 |
|---|---|---|
| Employee strength | 256 | 339 (32.4) |
| Area under tea (Hectare) | 138.44 | 148.81 (7.5) |
| Production (Kg) | 1,42,000 | 1,16,757 (-17.8) |
| Yield (Kg/Hectare) | 1,026 | 782 (-23.7) |
| Employee-area ratio | 1.85 | 2.28 (23.2) |

*** Figures in bracket indicate pc growth over the years.**

**Source: Head Office, ATCL**

The growth pattern of the garden, regarding area under tea, yield and production is shown in Table 6.11. The garden depends on factories of the Corporation's nearby gardens for manufacturing tea, as it does not have a factory of its own. From the Table it is seen that during the period under study, area under tea of the garden rose marginally from 143.39 hectares in 1990-91 to 148.81 hectares in 1997-98. It rose form 143.39 hectares in 1990-91 to 148.44 in 1992-93 and again rose over previous years by merely 0.2 pc in 1997-98. Yield of the garden, on the other hand, rose by a maximum of 41.4 pc in 1993-94 over previous year. In all other years the growth was negative and as a whole during this period it went down by about 6 pc. The major reason behind this has been poor rate of extension plantation and availability of more than half of its plantation area in the uneconomic age group of tea bushes of 50 years or more. (Ref. Table 7.5). This is one of the major causes of poor operational performance of the garden. Like yield per hectare, production of the garden went up in 1993-94 and 1996-97 over respective previous years but in all other years the growth rate has been negative.

## TABLE – 6.11
## RAJABARRIE T.E.
## GROWTH PATTERN OF THE GARDEN
## 1990-91 TO 1997-98

| INDICATORS | 1990-91 | 1991-92 | 1992-93 | 1993-94 | 1994-95 | 1995-96 | 1996-97 | 1997-98 |
|---|---|---|---|---|---|---|---|---|
| Area under tea (Hectare) | 143.39 | 143.39 (0) | 148.44 (3.5) | 148.44 (0) | 148.44 (0) | 148.44 (0) | 148.44 (0) | 148.81 (0.2) |
| Yield (Kg/Hectare) | 834 | 788 ( -5.5) | 608 (-22.8) | 860 (41.4) | 784 (-8.8) | 711 (-9.3) | 894 (25.7) | 782 (-12.5) |
| Production (Kg) | 1,24,053 | 1,17,248 (-5.5) | 92,486 (-21.1) | 1,27,922 (38.3) | 1,16,692 (-8.8) | 1,05,806 (-9.3) | 1,33,097 (25.8) | 1,16,757 (-12.3) |
| Extension plantation (Hectare) | -- | -- | 7.75 | -- | -- | -- | 1.00 | 2.00 |

*** Figures given in bracket indicate pc growth over previous years.**
**Source: Head Office, ATCL**

This is one of those gardens of the Corporation, which has been suffering from losses for most of the years. In the initial years of 1975 to 1977, the garden could show profit, as indicated in Table 6.12, but for all other years it suffered losses. It suffered a maximum loss of Rs. 44,47,039.00 in the year 1995-96 and has earned a maximum profit of Rs 3,30,857.00 in the year 1977. Total deficit balance of the garden as on 1997-98 was Rs 3,12,62,306.00.

**TABLE – 6.12**
**RAJABARRIE TEA ESTATE**
**OPERATIONAL RESULTS SINCE TAKE OVER**
**( IN RUPEES )**

| Year | Surplus/Deficit (-) | Year | Surplus/Deficit (-) |
|---|---|---|---|
| 1974 | (-) 2,97,666.00 | 1987 | (-) 19,99,251.00 |
| 1975 | 24,606.00 | 1988-89 | (-) 15,80,274.00 |
| 1976 | 19,596.00 | 1989-90 | (-) 16,31,763.00 |
| 1977 | 3,30,857.00 | 1990-91 | (-) 11,83,140.00 |
| 1978 | (-) 1,34,714.00 | 1991-92 | (-) 19,11,957.00 |
| 1979 | (-) 2,93,658.00 | 1992-93 | (-) 28,70,527.00 |
| 1980 | (-) 10,19,228.00 | 1993-94* | (-) 21,18,423.00 |
| 1981 | (-) 9,08,318.00 | 1994-95* | (-) 28,03,727.00 |
| 1982 | (-) 9,49,468.00 | 1995-96* | (-) 44,47,039.00 |
| 1983 | (-) 2,54,663.00 | 1996-97* | (-) 9,39,895.00 |
| 1984 | (-) 2,64,643.00 | 1997-98* | (-) 40,43,139.00 |
| 1985 | (-) 6,61,917.00 | **Total ( Deficit)** | **(-) 3,12,62,306.00** |
| 1986 | (-) 13,23,924.00 | | |

*** Provisional**
**Source: Head Office, ATCL**

### 6.2.5 Deepling T.E.

Since its take over by the Corporation the garden has been witnessing both positive and negative growth. Table 6.13 shows the progress of the garden over the years under the Corporation. During these years employee strength of the garden went up by 7.9 pc from 1090 in 1975 to 1176 in 1997-98. On the other hand, area under tea went up by 6.7 pc during the same period. However, yield of the garden went down sharply by 35.4 pc, resulting into a downfall of production by 31 pc. During the period ratio of employee to area under tea rose by 1.2 pc.

**TABLE – 6.13**
**DEEPLING TEA ESTATE**
**PROGRESS OVER THE YEARS**

| Indicators | At The Time of Take Over | As on 1.1.1998 |
|---|---|---|
| Employee strength | 1,090 | 1,176 (7.9) |
| Area under tea (Hectare) | 312.41 | 333.29 (6.7) |
| Production (Kg) | 5,27,000 | 3,63,162 (-31.0) |
| Yield (Kg/Hectare) | 1,687 | 1,090 (-35.4) |
| Employee-area ratio | 3.49 | 3.53 (1.2) |

*** Figures given in bracket indicate pc growth over the years.**
**Source: Head Office, ATCL**

As seen form Table 6.14, during 1992-93 and again in 1995-96, the area under tea of the garden rose by 3 pc and 3.9 pc respectively, but in rest of the years, from 1990-91 to 1997-98 it either remained constant or went down over the respective previous years. Yield and hence, production of the garden went up in 1991-92, 1994-95 and from 1996-97 to 1997-98. But in all other years the growth was negative. As a whole the average yield of the garden went down by about 11 pc. This is mainly because of low extension plantation and lack of replantation work. It is also seen that about 41 pc of the total plantation is covered by uneconomic tea bushes of the age group of 50 years or more (Ref. Table 7.1). On the price front, the garden has been realising growing price except in the year 1994-95, when it registered a negative growth of 13.6 pc over 1993-94.

## TABLE – 6.14
## DEEPLING T.E.
## GROWTH PATTERN OF THE GARDEN
## 1990-91 TO 1997-98

| INDICATORS | 1990-91 | 1991-92 | 1992-93 | 1993-94 | 1994-95 | 1995-96 | 1996-97 | 1997-98 |
|---|---|---|---|---|---|---|---|---|
| Area under tea (Hectare) | 320.48 | 320.48 (0) | 329.98 (3.0) | 327.86 (-0.6) | 321.26 (-2.0) | 333.89 (3.9) | 333.89 (0) | 333.29 (-0.2) |
| Yield (Kg/Hectare) | 1229 | 1269 (3.3) | 1119 (-11.8) | 1098 (-1.9) | 1109 (1.0) | 1007 (-9.2) | 1078 (7.1) | 1090 (1.1) |
| Production (Kg) | 4,09,495 | 4,22,845 (3 3) | 3,72,843 (-11.8) | 3,65,797 (-1.9) | 3,69,594 (1.0) | 3,35,618 (-9.2) | 3,59,402 (7.1) | 3,63,162 (1.1) |
| Price (Rs/Kg) | 40.65 | 41.75 (2.7) | 44.19 (5.8) | 47.15 (6.7) | 40.73 (-13.6) | 51.81 (27.3) | 54.46 (5.1) | 78.18 (43.6) |
| Extension plantation (Hectare) | -- | 8.88 | 4.31 | 3.50 | 6.82 | 7.12 | -- | -- |

*** Figures given in bracket indicate pc growth over previous years.**
**Source: Head Office, ATCL**

For most of the years, the operational results of the garden, as shown in Table 6.15, indicate negative performance. Except for the initial years of 1976, 1977 and 1983 & 1984, the garden suffered losses for all other years. Its amount of loss has been increasing gradually and during 1995-96 it suffered a maximum loss of Rs 90,02,531.00. It is notable that in 1976 it registered a record maximum profit of Rs. 31,90,234.00 but could not sustain that in the latter years. Total operational deficit balance of the garden as on 1997-98 was Rs 4,70,99,264.00.

**TABLE – 6.15**
**DEEPLING TEA ESTATE**
**OPERATIONAL RESULTS SINCE TAKE OVER**
**( IN RUPEES )**

| Year | Surplus/Deficit (-) | Year | Surplus/Deficit (-) |
|---|---|---|---|
| 1976 | 31,90,234.00 | 1987 | (-) 16,85,704.00 |
| 1977 | 15,34,887.00 | 1988-89 | (-) 48,70,661.00 |
| 1978 | (-) 3,41,821.00 | 1989-90 | (-) 7,98,158.00 |
| 1979 | (-) 11,38,665.00 | 1990-91 | (-) 1,69,401.00 |
| 1980 | (-) 24,30,394.00 | 1991-92 | (-) 33,07,641.00 |
| 1981 | (-) 24,52,474.00 | 1992-93 | (-) 31,86,720.00 |
| 1982 | (-) 24,60,069.00 | 1993-94* | (-) 44,68,210.00 |
| 1983 | 1,62,925.00 | 1994-95* | (-) 88,31,691.00 |
| 1984 | 1,34,201.00 | 1995-96* | (-) 90,02,531.00 |
| 1985 | (-) 9,38,871.00 | 1996-97* | (-) 33,58,226.00 |
| 1986 | (-) 10,23,103.00 | 1997-98* | (-)16,57,172.00 |
| | | **Total ( Deficit)** | **(-) 4,70,99,264.00** |

*** Provisional**
**Source: Head Office, ATCL**

### 6.2.6 Naginijan T.E.

Since the change of ownership, there has been a positive growth of the garden's area under tea and employee strength. Over the years, as indicated in Table 6.16, area under tea of the garden went up by 13.1 pc and strength of employee went up by 11.1 pc. On the other hand yield and production went down by 16 pc and 5 pc respectively. Since the growth of employee strength has been less than the growth of area under tea, the garden registered a negative growth of employee area ratio by 1.8 pc.

**TABLE – 6.16**
**NAGINIJAN TEA ESTATE**
**PROGRESS OVER THE YEARS**

| Indicators | At the time of take over | As on 1.1.1998 |
|---|---|---|
| Employee strength | 963 | 1070 (11.1) |
| Area under tea (Hectare) | 351.06 | 397.19 (13.1) |
| Production (Kg) | 3,35,704 | 3,18,960 (-5.0) |
| Yield (Kg/Hectare) | 956 | 803 (-16.0) |
| Employee-area ratio | 2.74 | 2.69 (-1.8) |

*** Figures given in bracket indicate pc growth over the years.**
**Source: Head Office, ATCL**

Table 6.17 indicates the growth pattern of the garden for the last eight years span. During this period area under tea of the garden went up by 6.16 pc from 374.16 hectare to 397.19 hectare. Area under tea had been growing positively till 1995-96 but in the next year it remained stable and went down in the next year by 3.5 pc. Annual average yield per hectare of the garden, on the other hand, went down by around 19 pc during that period. It registered a positive growth in 1992-93 and 1993-94 but went down in all other years. In 1994-95, it registered a maximum downfall of 13.9 pc. It is mostly because of presents of old tea bushes of more than 50 years of age in around 61 pc of area, poor extension plantation and no replantation work under taken by the garden during this period. Production of the garden went down by around 19 pc, registering a negative growth in almost all the years. During the period, the garden has registered a maximum growth in price of its tea. It went up by 101.74 pc during the last eight years span. Only in 1994-95 its price went down by 16.1 pc.

## TABLE – 6.17
### NAGINIJAN T.E.
## GROWTH PATTERN OF THE GARDEN
## 1990-91 TO 1997-98

| INDICATORS | 1990-91 | 1991-92 | 1992-93 | 1993-94 | 1994-95 | 1995-96 | 1996-97 | 1997-98 |
|---|---|---|---|---|---|---|---|---|
| Area under tea (Hectare) | 374.16 | 379.47 (1.4) | 394.83 (4.0) | 395.87 (0.3) | 403.20 (1.9) | 411.43 (2.0) | 411.43 (0) | 397.19 (-3.5) |
| Yield (Kg/Hectare) | 993 | 933 (-6.0) | 942 (1.0) | 995 (5.6) | 857 (-13.9) | 844 (-1.5) | 835 (-1.1) | 803 (-3.8) |
| Production (Kg) | 3,94,602 | 3,70,501 (-6.1) | 3,74,010 (1.0) | 3,95,010 (5.6) | 3,40,300 (-13.9) | 3,35,124 (-1.5) | 3,31,597 (-1.4) | 3,18,960 (-3.8) |
| Price (Rs/Kg) | 38.04 | 39.75 (4.5) | 41.38 (4.1) | 47.73 (15.3) | 40.06 (-16.1) | 50.70 (26.6) | 51.81 (2.2) | 76.74 (48.2) |
| Extension plantation (Hectare) | 5.62 | -- | 29.50 | 4.60 | 5.00 | 4.00 | -- | -- |

*** Figures given in bracket indicate pc growth over previous years**
**Source: Head Office, ATCL**

Going by Table 6.18, it is seen that the garden has been suffering from losses in almost all the years. It could earn profit only during 1974 to 1976 and again in 1989-90. It suffered a maximum loss of Rs. 73,12,479.00 in the year 1995-96,and earned a maximum profit of Rs.11,21,250.00 in the year 1989-90. As on 1997-98 its total operational deficit was Rs. 4,49,15,961.00.

**TABLE – 6.18**

**NAGINIJAN TEA ESTATE**

**OPERATIONAL RESULTS SINCE TAKE OVER**

**(IN RUPEES )**

| Year | Surplus/Deficit (-) | Year | Surplus/Deficit (-) |
|---|---|---|---|
| 1973 | (-) 1,39,193.00 | 1986 | (-) 21,60,811.00 |
| 1974 | 3,65,855.00 | 1987 | (-) 27,01,801.00 |
| 1975 | 1,11,742.00 | 1988-89 | (-)43,80,982.00 |
| 1976 | 10,79,200.00 | 1989-90 | 11,21,250.00 |
| 1977 | (-)88,312.00 | 1990-91 | (-)1,48,567.00 |
| 1978 | (-)11,76,338.00 | 1991-92 | (-)26,99,911.00 |
| 1979 | (-)9,71,624.00 | 1992-93 | (-)21,52,205.00 |
| 1980 | (-)26,47,561.00 | 1993-94* | (-)14,65,493.00 |
| 1981 | (-)25,21,654.00 | 1994-95* | (-)68,10,424.00 |
| 1982 | (-)25,13,898.00 | 1995-96* | (-) 73,12,479.00 |
| 1983 | (-)9,99,803.00 | 1996-97* | (-)36,49,541.00 |
| 1984 | (-) 13,33,840.00 | 1997-98* | (-)25,87,784.00 |
| 1985 | (-)8,68,214.00 | **Total ( Deficit )** | **(-)4,49,15,961.00** |

*** Provisional**

**Source: Head Office, ATCL**

### 6.2.7 Sycotta T.E.

Over the years under the Corporation, the garden's yield and production have reduced drastically (Table-6.19). Yield has come down from 1247 kg per hectare at the time of take over to 765 kg per hectare as on 1.1.1998. On the other hand production went down by 27.79 pc. At the same time employee strength went up by 12.57 pc and area under tea went up even more by 19.27 pc. It resulted in a negative growth of employee –area ratio by 5.7 pc.

**TABLE – 6.19**
**SYCOTTA TEA ESTATE**
**PROGRESS OVER THE YEARS**

| Indicators | At the time of take over | As on 1.1.1998 |
|---|---|---|
| Employee strength | 2172 | 2445 (12.57) |
| Area under tea (Hectare) | 728.55 | 868.97 (19.27) |
| Production (Kg) | 9,08,574 | 6,65,107 (-27.79) |
| Yield (Kg/Hectare) | 1,247 | 765 (-38.63) |
| Employee-area ratio | 2.98 | 2.81 (-5.7) |

*** Figures given in bracket indicate pc growth over the years.**
**Source: Head Office, ATCL**

Table 6.20 indicates the growth pattern of the garden over the period from 1990-91 to 1997-98. During this period area under tea of the garden went up by around 9.5 pc, registering a low but steady growth in all the years. On the other hand, production of the garden, during that period, went down by around 7.9 pc. It went down by 16.3 pc in 1994-95 and 17.5 pc in 1997-98. Major reason attributing to this downfall may be the low yield rate of the garden, which went down from 831 kg per hectare in 1990-91 to 765 kg per hectare in 1997-98, a down fall of around 8 pc. It is also seen during study that around 36 pc of its plantation area is covered by uneconomic tea bushes of the age group of 50 or more years (Ref. Table 7.5). However, the garden was extended by 140.30 hectare during the period from 1990-91 to 1995-96. On the other hand, price of tea of the garden has maintained a steady growth over all the years, except in 1992-93 and 1994-95, when it registered a negative growth of 1.8 pc and 11.1 pc respectively. The overall growth of price of the garden during that period has been around 75 pc.

## TABLE – 6.20
### SYCOTTA T.E.
### GROWTH PATTERN OF THE GARDEN
### 1990-91 TO 1997-98

| INDICATORS | 1990-91 | 1991-92 | 1992-93 | 1993-94 | 1994-95 | 1995-96 | 1996-97 | 1997-98 |
|---|---|---|---|---|---|---|---|---|
| Area under tea (Hectare) | 793.78 | 805.49 (1.5) | 810.35 (0.6) | 819.40 (1.1) | 828.42 (1.1) | 867.86 (4.8) | 867.86 (0) | 868.97 (0.1) |
| Yield (Kg/Hectare) | 831 | 921 (10.8) | 974 (5.8) | 1041 (6.9) | 871 (-16.3) | 878 (0.8) | 928 (5.7) | 765 (-17.6) |
| Production (Kg) | 7,22,034 | 8,00,463 (10.9) | 8,46,792 (5.8) | 9,04,627 (6.8) | 7,57,232 (-16.3) | 7,62,549 (0.7) | 8,06,546 (5.8) | 6,65,107 (-17.5) |
| Price (Rs/Kg) | 42.21 | 43.85 (3.9) | 43.06 (-1.8) | 52.14 (21.1) | 46.33 (-11.1) | 50.73 (9.5) | 55.03 (8.5) | 73.80 (34.1) |
| Extension plantation (Hectare) | 29.05 | 11.90 | 41.23 | 11.80 | 34.30 | 12.02 | -- | -- |

*** Figures given in bracket indicate pc growth over previous years.**
**Source: Head Office, ATCL**

The financial performance of the garden under the Corporation has not been satisfactory. As shown in Table 6.21, except for the initial years, from 1973 to 1976 and again from 1990-91 to 1993-94,the garden suffered losses in all the years. It earned a maximum profit of Rs. 44,72,030.00 in 1993-94 and recorded a maximum loss of Rs 1,01,36,857.00 in the year 1988-89 Total deficit balance of the garden as on 1997-98 was Rs. 5,80,21,088.00. One of the prominent reasons behind the operational deficit of the gardens of the Corporation has been low average yield per hectare of land and realization of low unit price on tea.

**TABLE – 6.21**
**SYCOTTA TEA ESTATE**
**OPERATIONAL RESULTS SINCE TAKE OVER**
**( IN RUPEES )**

| Year | Surplus/Deficit (-) | Year | Surplus/Deficit (-) |
|---|---|---|---|
| 1973 | 4,15,044.00 | 1986 | (-) 42,56,380.00 |
| 1974 | 17,14,265.00 | 1987 | (-) 73,77,056.00 |
| 1975 | 3,07,460.00 | 1988-89 | (-) 1,01,36,857.00 |
| 1976 | 27,40,214.00 | 1989-90 | (-) 26,15,788.00 |
| 1977 | (-) 1,15,593.00 | 1990-91 | 14,05,969.00 |
| 1978 | (-) 26,78,450.00 | 1991-92 | 7,08,926.00 |
| 1979 | (-) 18,98,132.00 | 1992-93 | 4,16,880.00 |
| 1980 | (-) 51,61,869.00 | 1993-94* | 44,72,030.00 |
| 1981 | (-) 64,69,193.00 | 1994-95* | (-) 60,00,381.00 |
| 1982 | (-) 41,18,551.00 | 1995-96* | (-)93,01,769.00 |
| 1983 | (-) 4,88,448.00 | 1996-97* | 2,59,424.00 |
| 1984 | (-) 48,749.00 | 1997-98* | (-)59,48,053.00 |
| 1985 | (-) 38,46,030.00 | **Total ( Deficit)** | **(-) 5,80,21,088.00** |

*** Provisional**
**Source: Head Office, ATCL**

### 6.2.8 Cinnamora T.E.

From Table 6.22 it seen that the garden has been performing poorly since it was taken over by the Corporation. During this period it witnessed a negative growth in all the key areas of performance. Its employee strength went down by 9.4 pc and area under tea went down by 4.03 pc. This has resulted into 5.47 pc down fall of employee- area ratio of the garden. Against a production of 9,29,735 kg of tea in 1973, when the garden was taken over by the Corporation, it produced 6,27,402 kg of

tea in 1997-98. It means a downfall of about 30 pc. On the other hand average yield per hectare of area of the garden went down by more then 5 pc over the years.

**TABLE – 6.22**
**CINNAMORA TEA ESTATE**
**PROGRESS OVER THE YEARS**

| Indicators | At The Time of Take Over | As on 1.1.1998 |
|---|---|---|
| Employee strength | 2490 | 2256 (-9.40) |
| Area under tea (Hectare) | 756.05 | 725.59 (-4.03) |
| Production (Kg) | 9,29,735 | 6,27,402 (-32.52) |
| Yield (Kg/Hectare) | 1,230 | 865 (-29.70) |
| Employee-area ratio | 3.29 | 3.11 (-5.47) |

*** Figures given in bracket indicate pc growth over the years.**

**Source: Head Office, ATCL**

During the last eight years of 1990-91 to 1997-98, there has been very little development of the garden (Table 6.23). Except for the years from 1993-94 to 1995-96, when area under tea of the garden went up over their respective previous years, in all other years it was negative. Yield of the garden during that period has come down form 1017 kg per hectare in 1990-91 to 865 kg per hectare in 1997-98. It came down heavily by 18.6 pc in 1994-95 and again by 12.8 pc in 1997-98. Poor yield rate of the Corporation has been responsible to a greater extend for its negative operational result. It is seen from the table that large extension plantation work was undertaken in the garden in the year 1993-94 and 1994-95. However, about 37 pc of its plantation area are still covered by tea bushes of the age group of 50 years or more (Ref. Table 7.5). Production of the garden during that period also went down by 2.4 pc, 18.6 pc, and 12.9 pc in 1993-94, 1994-95, and 1997-98 respectively. Unlike other factors, as indicated in Table 6.23, the price of the garden has been growing sharply during the period. Only during 1992-93 and 1994-95 it went down marginally by 0.1 pc and 3.8 pc respectively.

## TABLE – 6.23
## CINNAMORA T.E.
## GROWTH PATTERN OF THE GARDEN
## 1990-91 TO 1997-98

| INDICATORS | 1990-91 | 1991-92 | 1992-93 | 1993-94 | 1994-95 | 1995-96 | 1996-97 | 1997-98 |
|---|---|---|---|---|---|---|---|---|
| Area under tea (Hectare) | 685.20 | 683.64 (-0.2) | 683.21 (-0.1) | 686.86 (0.5) | 721.72 (5.1) | 743.74 (3.1) | 743.74 (0) | 725.59 (-2.4) |
| Yield (Kg/Hectare) | 1017 | 1085 (6.7) | 1134 (4.5) | 1107 (-2.4) | 901 (-18.6) | 903 (0.2) | 992 (9.9) | 865 (-12.8) |
| Production (Kg) | 7,37,964 | 7,87,667 (6.7) | 8,22,644 (4.4) | 8,02,957 (-2.4) | 6,53,471 (-18.6) | 6,55,463 (0.3) | 7,20,024 (9.8) | 6,27,402 (-12.9) |
| Price (Rs/Kg) | 36.92 | 43.40 (17.6) | 43.36 (-0.1) | 50.37 (16.2) | 48.48 (-3.8) | 52.43 (8.1) | 55.36 (5.6) | 78.45 (41.7) |
| Extension plantation (Hectare) | -- | 6.20 | 3.62 | 25.62 | 30.00 | -- | -- | 7.00 |

*** Figures given in bracket indicate pc growth over previous years.**
**Source: Head Office, ATCL**

Over the years under the Corporation the garden has been showing both positive and negative operational results (Table-6.24). It earned profit in 1974 to 1977, 1983 to 1984, 1989-90 and 1991-92 to 1993-94.But in all other years it suffered losses. The garden has suffered a maximum loss of Rs. 91,65,111.00 in 1995-96 and has recorded a maximum profit of Rs. 52,12,715.00 in 1983. As on 1997-98 its total deficit balance was Rs.4, 30,86,285.00.

**TABLE – 6.24**
**CINNAMORA TEA ESTATE**
**OPERATIONAL RESULTS SINCE TAKE OVER**
**( IN RUPEES )**

| Year | Surplus/Deficit (-) | Year | Surplus/Deficit (-) |
|---|---|---|---|
| 1973 | (-) 3,00,147.00 | 1986 | (-) 87,44,490.00 |
| 1974 | 8,98,135.00 | 1987 | (-) 60,00,853.00 |
| 1975 | 4,49,638.00 | 1988-89 | (-) 68,60,122.00 |
| 1976 | 48,19,211.00 | 1989-90 | 24,44,110.00 |
| 1977 | 3,00,124.00 | 1990-91 | (-) 51,73,620.00 |
| 1978 | (-) 30,05,058.00 | 1991-92 | 3,62,890.00 |
| 1979 | (-) 11,82,632.00 | 1992-93 | 21,73,620.00 |
| 1980 | (-) 57,37,547.00 | 1993-94* | 26,81,716.00 |
| 1981 | (-) 57,21,799.00 | 1994-95* | (-) 81,45,179.00 |
| 1982 | (-) 29,51,844.00 | 1995-96* | (-)91,65,111.00 |
| 1983 | 52,12,715.00 | 1996-97* | 38,91,674.00 |
| 1984 | 4,37,764.00 | 1997-98* | 12,75,677.00 |
| 1985 | (-) 50,45,355.00 | **Total ( Deficit)** | **(-) 4,30,86,285.00** |

*** Provisional**
**Source: Head Office, ATCL**

### 6.2.9 Isabheel T.E.

Table 6.25 shows the progress made by the garden under the Corporation. It is seen from the Table that over the years employee strength and area under tea of the garden went up by 13.87 pc and 5.06 pc respectively. This high rate of growth of employee strength has resulted in an increase of employee area ratio by 8.57 pc. On the other hand yield per hectare of the garden went down by 22.46 pc, which has resulted in a downfall of 18.52 pc in average production of tea in the garden

**TABLE – 6.25**
**ISABHEEL TEA ESTATE**
**PROGRESS OVER THE YEARS**

| Indicators | At The Time of Take Over | As on 1.1.1998 |
|---|---|---|
| Employee strength | 952 | 1084 (13.87) |
| Area under tea (Hectare) | 544.25 | 571.81 (5.06) |
| Production (Kg) | 5,91,000 | 4,81,000 (-18.52) |
| Yield (Kg/Hectare) | 1,086 | 842 (-22.46) |
| Employee-area ratio | 1.75 | 1.90 (8.57) |

*** Figures given in bracket indicate pc growth over the years.**

**Source: Head Office, ATCL**

Growth pattern of the garden over the last eight years span has been shown in Table 6.26. It is seen that during this period the garden has been maintaining a stable growth in area under tea. It went up by 6.64 pc over the last eight years, registering the highest growth of area under tea in 1993-94. During the years production of the garden went down by around 3.5 pc. The garden registered the highest growth of production in 1992-93 and recorded the lowest production in 1994-95. Like production, yield per hectare of the garden also went down during this period. It went down to 842 kg. per hectare in 1997-98 from 873 kg per hectare in 1990-91, a downfall of around 3.4 pc. Main reason behind this drop has been the presence of tea bushes in the age group of 50 years or more in around 61 pc of its total plantation area (Ref. Table 7.5). But no replantation work was done in the garden during this period. From Table 6.26 it is also seen that the garden under took extension plantation work to limited extent during this period. On the other hand, price of tea of the garden recorded a growth of more than 103 pc from Rs. 36.38 in 1990-91 to Rs. 74.07 in 1997-98. During this period it registered the highest growth of. 52.2 pc in 1997-98 and lowest growth of (-) 16.9 pc in 1994-95 over their respective years.

## TABLE – 6.26
## ISABHEEL T.E.
## GROWTH PATTERN OF THE GARDEN
## 1990-91 TO 1997-98

| INDICATORS | 1990-91 | 1991-92 | 1992-93 | 1993-94 | 1994-95 | 1995-96 | 1996-97 | 1997-98 |
|---|---|---|---|---|---|---|---|---|
| Area under tea (Hectare) | 536.23 | 536.23 (0) | 536.23 (0) | 551.23 (2.8) | 556.23 (0.9) | 566.38 (1.8) | 566.38 (0) | 571.81 (1.0) |
| Yield (Kg/Hectare) | 873 | 776 (-11.1) | 947 (22.0) | 973 (2.7) | 853 (-12.0) | 798 (-6.4) | 852 (6.8) | 842 (-1.2) |
| Production (Kg) | 4,99,079 | 4,44,000 (-11.0) | 5,41,419 (21.9) | 5,56,437 (2.8) | 4,87,519 (-12.4) | 4,56,328 (-6.4) | 4,87,225 (6.8) | 4,81,523 (-1.2) |
| Price (Rs/Kg) | 36.38 | 35.53 (-2.3) | 41.09 (15.6) | 44.24 (7.7) | 36.77 (-16.9) | 47.41 (28.9) | 48.67 (2.7) | 74.07 (52.2) |
| Extension plantation (Hectare) | -- | -- | 11.00 | 5.00 | 10.15 | 4.70 | 1.13 | -- |

*** Figures given in bracket indicate pc growth over previous years.**
**Source: Head Office, ATCL**

Since the take over of the garden by the Corporation, it has been showing mixed financial performance. During 1977,1982 to 1985, 1989-90 to 1990-91, 1992-93 to 1993-94 and in 1996-97 to 1997-98 it earned profit and in rest of the years it suffered loss. It recorded a maximum profit of Rs 1,00,88,431.00 in 1997-98 and a maximum loss of Rs. 38,82,073.00 in 1994-95. As on 1997-98 the total surplus balance of the garden was Rs 2,58,52,242.00. Table 6.27 indicates operational results of the garden since it was taken over by the Corporation.

**TABLE – 6.27**
**ISABHEEL TEA ESTATE**
**OPERATIONAL RESULTS SINCE TAKE OVER**
**(IN RUPEES )**

| Year | Surplus/Deficit (-) | Year | Surplus/Deficit (-) |
|---|---|---|---|
| 1977 | 23,17,060.00 | 1988-89 | (-) 15,53,334.00 |
| 1978 | (-) 5,68,849.00 | 1989-90 | 58,51,460.00 |
| 1979 | (-) 50,384.00 | 1990-91 | 23,35,554.00 |
| 1980 | (-) 5,18,002.00 | 1991-92 | (-) 13,64,802.00 |
| 1981 | (-) 6,70,060.00 | 1992-93 | 31,73,628.00 |
| 1982 | 4,00,165.00 | 1993-94* | 40,44,051.00 |
| 1983 | 6,57,054.00 | 1994-95* | (-) 38,82,073.00 |
| 1984 | 14,48,724.00 | 1995-96* | (-) 7,93,353.00 |
| 1985 | 2,67,719.00 | 1996-97* | 60,59,307.00 |
| 1986 | (-) 6,37,936.00 | 1997-98* | 1,00,88,431.00 |
| 1987 | (-) 7,52,118.00 | **Total (Surplus)** | **2,58,52,242.00** |

*** Provisional**
**Source: Head Office, ATCL.**

### 6.2.10 Longai T.E.

Ever since the garden had been taken over by the Corporation, the yield per hectare and consequently production has gone down by 35.9 pc and 24.4 pc respectively (Table-6.28). During this period, area under tea of the garden rose by 18.25 pc from 627.59 hectare to 742.13 hectare. On the other hand, employee strength of the garden went down by 30.62 pc, from 1522 to 1056. It resulted in lowering of employee area ratio by 41.56 pc, from 2.43 persons per hectare to 1.42 persons per hectare.

**TABLE – 6.28**
**LONGAI TEA ESTATE**
**PROGRESS OVER THE YEARS**

| Indicators | At The Time of Take Over | As on 1.1.1998 |
|---|---|---|
| Employee strength | 1,522 | 1,056 (-30.62) |
| Area under tea (Hectare) | 627.59 | 742.13 (18.25) |
| Production (Kg) | 7,75,000 | 5,87,903 (-24.14) |
| Yield (Kg/Hectare) | 1,235 | 792 (-35.9) |
| Employee-area ratio | 2.43 | 1.42 (-41.56) |

*** Figures given in brackets indicate pc growth over the years.**
**Source: Head Office, ATCL**

The growth pattern of the garden during the last eight years from 1990-91 to 1997-98 is shown in Table 6.29. During that period area under tea has been growing positively and it went up from 678.73 hectares in 1990-91 to 742.13 hectares in 1997-98. Yield, on the other hand, has gone down in most of the periods over the previous years, resulting in a decrease of 131 kg from 923 kg per hectare in 1990-91 to 792 kg in 1997-98. Like yield per hectare, production of the garden has also been declining gradually. It registered a negative growth of 2.0 pc, 7.7 pc, 3.4 pc and 11.6 pc in 1991-92,1992-93, 1994-95, and 1995-96 over the respective previous years. During this period the price of tea of the garden rose in almost all the years except in 1991-92 and 1994-95, when it registered a negative growth of 5.1 pc and 17.8 pc over their respective previous years. From the table it is seen that the garden was extended in 1995-96 by 18.91 hectare of land. It is noteworthy that about 82 pc of its total plantation area is covered by tea bushes of the age group of 50 years or more (Ref. Table 7.5). This has been a prime cause of low average yield of the garden.

## TABLE – 6.29
## LONGAI T.E.
## GROWTH PATTERN OF THE GARDEN
## 1990-91 TO 1997-98

| INDICATORS | 1990-91 | 1991-92 | 1992-93 | 1993-94 | 1994-95 | 1995-96 | 1996-97 | 1997-98 |
|---|---|---|---|---|---|---|---|---|
| Area under tea (Hectare) | 678.73 | 690.58 (1.8) | 694.84 (0.6) | 712.33 (2.5) | 726.36 (2.0) | 746.71 (2.8) | 746.71 (0) | 742.13 (-0.6) |
| Yield (Kg/Hectare) | 923 | 904 (-2.1) | 835 (-7.6) | 915 (9.6) | 884 (-3.4) | 782 (-11.5) | 790 (1.0) | 792 (0.3) |
| Production (Kg) | 6,84,747 | 6,70,884 (-2.0) | 6,19,420 (-7.7) | 6,79,032 (9.6) | 6,56,054 (-3.4) | 5,80,208 (-11.6) | 5,86,500 (1.1) | 5,87,903 (0.2) |
| Price (Rs/Kg) | 38.57 | 36.61 (-5.1) | 40.21 (9.8) | 42.62 (6.0) | 35.04 (-17.8) | 46.27 (32.0) | 48.39 (4.6) | 70.96 (46.6) |
| Extension plantation (Hectare) | -- | 2.20 | 8.80 | 1.10 | 13.33 | 18.91 | -- | -- |

*** Figures given in bracket indicate pc growth over previous years.**
**Source: Head Office, ATCL**

During the period under the Corporation, the garden has been showing both positive as well as negative financial results. As seen from Table 6.30, during 1977 to 1979, 1983 to 1984, 1986, and 1989-90 to 1993-94 the garden earned profits and suffered losses in the rest of the years. It suffered a maximum loss of Rs. 57,66,642.00 in 1994-95 and registered a maximum profit of Rs 2,34,69,564.00 in 1997-98. As on 1997-98, total surplus balance of the garden was Rs. 4,79,00,207.00.

**TABLE – 6.30**
**LONGAI TEA ESTATE**
**OPERATIONAL RESULTS SINCE TAKE OVER**
**(IN RUPEES )**

| Year | Surplus/Deficit (-) | Year | Surplus/Deficit (-) |
|---|---|---|---|
| 1977 | 23,39,618.00 | 1988-89 | (-) 21,54,311.00 |
| 1978 | 6,74,824.00 | 1989-90 | 59,22,775.00 |
| 1979 | 7,84,877.00 | 1990-91 | 62,47,423.00 |
| 1980 | (-) 1,50,775.00 | 1991-92 | 18,61,405.00 |
| 1981 | (-) 5,63,518.00 | 1992-93 | 18,69,500.00 |
| 1982 | (-) 5,75,637.00 | 1993-94* | 32,58,345.00 |
| 1983 | 43,25,028.00 | 1994-95* | (-) 57,66,642.00 |
| 1984 | 24,40,465.00 | 1995-96* | (-) 14,44,257.00 |
| 1985 | (-) 14,05,671.00 | 1996-97* | 77,48,327.00 |
| 1986 | 10,06,215.00 | 1997-98* | 2,34,69,564.00 |
| 1987 | (-) 19,87,347.00 | **Total (Surplus)** | **4,79,00,207.00** |

*** Provisional**

**Source: Head Office, ATCL**

### 6.2.11 Bholaguri T.E.

Except the area under tea, which has gone down from 113.67 hectares to 109.00 hectares, the garden under the Corporation has grown positively over the years. As indicated in Table 6.31, Employee strength of the garden rose from 130 to 226, thereby increasing by 73.85 pc over the years. Production of the garden, on the other hand, rose by 7.35 pc and yield per hectare went up by 9.9 pc. Since area under tea of the garden gone down by 4.11 pc and employee strength went up sharply, the employee-area ratio consequently went up by a whooping 81.58 pc.

**TABLE – 6.31**
**BHOLAGURI TEA ESTATE**
**PROGRESS OVER THE YEARS**

| Indicators | At The Time of Take Over | As on 1.1.1998 |
|---|---|---|
| Employee strength | 130 | 226 (73.85) |
| Area under tea (Hectare) | 113.67 | 109.00 (-4.11) |
| Production (Kg) | ** 1,57,620 | ** 1,69,202 (7.35) |
| Yield (Kg/Hectare) | 1,387 | 1,524 (9.9) |
| Employee-area ratio | 1.14 | 2.07 (81.58) |

**** Converted from green leaf figure**

*** Figures given in bracket indicate pc growth over the years.**

**Source: Head Office, ATCL**

During 1990-91 to 1997-98, as shown in Table 6.32, area under tea of the garden went up marginally over the respective pervious years except in 1997-98,when it went down by 3.8 pc over 1996-97. Throughout the period it went up from 100.57 hectares to 109.00 hectares. During the period, yield per hectare went up from 1453 kg to 1524 kg. It registered a negative growth of 6.9 pc, 0.1 pc, 2.0 pc and 8.9 pc during 1991-92,1993-94,1994-95 and 1995-96 respectively. It is located in the high yielding tea belt of the State and average yield per hectare of the garden has been highest in the Corporation. However, this is the smallest ( in hectares) of the gardens of ATCL. On the other hand its production went up from 1,58,342 kg in 1990-91 to 1,69,202 Kg in 1997-98. The data on price of tea of the garden is not available, as the garden does not produce tea of its own separately. It does not have a factory of its own. It is seen that the garden was extended by 1.75 hectare in 1991-92 and 7.25 hectare, 4.00 hectare, 3.5 hectare, 2.00 hectare in 1993-94, 1994-95, and 1995-96 respectively.

# TABLE – 6.32
# BHOLAGURI T.E.
# GROWTH PATTERN OF THE GARDEN
# 1990-91 TO 1997-98

| INDICATORS | 1990-91 | 1991-92 | 1992-93 | 1993-94 | 1994-95 | 1995-96 | 1996-97 | 1997-98 |
|---|---|---|---|---|---|---|---|---|
| Area under tea (Hectare) | 100.57 | 100.57 (0) | 101.84 (1.3) | 104.24 (2.4) | 104.24 (0) | 113.25 (8.6) | 113.25 (0) | 109.00 (-3.8) |
| Yield (Kg/Hectare) | 1,453 | 1,353 (-6.9) | 1,607 (18.8) | 1,606 (-0.1) | 1,574 (-2.0) | 1,434 (-8.9) | 1,480 (3.2) | 1,524 (3.0) |
| Production (Kg) | 1,58,342 | 1,47,521 (-6.8) | 1,75,180 (18.7) | 1,75,055 (-0.1) | 1,71,540 (-2.0) | 1,56,276 (-8.9) | 1,61,337 (3.2) | 1,69,202 (4.9) |
| Extension plantation (Hectare) | -- | 1.75 | -- | 7.25 | 4.00 | 3.50 | 2.00 | -- |

*** Figures given in bracket indicate pc growth over previous years.**
**Source: Head Office, ATCL**

In comparison to most other gardens of the Corporation, Bholaguri has been doing good business, which is evidenced from its annual operational results, as given in Table 6.33. It is seen that except in 1973, 1979 to 1984,1988-89 and 1995-96, the garden earned profits in rest of the years up to 1997-98. It recorded the maximum profit of Rs. 10,43,513.00 in the year 1993-94 and suffered the record loss of Rs 8,90,345.00 in 1995-96. Total surplus balance of the garden up to 1997-98 was Rs 22, 17,377.00

**TABLE – 6.33**
**BHOLAGURI TEA ESTATE**
**OPERATIONAL RESULTS SINCE TAKE OVER**
**( IN RUPEES )**

| Year | Surplus/Deficit (-) | Year | Surplus/Deficit (-) |
|---|---|---|---|
| 1973 | (-) 38,675.00 | 1986 | 1,19,760.00 |
| 1974 | 1,80,366.00 | 1987 | 30,280.00 |
| 1975 | 1,27,617.00 | 1988-89 | (-) 3,94,737.00 |
| 1976 | 1,66,290.00 | 1989-90 | 1,03,497.00 |
| 1977 | 3,25,091.00 | 1990-91 | 7,86,484.00 |
| 1978 | 4,49,312.00 | 1991-92 | 7,45,579.00 |
| 1979 | (-) 5,95,230.00 | 1992-93 | 1,92,735.00 |
| 1980 | (-) 4,30,477.00 | 1993-94* | 10,43,513.00 |
| 1981 | (-) 6,02,997.00 | 1994-95* | 4,75,439.00 |
| 1982 | (-) 6,62,368.00 | 1995-96* | (-) 8,90,345.00 |
| 1983 | (-) 7,59,351.00 | 1996-97* | 7,83,963.00 |
| 1984 | (-) 4,09,846.00 | 1997-98* | 8,62,359.00 |
| 1985 | 6,09,108.00 | **Total (Surplus)** | **22,17,377.00** |

*** Provisional**

**Source: Head Office, ATCL**

### 6.2.12 Negheriting T.E.

The garden has made positive growth in the five key areas as shown in Table 6.34. During the years under the Corporation the employee strength of the garden went up by 24.92 pc from 999 to 1,248. Area under tea at the same time went up by 9.11 pc from 507.36 hectares to 553.60 hectares. Moreover yield per hectare and production of the garden went up by 26.0 pc and 37.48 pc respectively. On the other hand employee-area ratio, i.e, employment of persons, including staff and labour, daily rated & monthly rated, per hectare of area under tea, has also gone up by 14.21pc from 1.97 persons per hectare to 2.25 persons per hectare.

**TABLE – 6.34**
**NEGHERITING TEA ESTATE**
**PROGRESS OVER THE YEARS**

| Indicators | At The Time of Take Over | As on 1.1.1998 |
|---|---|---|
| Employee strength | 999 | 1,248 (24.92) |
| Area under tea (Hectare) | 507.36 | 553.60 (9.11) |
| Production (Kg) | 3,03,488 | 4,17,244 (37.48) |
| Yield (Kg/Hectare) | 598 | 754 (26.0) |
| Employee-area ratio | 1.97 | 2.25 (14.21) |

*** Figures given in bracket indicate pc growth over the years.**
**Source: Head Office, ATCL.**

As seen in Table 6.35, during the period from 1990-91 to 1997-98, except for the years 1995-96. &1997-98, the area under tea of the garden has grown positively. It went up to 553.60 hectares in 1997-98 form 524.07 hectares in 1990-91. Yield per hectare of the garden went down heavily in 1994-95 and 1997-98 though there had been marginal growth in it in other years. As a result of that it came down from 773 kg in 1990-91 to 754 kg per hectare in 1997-98. Like yield, production of the garden went down from 4, 28,162 kg in 1990-91 to 4,17,244 kg in 1997-98. Unlike yield and production, price fetched on tea of the garden went up from Rs. 37.25 in 1990-91 to Rs. 75.75 in 1997-98. However, it went down marginally in 1994-95 and 1996-97 over previous years. It is seen from the table that the garden has taken up large extension plantation work during that period. However, despite that a major portion of its total plantation area (59pc) is still under occupation of tea bushes of the age group of 50 years or more (Ref. Table 7.5). This has mainly been responsible for low yield rate of the garden and resultant negative operational results.

## TABLE – 6.35
## NEGHERITING T.E.
## GROWTH PATTERN OF THE GARDEN
## 1990-91 TO 1997-98

| INDICATORS | 1990-91 | 1991-92 | 1992-93 | 1993-94 | 1994-95 | 1995-96 | 1996-97 | 1997-98 |
|---|---|---|---|---|---|---|---|---|
| Area under tea (Hectare) | 534.07 | 540.85 (1.3) | 577.85 (6.8) | 580.35 (0.4) | 589.60 (1.6) | 589.17 (-0.1) | 589.17 (0) | 553.60 (-6.0) |
| Yield (Kg/Hectare) | 773 | 800 (3.5) | 824 (3.0) | 861 (4.5) | 666 (-22.6) | 672 (0.9) | 849 (26.3) | 754 (-11.2) |
| Production (Kg) | 428162 | 443117 (3.5) | 456136 (2.9) | 476906 (4.6) | 368702 (-22.7) | 371762 (0.8) | 470061 (26.4) | 417244 (-11.2) |
| Price (Rs/Kg) | 37.25 | 40.01 (7.4) | 41.44 (3.6) | 46.68 (12.6) | 46.22 (-1.0) | 50.64 (9.6) | 49.67 (-1.9) | 75.75 (52.5) |
| Extension plantation (Hectare) | -- | 2.00 | 20.83 | 5.89 | 9.35 | 15.57 | 12.96 | 15.71 |

*** Figures given in bracket indicate pc growth over previous years.**
**Source: Head Office, ATCL**

As the data on operational results could not be made available separately, the financial performance of Negheriting, Rungamatty and Messamara T.Es are shown jointly in Table 6.36. Going through the Table it can easily be observed that every year these gardens have been depending on outside sources of fund for carrying out their business. As on 1997-98 total deficit balance of these gardens were Rs. 12,29,89,610.00. They have earned profit only in the year 1989-90 and in 1997-98 when the balance sheet figure showed surplus of Rs. 58,300.00 and Rs. 18,64,161.00 respectively. They have suffered a record loss of Rs 1,61,83,601.00 in the year 1994-95.

**TABLE – 6.36**
**NEGHERITING, RUNGAMATTY, MESSAMARA TEA ESTATES**
**OPERATIONAL RESULTS SINCE TAKE OVER**
**( IN RUPEES )**

| Year | Surplus/Deficit (-) | Year | Surplus/Deficit (-) |
|---|---|---|---|
| 1969-77 | (-) 33,70,436.00 | 1988-89 | (-) 95,06,701.00 |
| 1978 | (-) 43,38,464.00 | 1989-90 | 58,300.00 |
| 1979 | (-) 46,85,417.00 | 1990-91 | (-)5,61,314.00 |
| 1980 | (-) 68,79,097.00 | 1991-92 | (-) 56,16,961.00 |
| 1981 | (-) 82,41,307.00 | 1992-93 | (-) 44,74,623.00 |
| 1982 | (-) 66,01,986.00 | 1993-94* | (-) 1,93,426.00 |
| 1983 | (-) 75,70,045.00 | 1994-95* | (-) 1,61,83,601.00 |
| 1984 | (-) 50,88,434.00 | 1995-96* | (-) 1,53,67,130.00 |
| 1985 | (-) 55,56,396.00 | 1996-97* | (-)40,30,280.00 |
| 1986 | (-) 75,30,726.00 | 1997-98* | 18,64,161.00 |
| 1987 | (-) 91,15,726.00 | **Total (Deficit)** | **(-) 12,29,89,610.00** |

*** Provisional**

**Source: Head Office, ATCL**

### 6.2.13 Rungamatty T.E.

Since the time of take over of the garden by the Corporation, its employee strength has increased by 9.95 pc, from 734 to 807.During this period area under tea of the garden has increased by 19.76 PC, from 363.72 hectares to 435.60 hectares. Garden's yield per hectare of area under tea went up by 44.9 pc from 486 kg to 704 kg. On the other hand production of the garden went up by 74.21 pc, from 1,76,889 kg to 3,08,153 kg. As the growth of area under tea has been more than the growth of employee strength, there has been a negative growth of 8.42 pc of employee-area ratio

from 2.02 persons per hectare of area under tea to 1.85 persons per hectare. Table 6.37 depicts the progress of the garden over the years under the Corporation.

**TABLE – 6.37**
**RUNGAMATTY TEA ESTATE**
**PROGRESS OVER THE YEARS**

| Indicators | At The Time of Take Over | As on 1.1.1998 |
|---|---|---|
| Employee strength | 734 | 807 (9.95) |
| Area under tea (Hectare) | 363.72 | 435.60 (19.76) |
| Production (Kg) | 1,76,889 | 3,08,153 (74.21) |
| Yield (Kg/Hectare) | 486 | 704 (44.9) |
| Employee-area ratio | 2.02 | 1.85 (-8.42) |

*** Figures given in bracket indicate pc growth over the years.**

**Source: Head Office, ATCL**

As indicated in Table 6.38, area under tea of the garden went down from 395.34 hectares in 1990-91 to 386 hectares in 1992-93. Since then it went up gradually to reach the figure of 435.6 hectares in 1997-98. Maximum growth recorded in 1997-98, when area under tea went up by 5.8 pc over 1996-97. On the other hand both yield per hectare and production went up sharply during 1996-97, when it recorded around 46 pc growth over 1995-96. During this period yield per hectare went up marginally from 687 kg per hectare to 704 kg per hectare. On the other hand annual production went up from 2,99,303 kg to 3,08, 153 kg. during the period. However, the growth rate was uneven throughout the years. It is observed from the table that since 1991-92, the garden has been undertaking extension plantation in regular manner. Only about 22 pc of its total plantation area is occupied by tea bushes of the age group of 50 years or more (Ref. Table 7.5).

## TABLE – 6.38
## RUNGAMATTY T.E.
## GROWTH PATTERN OF THE GARDEN
## 1990-91 TO 1997-98

| INDICATORS | 1990-91 | 1991-92 | 1992-93 | 1993-94 | 1994-95 | 1995-96 | 1996-97 | 1997-98 |
|---|---|---|---|---|---|---|---|---|
| Area under tea (Hectare) | 395.34 | 395.75 (0.1) | 386.00 (-2.5) | 401.00 (3.9) | 409.54 (2.1) | 411.54 (0.5) | 411.54 (0) | 435.6 (5.8) |
| Yield (Kg/Hectare) | 687 | 684 (-0.4) | 677 (-1.0) | 739 (9.2) | 544 (-26.4) | 504 (-7.4) | 737 (46.2) | 701 (-4.5) |
| Production (Kg) | 2,99,303 | 2,97,737 (-0.5) | 2,94,902 (-1.0) | 3,21,770 (9.1) | 2,36,864 (-26.4) | 2,19,740 (-7.2) | 3,21,074 (46.1) | 3,08,153 (-4.0) |
| Extension plantation (Hectare) | -- | 1.00 | 31.52 | 13.50 | 14.00 | 2.36 | 1.25 | 3.50 |

*** Figures given in bracket indicate pc growth over previous years.**
**Source: Head Office, ATCL**

### 6.2.14 Messamara T.E.

The garden has made progress in the key areas, as indicated in Table 6.39, ever since it has been taken over by the Corporation. Over the years its employee strength went up by 7.95 pc from 767 to 828. During the period, area under tea of the garden also rose by 7.90 pc from 376.28 hectares to 406.02 hectares. On the other hand production of the garden went up to 2,64,502 kg from 1,87,402 kg, registering a growth of around 41 pc over the years. Closely associated with production, the yield per hectare of area under tea also went up by 29.5 pc, registering an increase from 498 kg to 645 kg of tea. During the period, employee strength and area under tea went up equally. As a result of that, employee- area ratio remains at 2.04 persons per hectare of land under tea.

**TABLE – 6.39**
**MESSAMARA TEA ESTAE**
**PROGRESS OVER THE YEARS**

| Indicators | At The Time Of Take Over | As on 1.1.1998 |
|---|---|---|
| Employee strength | 767 | 828 (7.95) |
| Area under tea (Hectare) | 376.28 | 406.02 (7.90) |
| Production (Kg) | 1,87,402 | 2,64,502 (41.14) |
| Yield (Kg/Hectare) | 498 | 645 (29.5) |
| Employee-area ratio | 2.04 | 2.04 (0) |

*** Figures given in bracket indicate pc growth over the years.**

**Source: Head Office, ATCL**

Table 6.40 indicates growth pattern of the garden during the last eight years from 1990-91 to 1997-98. Area under tea of the garden went up from 399.56 hectares in 1990-91 to 428.25 hectares in 1994-95. But since then it went down sharply to 406.02 hectares in 1997-98. Growth pattern of yield per hectare of the garden had been a mixture of both positive and negative ones. It went up by 2.3 pc, 14.5 pc, and 35 pc in 1991-92, 1993-94 and 1996-97 respectively, but during 1992-93,1994-95, 1995-96 and 1997-98 it registered a negative growth of 2.7 pc, 24.7 pc, 0.7 pc and 7.2 pc respectively over their respective previous years. Actual figure in terms of yield

## TABLE – 6.40
## MESSAMARA T.E.
## GROWTH PATTERN OF THE GARDEN
## 1990-91 TO 1997-98

| INDICATORS | 1990-91 | 1991-92 | 1992-93 | 1993-94 | 1994-95 | 1995-96 | 1996-97 | 1997-98 |
|---|---|---|---|---|---|---|---|---|
| Area under tea (Hectare) | 399.56 | 401.08 (0.4) | 402.26 (0.3) | 415.25 (3.2) | 428.25 (3.1) | 422.92 (-1.2) | 422.92 (0) | 406.02 (-4.0) |
| Yield (Kg/Hectare) | 605 | 619 (2.3) | 602 (-2.7) | 689 (14.5) | 519 (-24.7) | 515 (-0.7) | 695 (35) | 645 (-7.2) |
| Production (Kg) | 2,45,810 | 2,51,415 (2.3) | 2,44,510 (-2.7) | 2,79,942 (14.5) | 2,10,911 (-24.7) | 2,09,249 (-0.8) | 2,82,094 (34.8) | 2,64,502 (-6.2) |
| Extension plantation (Hectare) | -- | 24.25 | 6.56 | 11.56 | 1.40 | 8.97 | -- | 5.13 |

*** Figures given in bracket indicate pc growth over previous years.**
**Source: Head Office, ATCL**

per hectare of the garden as on 1997-98 has been 645 kg per hectare in comparison to 605 kg per hectare in 1990-91, thereby registering a growth of 40 kg per hectare in eight years. However, this in no means a good yield rate for a healthy tea garden. One of the major reason of low yield rate of the garden has been occupation of old tea bushes of the age group of 50 years or more in about 58 pc of its total plantation area (Ref. Table 7.5). As a remedy to this it has taken up extension plantation in large scale but no replantation work has been undertaken. During the said period production of the garden also went up marginally from 2,45,810 kg in 1990-91 to 2,64,502 kg in 1997-98 thereby registering a growth of 18,692 kg in eight years. It went down sharply by 24.7 pc in 1994-95 over the previous year but recovered quickly by recording 34.8 pc increase in 1996-97 over the previous year.

### 6.2.15 Bidyanagar T.E.

Ever since the management of the garden has been taken over by the Corporation in 19-6- 1975, its employee strength has gone up by 62.1 pc from 317 to 514 in 1997-98. Area under tea of the garden went up marginally by 7.3 pc from 229.54 hectares to 246.30 hectares in 1997-98. This resulted in 51.2 pc increase in employee- area ratio from 1.38 persons per hectare to 2.09 persons per hectare. Figures relating to yield per hectare and production of the garden at the time of take over were not available and hence they could not be shown in Table 6.41.

**TABLE – 6.41**
**BIDYANAGAR TEA ESTATE**
**PROGRESS OVER THE YEARS**

| Indicators | At The Time of Take Over | As on 1.1.1998 |
|---|---|---|
| Employee strength | 317 | 514 (62.1) |
| Area under tea (Hectare) | 219.54 | 246.30 (7.3) |
| Employee-area ratio | 1.38 | 2.09 (51.2) |

*** Figures given in bracket indicate pc growth over the years.**

**Source: Head Office, ATCL**

Growth pattern of the garden over the last eight years from 1990-91 to 1997-98 is shown in Table 6.42. During the period area under tea of the garden went down from 325.12 hectares to 246.30 hectares. It went up by 3.7 pc in 1991-92 over 1990-91 but immediately went down by 3.5 pc in the next year. It remained on 325.12 hectares till 1996-97 but in the year 1997-98 it went down by 24.2 pc. Unlike that, yield of the garden went up sharply from 362 kg per hectare to 722 kg per hectare during the period. It registered a maximum growth of 43 pc in 1992-93 and again 36.5 pc in 1997-98. It registered a negative growth of 7.3 pc and 13.9 pc in 1993-94 and 1995-96 over the previous years. On the other hand production of tea of the garden went up from 1,17,821 kg in 1990-91 to 1,77,734 kg in 1997-98. It recorded a positive growth of 12.8 pc, 37.9 pc, 2.1 pc, 15 pc and 3.4 pc in 1991-92, 1992-93, 1994-95, 1996-97 and 1997-98 but the growth was negative in 1993-94 by 7.2 pc and in 1995-96 by 13.9 pc. Since 1992-93, the garden has regularly been extending its plantation area. Still as on 1998 about 32 pc of its plantation area were covered by the tea bushes of the age group of 50 years or more (Ref. Table 7.5).

## TABLE – 6.42
## BIDYANAGAR T.E.
## GROWTH PATTERN OF THE GARDEN
## 1990-91 TO 1997-98

| INDICATORS | 1990-91 | 1991-92 | 1992-93 | 1993-94 | 1994-95 | 1995-96 | 1996-97 | 1997-98 |
|---|---|---|---|---|---|---|---|---|
| Area under tea (Hectare) | 325.12 | 337.00 (3.7) | 325.12 (-3.5) | 325.12 (0) | 325.12 (0) | 325.12 (0) | 325.12 (0) | 246.30 (-24.2) |
| Yield (Kg/Hectare) | 362 | 394 (8.8) | 564 (43.0) | 523 (-7.3) | 534 (2.1) | 460 (-13.9) | 529 (15.0) | 722 (36.5) |
| Production (Kg) | 1,17,821 | 1,32,869 (12.8) | 1,83,285 (37.9) | 1,70,058 (-7.2) | 1,73,582 (2.1) | 1,49,438 (-13.9) | 1,71,892 (15.0) | 1,77,734 (3.4) |
| Extension plantation (Hectare) | -- | -- | 36.81 | 11.41 | 12.00 | 8.30 | 4.50 | 1.00 |

*** Figures given in bracket indicate pc growth over previous years.**
**Source: Head Office, ATCL**

## 6.3 TOTAL CORPORATION GROWTH

After analysing the growth of individual gardens of the Corporation, it would now be appropriate to throw light on the growth of the Corporation as a whole. In order to have a proper understanding of the growth of the Corporation it is felt necessary to analyse figures of the Corporation in terms of area, production, price and yield per hectare of tea. As has been done in case of individual garden analysis, a time frame of eight years, from 1990-91 to 1997-98 has also been considered here. Table 6.43 & Figure 6.1 indicate the growth pattern of the Corporation for the said period of time.

### 6.3.1 Growth of Area Under Tea

From Table 6.43 it is seen that during the eight years period under study total area under plantation of the Corporation went up by 335.58 hectares, an increase of around 5.05 pc. Its annual growth was maximum of 1.8 pc in 1994-95 and up to 1995-96 it maintained a stable growth rate of around 1.7 pc. It registered a negative growth of 2.0 pc in 1997-98.

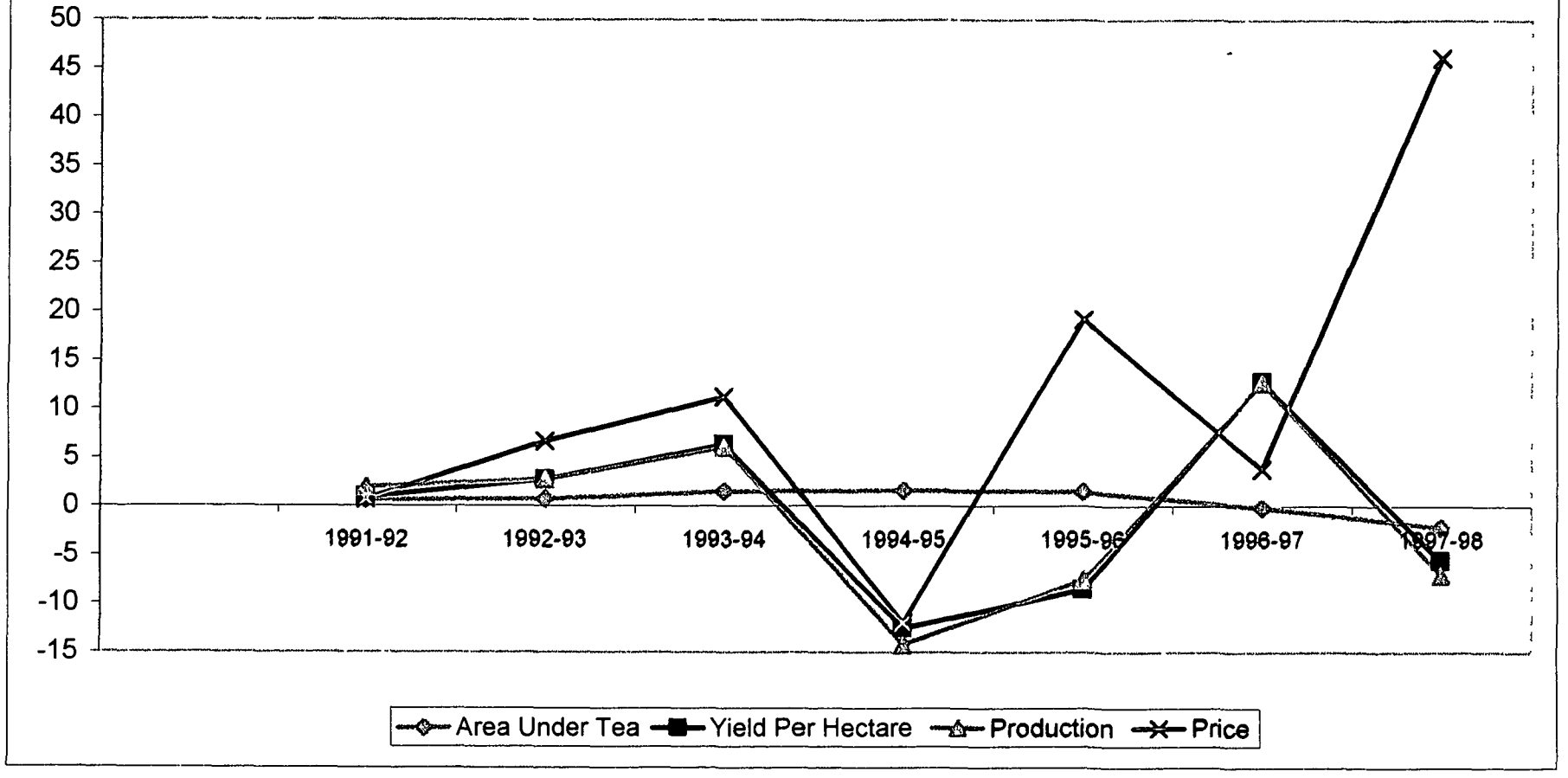
During this period the Corporation undertook marginal extension plantation work. Maximum extension plantation work was done in 1992-93 when a record area of 223.93 hectares had been extended for plantation. On the contrary, during 1996-97 only 26.99 hectares of plantation was extended. During 1990-91, a total of 35.87 hectares of plantation was extended. However, considering the presence of large scale of vacant and unused area this has not been sufficient for the growth of yield of the Corporation. Paucity of fund has forced it to limit extension plantation and replantation work to minimum.

## TABLE – 6.43
## GROWTH PATTERN OF ATCL
## 1990-91to 1997-98

| INDICATORS | 1990-91 | 1991-92 | 1992-93 | 1993-94 | 1994-95 | 1995-96 | 1996-97 | 1997-98 |
|---|---|---|---|---|---|---|---|---|
| Area under Tea (Hectares) | 6645.70 | 6701.60 (0.8) | 6764.58 (0.9) | 6882.24 (1.7) | 7006.88 (1.8) | 7127.33 (1.7) | 7127.33 (0) | 6981.28 (-2.0) |
| Yield Per Hectare (Kg/Hectare) | 977 | 988 (1.1) | 1017 (2.9) | 1083 (6.5) | 949 (-12.4) | 869 (-8.4) | 983 (13.0) | 930 (-5.4) |
| Production (Kg) | 6677965 | 6815684 (2.1) | 7011183 (2.9) | 7446788 (6.2) | 6394410 (-14.1) | 5922324 (-7.4) | 6685783 (12.9) | 6224447 (-6.9) |
| Price ( Rs/Kg) | 39.07 | 39.42 (0.9) | 42.12 (6.8) | 46.94 (11.4) | 41.38 (-11.8) | 49.42 (19.4) | 51.38 (4.0) | 75.17 (46.3) |
| Extension plantation (Hectare) | 35.87 | 81.87 | 223.93 | 133.06 | 148.35 | 91 45 | 26.99 | 34.34 |

*** Figures in bracket indicate pc growth over previous years.**
**Source: Head Office, ATCL.**

**FIGURE-6.1**
**GROWTH PATTERN OF ATCL**
**(PC GROWTH OVER PREVIOUS YEARS)**



### 6.3.2 Growth of Production

Survival and development of a tea garden depends mostly on quantity and quality of tea produced by it. Going by Table 6.43, it is seen that over the last eight years production of tea of the Corporation has gone down heavily. Against an annual production of 66,77,965 kg of tea in 1990-91 it could produce only 62,24,447 kg of tea in 1997-98. It shows a downfall of 4,53,518 kg of tea (6.8 pc) in eight years. Up to 1993-94 it had been maintaining a steady growth in its production but in the next year it went down sharply by 14.1 pc, which further declined by 7.4 pc. in next year. In 1996-97 production went up by 12.9 pc but again went down by 6.9 pc. in 1997-98. Going by the Table it can be said that the Corporation has been unable to maintain a stable growth rate of production over the years. While exploring the reasons it was seen that poor yield rate, low use of agricultural inputs, and lack of proper developmental plan have been responsible for it.

### 6.3.3 Growth of Yield per Hectare

Yield per hectare is a major determinant of total production of tea in a garden. If other things remain same, increase in yield per hectare will lead to high production of tea with the same area under plantation. But yield per hectare of the gardens of the Corporation has not been growing; rather it is falling down over the years. As against an annual average yield per hectare of 977 kg of the Corporation in 1990-91 its average yield was only 930 kg per hectare in 1997-98. During this period it went down by nearly 5 pc. It had been maintaining a steady growth up to 1993-94, but went down sharply in the next two years. Though it could recover to some extent in 1996-97, in the next year it fell down again by around 5.4 pc. It can be concluded that unstable yield rate has been greatly responsible for poor production of tea by the Corporation. Low yield on the other hand has been the result of old tea bushes, high vacant areas, low extension plantation, no replantation and rejuvenation in the Corporation.

### 6.3.4 Growth of Price of Tea

Revenue of a tea unit can be increased either by increasing the production or by increasing price of tea. But price of tea depends on a lot of external factors. It can never be fixed by the unit concern. Price of tea also reflects the quality of tea produced by the unit. It is said that better the quality of tea, more is the price it fetches

and better is the financial condition of the unit. However, going by the garden-wise data it is seen that most of the gardens have been suffering from losses for most of the years. One of the reason behind the poor financial performance of the garden of the Corporation has been the low level of price of the tea fetched by them. For most of the years the Corporation failed to gain substantial price on its tea. Only in 1997-98 it fetched a good price. However, that was a boom year as far as price fetched on tea by the units are concerned. All the units got good price on their tea because of shortfall in tea production. During the last eight years it has been maintaining a steady growth rate of price on its tea except in 1994-95, when it went down by 11.8 pc. It is noticed that in 1997-98 the Corporation's price of tea went up by 46.3 pc.

### 6.3.5 Operational Results of ATCL

Table 6.44 reveals the operational results of the Corporation since its establishment. In the year of its establishment it suffered a loss of Rs. 10,91,169.00 but since 1974 it continued to earn profit up to 1977. However, since 1978 it maintained a loss- making trend for most of the years, except in 1989-90,1990-91,1993-94 and 1997-98. It recorded a maximum loss of Rs 8,88,38,830.00 in 1995-96 and earned a maximum profit of Rs 2,22,88,023.00 in 1993-94. The reason behind the negative operational results of the Corporation has been discussed in later part of this Chapter. However, in a nutshell it can be said that ever declining yield of the Corporation, coupled with high cost of operation have been the primary reasons for it.

It is important to note here that the Corporation could not complete the process of finalising its Audited Annual Reports since 1992-93. The figures shown in the later years are only provisional. Since its establishment the total accumulated operation deficit of the Corporation after deducting finance charge and taxes up to 1997-98 amounted to Rs. 50,20,35,063.00.

**TABLE: 6.44**

**OPERATIONAL RESULTS SINCE ESTABLISHMENT**

**(AFTER FINANCE CHANGES & TAXES)**

**ATCL ( IN RUPEES )**

| Year | Surplus/Deficit (-) | Year | Surplus/Deficit (-) |
|---|---|---|---|
| 1973 | (-) 10,91,169.00 | 1986 | (-)3,90,84,604.00 |
| 1974 | 28,49,595.00 | 1987 | (-)4,86,45,783.00 |
| 1975 | 55,462.00 | 1988-89 | (-)5,84,85,723.00 |
| 1976 | 52,36,944.00 | 1989-90 | 1,78,33,187.00 |
| 1977 | 6,63,196.00 | 1990-91 | 1,64,18,906.00 |
| 1978 | (-)1,53,49,642.00 | 1991-92 | (-)19,41,827.00 |
| 1979 | (-)1,47,20,662.00 | 1992-93 | (-)89,61,458.00 |
| 1980 | (-)3,12,49,700.00 | 1993-94* | 2,22,88,023.00 |
| 1981 | (-)4,02,72,900.00 | 1994-95* | (-)8,83,71,154.00 |
| 1982 | (-)4,10,42,503.00 | 1995-96* | (-)8,88,38,830.00 |
| 1983 | (-)34,56,330.00 | 1996-97* | (-)7,93,02,235.00 |
| 1984 | (-)83,39,122.00 | 1997-98* | 3,69,81,854.00 |
| 1985 | (-)3,52,08,588.00 | **Total (Deficit )** | **(-)50,20,35,063.00** |

*** Provisional**

**Source: Annual Reports, ATCL**

### 6.3.6 Growth of Employee Strength

The employee strength of the gardens of the Corporation during the eight years period from 1990-91 to 1997-98 has been steadily growing. Like almost all the private sector gardens the gardens of ATCL also resorts to employment of additional casual workers during plucking seasons. These are temporary appointments and they do not find place in permanent pay-roll of the Corporation.

During the course of study it is seen that the strength of the Head Office Executives of the Corporation went up to 29 in 1997-98 from 18 in 1991-92, strength of the Garden Executives went up to 88 in 1997-98 from 66 in 1991-92, strength of

Head Office Staff went up to 39 in 1997-98 form 37 in 1991-92 and Head Office IV Grade employees to 37 in 1997-98 from 24 in 1991-92.

As on 1997-98, total employee strength of the Corporation was 16,646 which includes the following:

| | |
|---|---|
| Head Office Executives | 29 |
| Head Office Staff | 39 |
| Head Office iv Grade | 37 |
| **Total Head Office Employee** | **105** |
| Garden Executives | 88 |
| Garden Staff | 585 |
| Garden Monthly Rated Workers | 775 |
| Garden Daily Rated Workers | 15,091 |
| **Total Garden Employee** | **16,539** |
| Total Employee Strength of the Corporation | 16,644 |

As on 1997-98 against the total employee strength of 16,644, the total area under tea of the Corporation was 6981.28 hectares. It means that the Corporation was burdened with 2.38 employees per hectare of land under tea.

### 6.3.7 Payment of Dues & Facilities to Workers

One of the basic objectives behind the establishment of ATCL was to protect the interest of the tea workers. The interest of the workers may well be protected when their legitimate dues are paid in time in full. During the course of the study it has been noticed that the benefits provided by the Corporation to its workers are inadequate. Proper Sanitation, Electrification of residential units, Drinking water facility etc. have not been provided to the workers of the gardens. Conditions of roads inside many gardens are not good.

However, in many cases it is observed that facilities of Crèches to the children of the tea workers, reimbursement of medical expenditures, free rations etc. are properly provided by the Corporation to its workers.

It is seen that though in most of the years the Corporation has suffered losses, it maintained the practice of paying standared rate of bonus to its workers.

All other legal dues of the Corporation like, Customs Duty, Excise Duty, Various Taxes, Cess, etc payable to the Government have been paid in time.

However, one of the important lacunae on the part of the management of the Corporation, as detected during the course of study, is that it failed to provide directly or indirectly, two most important dues to its workers. One is provident Fund due, and the other is Gratuity due. According to the procedures the owner of the tea gardens in Assam need to contribute Provident Fund amounts of their workers to the Assam Tea Planters Provident Fund Authorities and they in turn make payment of the dues of Provident Funds to the tea workers in time. But the Corporation regularly defaults in contributing Provident Fund amounts to the Authorities. As on 1997-98 the total accumulated dues against Provident fund was Rs. 3,11,67,925.00. The Corporation has also been regularly defaulting in making payment of Gratuity to the workers. During the course of study it is observed that instances were there when the Corporation has not released gratuity to its workers even after retirement because of inability to pay their dues in time. As on September 1998 total accumulated dues of the Corporation against Gratuity was Rs 37.6 Lakhs.

## 6.4 ANALYSIS OF FINANCIAL HEALTH

From the foregoing analysis it is seen that the Corporation has not been able to conduct profitable business. It has been suffering from losses for years together. In view of it an attempt has been made here to analyse the Financial Statements of the Corporation to see the financial practices and judge the financial performance of the Corporation in proper perspectives.

Financial Statements are prepared by the management primarily to help them in decision-making process. If analysed properly, these statements can provide

valuable insights into the strengths and weaknesses of the firm. The Financial Statements are the best way of presenting the results of managerial efforts to the various interested parties.

In order to have a proper understanding of the financial health of the Corporation an attempt has been made here to throw light, beside a comparative analysis, on four basic elements of financial statement analysis as indicated below.

1. Pattern of Capital Structure.
2. Pattern of Application of Funds.
3. Pattern of Distribution of Revenue, and
4. Specific Ratio Analysis.

### 6.4.1 Capital Structure Analysis of ATCL

Capital Structure reflects the policy of the management on the composition of funds in the firm. Broadly two components of capital are there, viz, Shareholders Funds and Loan Funds.

Capital Structure of ATCL is shown in Table 6.45. From the Table it is seen that total capital of the Corporation has gone up by many times over the period. At the time of its establishment (1972) total fund used by the Corporation was only Rs.41 lakhs, but in the year 1973 it went up by 4 times to Rs. 160 lakhs, which further went up by 2.7 times to Rs 426 lakhs in 1974. It maintained the growing trend up to 1977 but went down in the next year from Rs 838 lakhs to Rs 779 lakhs. It went up again in the next year and continued the same trend up to 1988-89. In 1989-90, it went down to Rs 6724 lakhs from Rs 7006 lakhs in 1988-89. It further went down to Rs 4697 lakhs in 1993-94. According to the provisional Balance Sheet prepared by the Corporation, its total capital was Rs. 5968 lakhs in1997-98.

Table 6.45 also shows the percentage of loan funds to total fund used by the Corporation. It is seen from the Table that in most of the years the use of Loan fund were more than the Share Holders' fund. It was 12 pc and 18 pc respectively in 1972 and 1973, but went up to 75 pc in 1974. Loan funds continued to dominate the total

funding of the Corporation up to 1988-89. It was as high as 95pc in three consecutive years of 1982 to 1984. Up to 1993-94 it was less than 50 pc, but went up again gradually in the later years. During 1981 and 1991-92,out of the total loan taken by the Corporation, Government contributed most. Before 1981 and after 1992-93 the Corporation depended on other external sources for meeting its requirements. According to the provisional financial statement of the Corporation for the year 1997-98, out of the total loan funds of Rs 3214 lakhs Government loan was Rs. 410 lakhs and other external loan was Rs 2804 lakhs, which was about 7pc and 47 pc respectively. As on 1984, the share of Government loan to total funds of the Corporation was 69pc.

The share of shareholders' fund to total fund was as high as 88 pc in 1972 and 82 pc in 1973. But it went down to 25 pc in 1974 and maintained a low profile up to 1986. In 1987 it went up to 64 pc from 22 pc in 1986 and played a dominant role up to 1993-94 (provisional). According to the last audited Balance sheet of 1992-93, the share of shareholders' funds to total fund in the Corporation was 75 pc, but it went down sharply in the latter years. The Corporation had no funds in the Reserves and Surplus accounts for most of the year. It accounted as high as 55 pc of total fund in 1987 and was non-existent in 1972,1973,1980 to 1986 and again in the Provisional balance Sheets of 1993-94 to 1997-98. Capital fund of the Corporation was Rs 36 lakhs in the year of its establishment (1972) and went up to Rs. 131 lakhs in the next year. These figures include an amount of Rs. 35,63,000.00 share money received in advance in 1972 and Rs. 1,06,63,000.00 in 1973. Capital fund during 1974 was Rs 98 lakhs and the Corporation continued its business up to 1984 with the same capital fund. It went up to Rs.520 lakhs in 1985, and continued to rise up to 1997-98, when it amounted to Rs. 2754 lakhs (provisional). Such increase in capital fund has been basically the result of increase in the share of capital of the Government.

Going by the Capital Structure of Assam Tea Corporation, it can be concluded that the Corporation has been using a high geared capital mix as it heavily relied upon borrowed funds for most of the years. As a result of that it had to spend a major

## TABLE – 6.45
## CAPITAL STRUCTURE OF ATCL
## ( RUPEES IN LAKHS)

| Year | Shareholders Funds | | | Loan Funds | | | Total |
|---|---|---|---|---|---|---|---|
| | Capital | Reserve & surplus | Total | Government | Other agencies | Total | |
| 1972 | 36 (88) | -- | 36 (88) | -- | 5 (12) | 5 (12) | 41 (100) |
| 1973 | 131 (82) | -- | 131(82) | -- | 29 (18) | 29 (18) | 160 (100) |
| 1974 | 98 (23) | 8 (2) | 106 (25) | 84 (20) | 236 (55) | 320(75) | 426 (100) |
| 1975 | 98 (19) | 6(1) | 104 (20) | 134 (26) | 278 (54) | 412(80) | 516 (100) |
| 1976 | 98 (15) | 35(5) | 133 (20) | 134 (20) | 408 (60) | 542(80) | 675 (100) |
| 1977 | 98 (12) | 55 (6) | 153 (18) | 140 (17) | 545 (65) | 685(82) | 838 (100) |
| 1978 | 98 (12) | 4(1) | 102 (13) | 154 (20) | 523 (67) | 677(87) | 779 (100) |
| 1979 | 98 (10) | 4(1) | 102 (11) | 205 (22) | 632 (67) | 837(89) | 939 (100) |
| 1980 | 98 (9) | -- | 98(9) | 346 (33) | 609 (58) | 955(91) | 1053 (100) |
| 1981 | 98 (7) | -- | 98 (7) | 758 (51) | 632 (42) | 1390(93) | 1488 (100) |
| 1982 | 98 (5) | -- | 98(5) | 1086 (61) | 605 (34) | 1691(95) | 1789 (100) |
| 1983 | 98 (5) | -- | 98 (5) | 1244 (68) | 499 (27) | 1743(95) | 1841 (100) |
| 1984 | 98 (5) | -- | 98(5) | 1390 (69) | 525 (26) | 1915(95) | 2013 (100) |
| 1985 | 520 (22) | -- | 520 (22) | 1166 (49) | 687 (29) | 1853(78) | 2377 (100) |
| 1986 | 579 (22) | -- | 579 (22) | 1287 (49) | 746 (29) | 2033(78) | 2612 (100) |
| 1987 | 579 (9) | 3600 (55) | 4179 (64) | 1458 (22) | 946 (14) | 2404(36) | 6583 (100) |
| 1988-89 | 729 (10) | 3471 (50) | 4200 (60) | 1525 (22) | 1281 (18) | 2806(40) | 7006 (100) |
| 1989-90 | 979 (15) | 3381(50) | 4360 (65) | 1528 (23) | 836 (12) | 2364(35) | 6724 (100) |
| 1990-91 | 1029 (14) | 3299 (46) | 4328 (60) | 1539 (22) | 1251 (18) | 2790(40) | 7118 (100) |
| 1991-92 | 1324 (18) | 3224 (44) | 4548 (62) | 1550 (21) | 1307 (17) | 2857(38) | 7405 (100) |
| 1992-93 | 2434 (33) | 3153 (42) | 5587 (75) | 452 (6) | 1419 (19) | 1871(25) | 7458 (100) |
| 1993-94* | 2534 (54) | -- | 2534 (54) | 417 (9) | 1746 (37) | 2163(46) | 4697 (100) |
| 1994-95* | 2534 (45) | -- | 2534 (45) | 418 (7) | 2739 (48) | 3157(55) | 5691 (100) |
| 1995-96* | 2534 (41) | -- | 2534 (41) | 419 (7) | 3193 (52) | 3612(59) | 6146 (100) |
| 1996-97* | 2754 (43) | -- | 2754 (43) | 418 (6) | 3306 (51) | 3724(57) | 6478 (100) |
| 1997-98* | 2754 (46) | -- | 2754 (46) | 410 (7) | 2804 (47) | 3214(54) | 5968 (100) |

**Source: Compiled form Annual Reports of ATCL.**

*** Provisional**

**Figures in bracket indicate pc to total fund.**

portion of its earnings in paying interest to the suppliers of funds. But such borrowings were not properly utilised in developmental activities to get a fair return from the investment resulting in an over-capitalised situation in the Corporation. It procured most of the borrowed funds from Banks and other Financial Institutions. Major Suppliers of loans to the Corporation are, Indian Overseas Bank, Punjab National Bank, Assam Co-operative Apex Bank, U.B.I, and NABARD Refinance Scheme etc. The Corporation is not entitled to receive loan at subsidized rate from Tea Board, as it could not fulfill the terms of Tea Board for getting loan from it.

### 6.4.2 Pattern of Application of Fund

Table 6.46 shows the pattern of application of funds by the Corporation. Application of funds have been shown broadly in Net Fixed Assets, Investment in Securities, Net Current Assets, Miscellaneous Expenditures and adjustment by way of amount of Debit Balance of Income Statement. The components of total long-term funds have been shown in Table 4.45. As the Corporation suffered losses for most of the years it had to set aside huge amount of funds in adjustment. It represents the amount of losses suffered by the Corporation. It has always been increasing and had accounted for as high as 86 pc of the total fund used in the business in 1997-98 (provisional).

Another significant aspect of the Corporation has been its bearing of negative current assets for many years. It implies that the Corporation has invested a part of its working capital in fixed assets. However, certain years were there when net current assets amounted for as much as 61 pc (1977) of the total fund invested in the business. The percentage of Net Fixed Assets of the Corporation to total fund used had gradually gone down till 1977. In 1978 it amounted to 65 pc of total funds, but since then it again went down gradually and continued with the decreasing trend up to 1986. In 1987 a huge amount of funds were allocated in fixed assets. During 1992-93 total fund used in net fixed assets was Rs 4238 lakhs, which amounted to 57 pc of total fund used in the business. Since then it went down gradually and as on 1997-98 it was Rs 1414 lakhs (provisional) which accounted 24 pc of total fund used in the business.

**TABLE –6.46**
**PATTERN OF APPLICATION OF FUNDS**
**(RUPEES IN LAKH)**

| Year | Total Long-term Funds | Net Fixed Assets | Misc. Expenditure | Net Current Assets | Other Investments | Profit & Loss (Debit Balance) |
|---|---|---|---|---|---|---|
| 1972 | 41 (100) | | | 41(100) | | |
| 1973 | 160 (100) | 201(126) | | (-)52 (33) | | 11 (7) |
| 1974 | 426 (100) | 218(51) | 2 (1) | 202 (47) | 4 (1) | |
| 1975 | 516 (100) | 237(46) | 4 (1) | 272 (52) | 3(1) | |
| 1976 | 675 (100) | 296(44) | | 379 (56) | | |
| 1977 | 838 (100) | 326(39) | | 511 (61) | 1 | |
| 1978 | 779 (100) | 508(65) | | 212 (27) | | 59 (8) |
| 1979 | 939 (100) | 521(55) | | 207 (22) | | 211 (22) |
| 1980 | 1053 (100) | 512(49) | | 25 (2) | | 516 (44) |
| 1981 | 1488 (100) | 503(34) | | 86 (6) | | 899 (60) |
| 1982 | 1789 (100) | 509(28) | | (-) 35 (2) | | 1315 (74) |
| 1983 | 1841 (100) | 498(27) | | (-) 10 (1) | | 1353 (74) |
| 1984 | 2013 (100) | 503(25) | | 71 (4) | | 1439 (71) |
| 1985 | 2377 (100) | 515(22) | | 70 (3) | 1 | 1791 (75) |
| 1986 | 2612 (100) | 563(22) | | (-) 134 (5) | 1 | 2182 (83) |
| 1987 | 6583 (100) | 4173(63) | | (-) 280 (4) | 1 | 2689 (41) |
| 1988-89 | 7006 (100) | 4108(59) | | (-) 366 (5) | 1 | 3263 (46) |
| 1989-90 | 6724 (100) | 4047(60) | | (-) 442 (7) | 3 | 3116 (47) |
| 1990-91 | 7118 (100) | 3990(56) | | 169 (2) | 2 | 2957 (42) |
| 1991-92 | 7405 (100) | 4088(55) | | 344 (5) | 1 | 2972 (40) |
| 1992-93 | 7458 (100) | 4238(57) | | 144 (2) | 1 | 3075 (41) |
| 1993-94* | 4697 (100) | 1326(28) | | 642 (14) | | 2729 (58) |
| 1994-95* | 5691 (100) | 1496(26) | | 443 (8) | | 3752 (66) |
| 1995-96* | 6146 (100) | 1428(23) | | 209 (3) | | 4509 (74) |
| 1996-97* | 6478 (100) | 1403(22) | | (-) 374 (6) | | 5449 (84) |
| 1997-98* | 5968 (100) | 1414(24) | | (-) 579 (10) | | 5133 (86) |

*** Provisional**
**Figures in bracket indicate pc to total funds.**
**Source: Compiled from annual reports of ATCL.**

The Corporation had invested in securities only a meager amount for a couple of years. It allocated funds in order to write off preliminary expenses and deferred revenues expenditures ( marketing developmental expenses) for a few initial years. However, amount in this heading has always been negligible. Going by the pattern of application of funds by the Corporation it is seen that the Corporation has been doing business with very little amount of fixed assets. As a result of that there has been strain on its production. On the other hand the availability of lesser amount of net current assets signify the crisis of working capital of the concern. This creates liquidity crises in the concern. Under such condition the creditors and the suppliers can not be satisfied in time.

### 6.4.3 Distribution of Revenue

Table 6.47 shows the distribution of revenue earned by the Corporation. Revenue figure includes income from sale of tea and other incomes. The distribution helps in understanding the policy of the management in allocating its earnings in various operating and non- operating costs. In the very first year of its establishment the Corporation did not have any operative expenditure as it started its actual business operations (running tea gardens) from 1973. Hence, in 1972 its expenditures were administrative in nature, which amounted to Rs. 4 lakhs, which was 44 pc of total revenue, collected by the Corporation in terms of interest on deposits.

One of the major expenses of the Corporation has been the cost of operation. It includes expenses on old cultivation (use of labours and stores in various agricultural inputs like fertilizer, chemicals etc.), plucking and manufacturing expenses, running and maintaining vehicles and repairs, maintenance & replacement costs. This cost accounted for more than 50 pc of total revenue earned by the Corporation for most of the years. It accounted for as high as 79 pc of total revenue earned by the Corporation in the year 1981, and in 1993-94 it accounted for lowest of 42 pc revenue earned by the Corporation (provisional). It is seen that in the years in which the Corporation spends more money in this respect it suffers heavy losses. However, general practice is that more expenditure in various agricultural inputs leads to higher yields and it leads to more revenue generation and profit. But in case of the Corporation more expenditure in this heading has not resulted more profits, rather more losses. Hence, it can be concluded that funds were not properly been utilised.

Another important source of expenditures for the Corporation has been Administrative expenditures. It includes Executive Salary, Staff and Labour welfare, Garden overhead, Bonus, Sale charges, Ex-gratia, Head Office expenses, (Jorhat) Medical Practice expenses and Jorhat office expenses etc. For most of the years the Corporation spent around 45 pc of its total revenue in this heading. It was as high as 89 pc in 1974 and as low as 27 pc in 1977.

From Table 6.48 it can be seen that the Corporation has been spending a huge sum of money as Finance Charges (interest). The Corporation has been paying huge amount as interest because loan fund constitute majority of its total funds. As high as 25 pc of its total revenue has been spent as interest in 1982, 23 pc in 1981, 19 pc in 1995-96 (provisional), 17 pc each in 1983 and 1986. It can be said that as the Corporation has been unable to generate internal funds due to continuous losses, it had to depend on external sources of funds for carrying out business operations and as a result of that a huge amount of fund had to be spent for paying external dues.

The Corporation has been setting aside 1 pc to 2 pc of its total revenue towards depreciation. Only for a couple of years it accounted for 3 pc of total revenue earned. The value of increase/decrease in stock has been computed after deducting the value of closing stock of tea from the value of opening stock of tea. The negative value indicates that the value of stock of tea for the previous year(opening stock) was less than the value of stock of tea for the current year(closing stock).

### 6.4.4 Ratio Analysis

Ratio analysis is considered as a common and powerful tool of analysing the financial health of a firm. As compared to other tools of Financial Statement Analysis, like Comparative Financial Statements, Common size Statement, Trend Analysis, Statement of Changes in Working Capital and Fund Flow and Cash Flow Analysis, Ratio Analysis is most useful in drawing conclusion regarding various aspects of the workings of a firm. Ratio refers to the numerical relationship between two items of the financial statements. They are calculated by dividing one item of the relationship with the other.

## TABLE – 6.47
## DISTRIBUTION OF REVENUE :ATCL
### (RUPEES IN LAKHS)

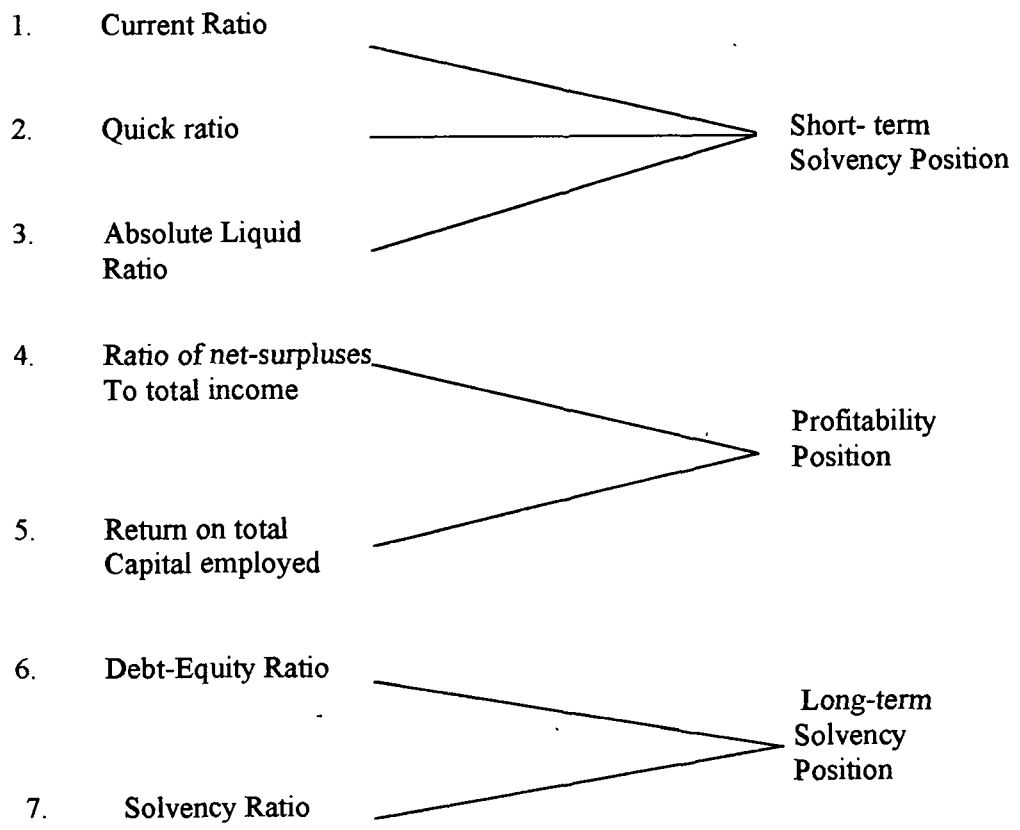
| Year | Total Revenue | Cost of Operation | Administrative & Other Exps. | Finance Charges | Depreciation | Decrease/Increase in Stock | Total Exp. | Net Profit After Tax |
|---|---|---|---|---|---|---|---|---|
| 1972 | 9 (100) | -- | 4 (44) | -- | -- | -- | 4 (44) | 5 (56) |
| 1973 | 256(100) | 113 (44) | 141 (55) | 8 (3) | 5 (2) | -- | 267 (104) | (-) 11 (4) |
| 1974 | 243(100) | 110 (45) | 217 (89) | 13 (5) | 6 (2) | (-) 158 (64) | 188 (77) | 55 (23) |
| 1975 | 384(100) | 193 (50) | 145 (38) | 36 (9) | 7 (2) | (-) 1 | 380 (99) | 4 (1) |
| 1976 | 450(100) | 275 (61) | 218 (48) | 64 (14) | 10 (2) | (-) 249 (54) | 318 (71) | 132 (29) |
| 1977 | 843(100) | 374 (44) | 225 (27) | 75 (9) | 17 (2) | 105 (12) | 796 (94) | 47 (6) |
| 1978 | 928(100) | 539 (58) | 319 (34) | 79 (9) | 17 (2) | 112 (12) | 1066 (115) | (-) 138 (15) |
| 1979 | 769(100) | 525 (68) | 330 (43) | 101 (13) | 18 (2) | (-) 65 (8) | 909 (118) | (-) 140 (18) |
| 1980 | 782(100) | 559 (71) | 350 (45) | 122 (16) | 16 (2) | 47 (6) | 1094 (140) | (-) 312 (40) |
| 1981 | 724(100) | 570 (79) | 356 (49) | 168 (23) | 15 (2) | 18 (3) | 1127 (156) | (-) 403 (56) |
| 1982 | 901(100) | 601 (67) | 402 (45) | 228 (25) | 14 (2) | 27 (2) | 1272 (141) | (-) 371 (41) |
| 1983 | 1339(100) | 694 (52) | 484 (36) | 225 (17) | 12 (1) | (-) 42 (3) | 1373 (103) | (-) 34 (3) |
| 1984 | 1422(100) | 813 (57) | 565 (40) | 213 (15) | 13 (1) | (-) 99 (7) | 1505 (106) | (-) 83 (6) |
| 1985 | 1299(100) | 855 (66) | 545 (42) | 182 (14) | 14 (1) | 22 (2) | 1618 (125) | (-) 319 (25) |
| 1986 | 1203(100) | 796 (66) | 543 (45) | 206 (17) | 18 (1) | 31 (4) | 1594 (133) | (-) 391 (33) |
| 1987 | 1174(100) | 862 (73) | 574 (49) | 220 (19) | 17 (1) | (-) 13 (1) | 1660 (141) | (-) 486 (41) |
| 1988-89 | 1732(100) | 1030 (59) | 770 (44) | 229 (13) | 40 (2) | 248 (20) | 2317 (138) | (-) 585 (38) |
| 1989-90 | 2238(100) | 960 (43) | 835 (37) | 163 (7) | 35 (2) | 57 (3) | 2050 (92) | 188 (8) |
| 1990-91 | 2473(100) | 1149 (47) | 1003 (41) | 127 (5) | 35 (1) | (-) 15 (1) | 2309 (93) | 164 (7) |
| 1991-92 | 2639(100) | 1237 (47) | 1178 (45) | 195 (7) | 52 (2) | (-) 4 | 2658 (101) | (-) 19 (1) |
| 1992-93 | 2862(100) | 1449 (51) | 1273 (44) | 280 (10) | 51 (2) | (-) 101 (4) | 2952 (103) | (-) 90 (3) |
| 1993-94* | 3410(100) | 1434 (42) | 1274 (37) | 262 (8) | 57 (2) | 160 (4) | 3187 (93) | 223 (7) |
| 1994-95* | 2723(100) | 1632 (60) | 1515 (55) | 390 (14) | 71 (3) | (-) 1 | 3607 (132) | (-) 884 (32) |
| 1995-96* | 3046(100) | 1726 (57) | 1590 (52) | 588 (19) | 89 (3) | (-) 59 (2) | 3934 (129) | (-) 888 (29) |
| 1996-97* | 3570(100) | 1869 (52) | 1710 (48) | 633 (18) | 78 (2) | 73 (2) | 4363 (122) | (-) 793 (22) |
| 1997-98* | 4450(100) | 1993 (45) | 1881 (42) | 601 (14) | 74 (2) | (-) 469 (11) | 4080 (92) | 370 (8) |

*** Provisional**

**Figures in bracket indicate pc to total revenue.**

**Source: Compiled from Annual Reports, ATCL**

In order to understand the financial health of the Corporation, the short -term and long-term solvency position as well as its profitability position would be analysed with the help of the following ratios.




**6.4.4.A Analysis of Short -Term Solvency Position**

Liquidity position of a firm is known as short- term solvency position. When the firm is in a position to meet its current obligations in time, the firm is said to have a good solvency position. The short- term obligations of a firm can be met only when there are sufficient liquid assets. In fact, liquidity is pre- requisite for the very survival of a firm. If current assets can pay off current liabilities, then liquidity position will be satisfactory. The short-term suppliers and creditors are interested in knowing the short- term liquidity position of the firm.

In order to assess the liquidity position of Assam Tea Corporation, an attempt has been made here to compute and interpret the following three ratios.

### 6.4.4.A (I) Current Ratio

Table 6.48 exhibits the current ratio of the Corporation for all the years since its establishment. It has been calculated by dividing current assets by current liabilities of the Corporation. This measures the ability of the Corporation to meet its current liabilities. The Underlying theme of current ratio is that current assets get converted into cash in the operational cycle of the firm and provide the funds needed to pay current liabilities. A higher current ratio is a clue that the firm will be able to pay its debts maturing within a year. According to the general norm, a current ratio of 2:1, i.e, current assets double the current liabilities, is considered to be satisfactory.

**TABLE: 6.48**

**CURRENT RATIO,ATCL**

| Year | Ratio | | Year | Ratio | |
|---|---|---|---|---|---|
| | ATCL | Accepted Norm | | ATCL | Accepted Norm |
| 1972 | NA | 2 | 1985 | 1.07 | 2 |
| 1973 | .60 | 2 | 1986 | 0.89 | 2 |
| 1974 | 2.33 | 2 | 1987 | 0.79 | 2 |
| 1975 | 2.90 | 2 | 1988-89 | 0.74 | 2 |
| 1976 | 2.04 | 2 | 1989-90 | 0.71 | 2 |
| 1977 | 2.58 | 2 | 1990-91 | 1.11 | 2 |
| 1978 | 1.41 | 2 | 1991-92 | 1.19 | 2 |
| 1979 | 1.40 | 2 | 192-93 | 1.06 | 2 |
| 1980 | 1.04 | 2 | 1993-94 | 1.14 | 2 |
| 1981 | 1.13 | 2 | 1994-95 | 1.27 | 2 |
| 1982 | 0.95 | 2 | 1995-96 | 1.13 | 2 |
| 1983 | 0.99 | 2 | 1996-97 | 0.08 | 2 |
| 1984 | 1.08 | 2 | 1997-98 | 0.81 | 2 |

**Source: Compiled from Annual Reports, ATCL**

A current ratio of 1.33:1 is considered by banks as the minimum acceptable level for providing working capital finance[1]. Going by the Table it is seen that the

(1) Financial Management, Ravi M. Kishore, Taxmann Allied Services Private Ltd., New Delhi, 2000, P-34

Corporation never had a satisfactory current ratio in its whole life, except in 1974 to 1977. During these years the current ratios of the Corporation were higher than the accepted norm of 2. In all other years it has been seen that current liabilities were more than current assets. Current ratio of the Corporation had been decreasing constantly from 1977 to 1980 then again from 1984 to 1989-90. In 1990-91 it recovered slightly but went down again in 1996-97.

### 6.4.4.A (II) Quick Ratio

Quick ratio, also known as Acid test, is defined as the ratio of quick assets to quick liabilities. Table 6.49 indicates the Quick ratio of the Corporation since its establishment. While Quick assets were calculated by deducting inventories and prepaid expenses from current assets, Quick Liabilities were calculated by deducting Bank overdraft from current liabilities. Inventories were not included in liquid assets because it cannot be converted into cash in immediate future without incurring a substantial amount of loss. Prepaid expenses are never available to pay current debts. On the other hand, Bank overdraft has not been included in quick liabilities as it is generally a permanent adjustment with the Banker.

Quick ratio is considered as a measure of judging the immediate ability of the firm to pay off its current obligations. It is a stringent test of liquidity. It is more of a qualitative nature of test. A Quick ratio of 1:1 indicates highly solvent position of the firm[2]. Going by Table 6.49 it is noticed that throughout its life period the Corporation had satisfactory Quick ratio only for four years of 1975, 1977 and lately in 1993-94 and 1994-95. In all other years it has always been less than one. However, in 1974, 1990-91, 1991-92, 1992-93 and in 1995-96, the position was near satisfactory. It is seen that cash and bank balance position of the Corporation has been affecting its ratio to a greater extent. It shows the very deplorable liquidity position of the Corporation. It was as low as 0.46 in 1987.

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(2) Financial Management, Ravi M. Kishore, Taxmann Allied Services Private Ltd., New Delhi, 2000, P-34

**TABLE: 6.49**

**Quick Ratio: ATCL**

| Year | Ratio | | Year | Ratio | |
|---|---|---|---|---|---|
| | ATCL | Accepted Norm | | ATCL | Accepted Norm |
| 1972 | NA | 1 | 1985 | 0.63 | 1 |
| 1973 | .49 | 1 | 1986 | 0.52 | 1 |
| 1974 | .95 | 1 | 1987 | 0.46 | 1 |
| 1975 | 1.51 | 1 | 1988-89 | 0.59 | 1 |
| 1976 | 0.79 | 1 | 1989-90 | 0.59 | 1 |
| 1977 | 1.45 | 1 | 1990-91 | 0.95 | 1 |
| 1978 | 0.61 | 1 | 1991-92 | 0.89 | 1 |
| 1979 | 0.61 | 1 | 1992-93 | 0.93 | 1 |
| 1980 | 0.51 | 1 | 1993-94 | 1.25 | 1 |
| 1981 | 0.61 | 1 | 1994-95 | 1.10 | 1 |
| 1982 | 0.49 | 1 | 1995-96 | 0.95 | 1 |
| 1983 | 0.56 | 1 | 1996-97 | 0.73 | 1 |
| 1984 | 0.53 | 1 | 1997-98 | 0.58 | 1 |

**Source: Compiled from Annual Reports, ATCL**

### 6.4.4. A (III) Absolute Liquid Ratio

It is an even rigorous test of liquidity position of a firm. It tests whether cash and near cash items of a firm are sufficient to meet its immediately maturing obligations. Table 6.50 depicts the Absolute Liquid Ratio of ATCL since its establishment. The ratio has been calculated by dividing Cash and Bank balance and cash equivalents of the Corporation by its Current Liabilities excluding Bank Overdraft. Generally 75 pc is the acceptable norm for this ratio [3]. But going by the Table it is seen that the Corporation had not acquired that satisfactory stage in the early part of its life. During 1978 to 1989-90 its absolute liquid position was below standard. However, since 1990-91 the position has improved with sufficient cash and cash equivalents in hand. But during the last two years under study it went down to below average.

(3) Management Accounting, Pillai & Bagavati, S. Chand & Company, New Delhi, 1996, P-81

**TABLE: 6.50**

**ABSOLUTE LIQUID RATIO**

**ATCL**

| Year | Ratio | | Year | Ratio | |
|---|---|---|---|---|---|
| | ATCL | Accepted Norm | | ATCL | Accepted Norm |
| 1972 | NA | .75 | 1985 | 0.55 | .75 |
| 1973 | 0.10 | .75 | 1986 | 0.46 | .75 |
| 1994 | 0.95 | .75 | 1987 | 0.40 | .75 |
| 1975 | 0.84 | .75 | 1988-89 | 0.48 | .75 |
| 1976 | 0.51 | .75 | 1989-90 | 0.55 | .75 |
| 1977 | 1.44 | .75 | 1990-91 | 0.89 | .75 |
| 1978 | 0.53 | .75 | 1991-92 | 0.84 | .75 |
| 1979 | 0.49 | .75 | 1992-93 | 0.87 | .75 |
| 1980 | 0.42 | .75 | 1993-94 | 1.18 | .75 |
| 1981 | 0.53 | .75 | 1994-95 | 1.01 | .75 |
| 1982 | 0.43 | .75 | 1995-96 | 0.89 | .75 |
| 1983 | 0.41 | .75 | 1996-97 | 0.66 | .75 |
| 1984 | 0.43 | .75 | 1997-98 | 0.54 | .75 |

**Source: Compiled from Annual Reports, ATCL**

### 6.4.4.B Analysis of Profitability Position

Profitability Ratios are the best indicators of operational efficiency of a firm. They depict the economic progress and measure of control to the management of the firm. Profitability is a measure of efficiency and the search for it provides an incentive to achieve efficiency. It also indicates public acceptance of the enterprise's product and shows that the firm can produce competitively. Profitability ratios are calculated either in relation to income or investment. The relationship between net surplus and income is shown by Profit Margin ratios. On the other hand the relationship between profit and investment is reflected by Rate of Return ratios. Following two ratios have been calculated and interpreted in order to determine the profitability position of ATCL over the years.

### 6.4.4.B (I) Ratio of Net Surplus to Total Income

Table 6.51 presents the ratio of net surplus to total income of the Corporation for all the years since establishment. The two basic components of the ratio are "Net Surplus" and "Total Income". Amount of net surplus has been calculated after deducting finance changes and taxes from the operational profits. This was done to depict the true financial position of the Corporation. On the other hand total income includes all incomes made by the Corporation during the year. This ratio indicates the ability of the management in gaining sufficient amount of profit for the owners after fulfilling all the obligations and due. The ratio is the indicator of how well the resources of a firm are being used. Therefore, higher the ratio of net surplus to total income better is the operational efficiency of the concern.

Going by the Table of net surplus to total income of the Corporation, it can be concluded that it failed to gain sufficient profits for most of the years. Since 1978 it suffered losses up to 1988-89 then again from 1991-92 to 1996-97 except in 1993-94, when its net surplus ratio to total income was meager 6.5. The Corporation had the maximum net surplus ratio of 11.7 pc in the year 1974 but since then it went down sharply. The lowest net surplus ratio of the Corporation was seen in 1981, when it went down to (-) 55.6 pc. The net surplus to total income ratio presents a highly unsatisfactory financial health of the Corporation. It is seen that for most of the years its expenditures exceeded incomes.

### 6.4.4.B (II) Return on Total Capital Employed

Another important tool of analysing the profitability position of a firm is the ratio of return on total capital employed. It establishes the relationship between profits and capital employed. This ratio is also known as Return on Investment. It indicates the percentage of return on the total fund invested in the business. It also shows the efficiency of the business as a whole.

**TABLE: 6.51**

**RATIO OF NET SURPLUS TO**

**TOTAL INCOME**

**ATCL**

| Year | Ratio (in %) | Year | Ratio (in %) |
|---|---|---|---|
| 1973 | 4.3 | 1986 | (-)32.5 |
| 1974 | 11.7 | 1987 | (-)41.4 |
| 1975 | 0.1 | 1988-89 | (-)33.8 |
| 1976 | 11.6 | 1989-90 | 8.0 |
| 1977 | 0.8 | 1990-91 | 6.6 |
| 1978 | (-)16.5 | 1991-92 | (-)0.7 |
| 1979 | (-)19.1 | 1992-93 | (-)3.1 |
| 1980 | (-)34.0 | 1993-94 | 6.5 |
| 1981 | (-)55.6 | 1994-95 | (-)32.5 |
| 1982 | (-)45.6 | 1995-96 | (-)29.2 |
| 1983 | (-)2.6 | 1996-97 | (-)22.2 |
| 1984 | (-)5.9 | 1997-98 | 8.3 |
| 1985 | (-)27.1 | | |

**Source: Compiled from Annual Reports, ATCL**

Table 6.52 shows the ratio of Return on Total Capital Employed by the Corporation for the whole period since its establishment. The basic elements of the ratio are "Net surplus" and " Capital Employed." Net surplus amount has been calculated before deducting of finance charges & taxes as the Corporation pays huge funds every year by way of finance charges. On the other hand while calculating the other profitability ratio (Table 6.51) finance charges and tax have been deducted from surplus. The underlying concept is to see the return of the actual business operations of the Corporation in relation to its total investments. The other element of the ratio, i.e, total capital employed has been calculated by taking into account the shareholders funds including reserves & surpluses and loan funds.

Going by Table 6.51 it is seen that the Corporation failed to make substantial profits even before making payment of finance charges and taxes. It exhibits a very

poor performance of the Corporation throughout its life period. It is seen from the Table 6.52 that the performance of the Corporation in terms of return on total capital had been satisfactory for the initial few years but soon it became negative during 1978 to 1982. In 1983 and 1984 the ratio was positive but during 1985 to 1988-89 it again became negative. Since 1989-90 the ratio indicates that the Corporation had been performing well but since 1994-95 to 1996-97 it again became negative.

**TABLE: 6.52**

**RATIO OF RETURN ON TOTAL CAPITAL EMPLOYED**

**ATCL**

| Year | Ratio (in %) | Year | Ratio (in %) |
|---|---|---|---|
| 1973 | (-)1.8 | 1986 | (-)7.1 |
| 1974 | 16.1 | 1987 | (-)4.0 |
| 1975 | 7.8 | 1988-89 | (-)5.1 |
| 1976 | 29.3 | 1989-90 | 5.2 |
| 1977 | 14.6 | 1990-91 | 4.8 |
| 1978 | (-)7.6 | 1991-92 | 3.1 |
| 1979 | (-)4.1 | 1992-93 | 3.3 |
| 1980 | (-)18.1 | 1993-94 | 11.6 |
| 1981 | (-)15.8 | 1994-95 | (-)7.8 |
| 1982 | (-)8.0 | 1995-96 | (-)4.1 |
| 1983 | 10.4 | 1996-97 | (-)1.7 |
| 1984 | 6.6 | 1997-98 | 17.6 |
| 1985 | (-)5.8 | | |

**Source: Compiled from Annual Reports, ATCL**

In 1980 the rate of return was as low as (-) 18.1 pc. During 1989-90 to 1993-94 (provisional) the rate of return on total capital of the Corporation had been positive.

### 6.4.4.C Analysis of Long Term Solvency Position

Long-term solvency of a firm refers to the ability to repay the installments of the principal amount on due dates. The long-term creditors judge the soundness of a firm on the basis of its long-term financial strength. It can be judged with the help of

capital structure ratios. In order to analyse the long-term solvency position of ATCL the following two ratios have been calculated and interpreted.

### 6.4.4.C (I) Debt–Equity Ratio

Debt-Equity ratio is a popular measure of judging long-term solvency of a business. The relationship between external funds and internal equities is shown in Debt-Equity ratio. It also reflects the relative claims of creditors and shareholders against the assets of the firm. How much fund has been provided by the owners and how much by outsiders in the acquisition of total assets is a significant factor affecting long -term solvency of a firm.

Table 6.53 shows the Debt-Equity ratio of ATCL for the whole period since its establishment in 1972. The two basic components of this ratio are 'Debt' and 'Equity'. The amount of Debt has been calculated by taking into account all the outside liabilities of the Corporation. It includes loans form the Government and from other financial institutions. All secured and unsecured loans have been taken into consideration. On the other hand the amount of equity has been calculated by taking into account the capital and reserve & surplus funds of the Corporation. Capital includes both equity share capital as well as preference share capital of the Corporation. A very high Debt-Equity ratio is unfavourable for a firm as it brings in inflexibility to the business due to increasing pressures from the creditors. On the other hand a very low Debt-Equity ratio also deprive the owners form the benefits of trading on equity. Therefore the ratio of Debt to Equity should neither be too high nor too low. However, a ratio of 2:1 is the norm accepted by financial institutions for financing of projects. It means, for every rupee worth of the creditors, the investment of the shareholders should be rupee one [4].

(4) Financial Management, Ravi M. Kishore, Taxmann Allied Services Private Ltd., New Delhi, 2000, P-31

**TABLE: 6.53**

**DEBT – EQUITY RATIO, ATCL**

| Year | Ratio | | Year | Ratio | |
|---|---|---|---|---|---|
| | ATCL | Accepted Norm | | ATCL | Accepted Norm |
| 1972 | .15 | 2 | 1985 | 3.57 | 2 |
| 1973 | .23 | 2 | 1986 | 3.51 | 2 |
| 1974 | 3.02 | 2 | 1987 | .58 | 2 |
| 1975 | 3.94 | 2 | 1988-89 | .68 | 2 |
| 1976 | 4.81 | 2 | 1989-90 | .54 | 2 |
| 1977 | 1.27 | 2 | 1990-91 | .64 | 2 |
| 1978 | 6.61 | 2 | 1991-92 | .98 | 2 |
| 1979 | 8.27 | 2 | 1992-93 | .33 | 2 |
| 1980 | 9.71 | 2 | 1993-94 | .85 | 2 |
| 1981 | 14.13 | 2 | 1994-95 | 1.25 | 2 |
| 1982 | 17.19 | 2 | 1995-96 | 1.43 | 2 |
| 1983 | 17.72 | 2 | 1996-97 | 1.35 | 2 |
| 1984 | 19.47 | 2 | 1997-98 | .88 | 2 |

**Source: Compiled from Annual Reports, ATCL**

From Table 6.53 it is seen that the Corporation could attain a satisfactory Debt-Equity ratio of 2.0 only for a few years. It was satisfactory in the initial years of 1972 to 1973 and in1977. From 1974 to 1976 and 1978 to1986 the ratio was far higher than the accepted standard norm. In 1984 the Debt-Equity ratio of the Corporation was as high as 19.47. However, since 1987 it again went down to less than 2.0. It is basically because of increase in the Government's share of capital from 1985.

### 6.4.4.C (II) Solvency Ratio

This ratio is also known as Debt ratio and calculated by dividing total liabilities of the concern by its total assets. This ratio measures the proportion of total assets provided by the creditors of the firm. A firm is treated as solvent if the assets of the concern are far more than the liabilities.

Table 6.54 shows the Solvency Ratio of ATCL for all the years since its establishment. The two basic components of the ratio are 'Total Liabilities' and 'Total Assets'. The amount of total liabilities has been calculated by summing up all the long- term and short- term liabilities of the Corporation. On the other hand the total assets include all fixed and current assets of the Corporation for the respective years. Generally lower the ratio of total liabilities to total assets, more satisfactory or stable is the long term solvency position of a firm. The creditors always prefer the moderate solvency ratio.

**TABLE – 6.54**

**SOLVENCY RATIO, ATCL**

| Year | Ratio (in %) | Year | Ratio (in %) |
|---|---|---|---|
| 1972 | - | 1985 | 178.18 |
| 1973 | 57.18 | 1986 | 61.43 |
| 1974 | 84.51 | 1987 | 71.42 |
| 1975 | 85.01 | 1988-89 | 81.81 |
| 1976 | 87.27 | 1989-90 | 75.75 |
| 1977 | 86.88 | 1990-91 | 75.85 |
| 1978 | 96.50 | 1991-92 | 74.77 |
| 1979 | 108.63 | 1992-93 | 61.92 |
| 1980 | 133.82 | 1993-94 | 105.51 |
| 1981 | 163.61 | 1994-95 | 133.80 |
| 1982 | 201.23 | 1995-96 | 160.10 |
| 1983 | 191.67 | 1996-97 | 193.57 |
| 1984 | 190.95 | 1997-98 | 162.45 |

**Source: Compiled from Annual Reports, ATCL**

Going by Table 6.54 it is seen that for almost all the years the Corporation's total liabilities were more than its total assets. The ratio was satisfactory for the initial couple of years but went up sharply since 1979 when the ratio had crossed 100 pc marks. In 1982 it even became double the amount of fixed assets of the Corporation. In 1986 the process of revaluation of the assets were taken up and hence the Solvency ratio declined to 61.43 pc. But it again started rising from the next year. According to the provisional balance sheets of the Corporation, since 1993-94 the ratio again increased beyond 100 pc.

The discussions made above on the financial health of the Corporation based on the four tools of analysis viz, Analysis of Capital Structure, Pattern of application of funds, Pattern of distribution of revenue and Ratio analysis show a poor financial health of the Corporation. It is seen that all the three standard ratios, the short term solvency position ratios, profitability position ratios, and long term solvency position ratios of the Corporation have been far below the satisfactory levels.

## 6.5 GROWTH PATTERN OF INDIAN TEA INDUSTRY: PUBLIC SECTOR & PRIVATE SECTOR – A Comparative Analysis of Business Trend in Sample Units.

From the foregoing discussions it is seen that the performance of the Corporation has not so far been satisfactory. Over the period of time, its production & yield per hectare went down. All other factors of healthy functioning depend to a large extent on the development of these two key factors. On the other hand, the growth pattern of the Corporation has not been showing a stable and promising sign. On the financial front most of the gardens of the Corporation have been incurring losses for years. The Corporation as a whole has also been suffering losses for quite a number of years. Various ratios calculated to interpret the financial position and prospect of the Corporation have shown its deplorable position. On the other hand gardens in the private sector have been earning profits in huge quantity. In this context it is felt necessary to throw some light on the growth pattern of some representative private sector tea units as well as to analyse their financial statements. It is felt that it would help in understanding the managerial practices of the private sector tea units and by comparing the practices of private sector tea units with those of public sector's it would be possible to judge the actual position (health) of the public sector tea units. This would also help in finding the problems of the public sector tea units and to suggest measures to overcome them.

In this process attempts would also be made to compare the growth pattern of the Corporation with those of national average, state average and respective district averages where the gardens of the Corporation are situated.

In order to facilitate a proper comparison, three sample tea units in the private sector have been selected for analysis. While selecting these tea units considerations

have been made regarding the size and location of the gardens. For the purpose of maintaining business secret of these tea units they have been referred to as A,B,C.

The three private sector tea units henceforth would be known as sample tea unit A, B & C. While A and B are public limited companies, C is a proprietorship unit. Registered office of unit A is located at Calcutta and its gardens are located in North Bank of river Brahmaputra in Assam. The unit has three tea gardens, all are almost equal in size. Total area under tea of the unit was 1406 hectares as on 1-1-1998.Unit B's registered office is located in Sibsagar district of Assam and its gardens are spread over upper Assam. This unit also has three gardens of almost equal size. Total plantation area of the unit was 1727 hectares as on 1-1-1998. Head Office of unit C is located in Calcutta and its sole garden is located in Central Assam. Total area under plantation of the unit was 413 hectares as on 1-1-1998. All these sample units are factory units working under the same business environment and topographic and demographic conditions where the gardens of the public sector tea units of Assam are located.

The entire discussion of comparison has been divided into two parts.

i) Comparison of Non-financial factors.

ii) Comparison of financial factors.

A time period of eight years (1990-91 to 1997-98) has been considered for the study.

### 6.5.1 Comparison of Non-financial Factors

Certain non-financial factors have been identified to facilitate comparison between private sector sample units and ATCL. All these factors are essentially inter related and the health of a tea unit depends to a large extent on them. Growths of the units in private sector, public sector (ATCL) and district, state and national averages have been explored to see the position of the Corporation.

#### 6.5.1 (I) Comparative Growth of Production

Table 6.55 indicates the growth of production of ATCL and Non-ATCL sample gardens. It also facilitates comparison of growth of production of ATCL gardens with growth of district average, state average and national average.

The rate of growth of production of Cinnamora, Sycotta, Deepling, Naginijan, Negheriting, Rajabarrie, Messamara and Rungamatty gardens of the Corporation has always been lower than the district average growth rate except for 1993 and 1996. On the other hand the growth rate of Amluckie, Dejoovalley and Loongsoong has been more than the district average growth in 1991, 1993 and 1996; but the rate of growth has been lower in rest of the years under study. The gardens of the Corporation in the Cachar valley, namely Longai, Isabheel and Bidyanagar, have been performing poorly in comparison to district average growth for all the years except in 1992. Bholaguri garden, however, has been performing well in respect of growth of production in comparison to the district average growth rate. During 1992, 1993, 1996 and 1997 its growth rate has been better than the district average growth rate.

Table 6.55 indicates that for most of the years the Corporation has been maintaining a lower growth rate in comparison to the growth rate of Assam, India and sample tea units. Against Corporation's annual growth rate of 2. 1 pc in 1991, the growth rate of State was 3.2, national 4.7, sample private sector unit A 2.3 and C 5.2. However, sample unit B had a negative growth rate of 2.3. In 1992 the growth rate of the Corporation was same as the state average and better than the national average and sample unit A and B. Sample unit C, however, maintained a better growth rate of production. During 1993 the growth rate of the Corporation was better than the annual average growth rate of state, national and sample unit A and B. But it was still lower than the growth rate of sample unit C. In 1994 & 1995 the production of Indian tea went down sharply but the growth rate of production of the Corporation was far lower than the other units. In 1996, however, growth rate of the Corporation was better than the industry average growth rate except the growth rate of sample unit B. But in 1997 the growth rate of the Corporation fell sharply by 6.9 pc against a high positive growth of the industry average.

**TABLE – 6.55**
**COMPARTIVE GROWTH OF AVERAGE PRODUCTION**
**ATCL & NON- ATCL**
**(PC GROWTH OVER PREVIOUS YEARS)**

| Units | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 |
|---|---|---|---|---|---|---|---|
| Cinnamora T.E. | 6.7 (3.7) | 4.4 (1.6) | (-) 2.4 (0.2) | (-) 18.6 (-0.7) | 0.3 (-0.7) | 9.8 (3.5) | (-) 12.9 (-0.1) |
| Sycotta T.E. | 10.9 (3.7) | 5.8(1.6) | 6.8(0.2) | (-) 16.3(-0 7) | 0.7 (-0.7) | 5.8(3.5) | (-) 17.5(-0.1) |
| Deepling T.E. | 3.3 (3.7) | (-) 11.8(1.6) | (-) 1.9(0.2) | 1.0(-0.7) | (-) 9.2(-0.7) | 7.1(3.5) | 1.1(-0.1) |
| Naginijan T.E. | (-) 6.1 (3.7) | 1.0(1.6) | 5.6(0.2) | (-)13.9(-0.7) | (-) 1.5(-0.7) | 1.1(3.5) | (-) 3.8(-0.1) |
| Negheriting T.E. | 3.5 (3.7) | 2.9(1.6) | 4.6(0.2) | (-) 22.7(-0.7) | 0.8(-0.7) | 26.4(3.5) | (-) 11.2(-0.1) |
| Rajabarrie T.E. | (-) 5.5 (3.7) | (-) 21.1(1.6) | 38.3(0.2) | (-) 8.8(-0.7) | (-) 9.3(-0.7) | 25.8(3.5) | (-) 12.3(-0.1) |
| Messamara T.E. | 2.3 (3.7) | (-) 2.7(1.6) | 14.5(0.2) | (-) 24.7(-0.7) | (-) 0.8(-0.7) | 34.8(3.5) | (-) 6.2(-0.1) |
| Rungamatty T.E. | (-) 0.5 (3.7) | (-) 1.0(1.6) | 9.1(0.2) | (-) 26.4(-0.7) | (-) 7.2(-0.7) | 46.1(3.5) | (-) 4.0(-0.1) |
| **Dist av.(Sibsagar) of ATCL gardens** | **1.8 (3.7)** | **(-) 2.8 (1.6)** | **9.9 (0.2)** | **(-) 16.3(-0.7)** | **(-) 3.3(-0.7)** | **19.3(3.5)** | **(-) 8.4(-0.1)** |
| Amluckie T.E. | 1.4 (1.5) | 5.0 (4.0) | 5.2 (2.4) | (-) 17.1 (0 3) | (-) 10.4 (-0.6) | 17.1 (1.3) | (-) 5.0(9.6) |
| Dejoovalley T.E. | 6.4 (1.5) | (-) 0.6 (4.0) | 7.4(2.4) | (-) 12.9(0.3) | (-) 16.5(-0.6) | 9.7(1.3) | 0.2(9.6) |
| Loongsoong T.E | 5.5 (1.5) | 3.5 (4.0) | 19.9(2.4) | (-) 15.4(0.3) | (-) 17.7(-0.6) | 22.9(1.3) | (-) 14.41(9.6) |
| **Dist av.(Nagaon) of ATCL gardens** | **4.4 (1.5)** | **3.0 (1.5)** | **10.8(2.4)** | **(-)15.1(0.3)** | **14.4(-0.6)** | **16.6(1.3)** | **(-) 6.4(9.6)** |
| Longai T.E. | (-) 2.0 (1.1) | (-) 7.7(1.5) | 9.6 (2.1) | (-) 3.4 (-0.5) | (-) 11.6(2.5) | 1.1 (12.5) | 0.2(1.7) |
| Isabheel T.E. | (-) 11.0 (1.1) | 21.9(1.5) | 2.8(2.1) | (-) 12.4(-0.5) | (-) 6.4(2.5) | 6.8(12.5) | (-) 1.2(1.7) |
| Bidyanagar T.E. | 12.8 (1.1) | 37.9(1.5) | (-) 7.2(2.1) | 2.1(-0.5) | (-) 13.9(2.5) | 15.0(12.5) | 3.4(1.7) |
| **Dist av. (Cachar) of ATCL gardens** | **(-) 0.7 (1.1)** | **17.1 (1.5)** | **1.7(2.1)** | **(-) 4.6 (-0.5)** | **(-) 10.6 (2.5)** | **7.6(12.5)** | **(-) 0.8 (1.7)** |
| **Bholaguri T.E.(Darrang)** | **(-) 6.8 (1.6)** | **18.7(1.9)** | **(-) 0.1(-0.9)** | **(-) 2.0(-0.8)** | **(-) 8.9 (-0.2)** | **3.2 (2.6)** | **4.9(-1.7)** |
| **ATCL (TOTAL)** | **2.1** | **2.9** | **6.2** | **(-) 14.1** | **(-) 7.4** | **12.9** | **(-) 6.9** |
| ASSAM | 3.2 | 2.9 | (-) 0.4 | (-) 2.4 | (-) 0.4 | 6.4 | 0.1 |
| INDIA | 4.7 | (-) 2.9 | 3.9 | (-) 1.0 | 0.1 | 3.5 | 3.9 |
| SAMPLE A | 2.3 | 2.2 | (-) 3.8 | (-) 5.3 | (-) 5.0 | (-) 0.8 | 9.6 |
| SAMPLE B | (-) 2.3 | (-) 12.6 | (-) 3.8 | (-) 0.6 | 4.1 | 16.5 | 7.7 |
| SAMPLE C | 5.2 | 3.9 | 15.8 | 0.6 | 4.4 | 2.6 | (-) 5.2 |

*** Figures in bracket indicate district average growth over previous years.**
**Source: Tea Board, Individual Collection from sample units & Head office, ATCL.**

### 6.5.1 (II) Comparative Growth of Yield per Hectare

Table 6.56 indicates the yield per hectare of ATCL gardens and Non-ATCL sample units and industry average. While comparing the yield per hectare of ATCL gardens with district averages it is seen that for all the years under study the Corporation's average yield per hectare has been less than the average yield of respective districts.

On the other hand, the yield per hectare of the Corporation as a whole has been far below the average of state and national yield per hectare. During the period under study, maximum average yield recorded by the Corporation was in 1993. Against that year's average yield of the Corporation of 1083 kg, average yield per hectare of the state was 1770 kg, and national average was 1819 kg. During that year average yield of private sector sample unit A was 2896 kg, B 1688 kg and C 2490 kg per hectare.

While during this period, only for two years the Corporation's average yield could touch 1000 kg mark, in all other comparative units minimum average yield per hectare for all the years was 1663 kg. On the other hand, when average yield of the Corporation was 869 kg (lowest) in 1995 the average yield of the state was 1779 kg and National average was 1770 Kg. The three private sector sample units' average yield for the same period were, however, far greater than the average yield of the Corporation. In that year, yield per hectare of the sample unit A was 2571 kg, B 1785 kg and C 2575 kg.

**TABLE – 6.56**
**COMPARTIVE YIELD PER HECTARE (IN KG)**
**ATCL AND NON-ATCL**

| Units | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 |
|---|---|---|---|---|---|---|---|---|
| Cinnamora T.E. | 1017(1458) | 1085(1476) | 1134(1501) | 1107 (1521) | 901(1556) | 903 (1563) | 992 (1757) | 865 (1749) |
| Sycotta T.E. | 831(1458) | 921(1476) | 974(1501) | 1041(1521) | 871(1556) | 878(1563) | 928(1757) | 765(1749) |
| Deepling T.E. | 1229(1458) | 1269(1476) | 1119(1501) | 1098(1521) | 1109(1556) | 1007(1563) | 1078(1757) | 1090(1749) |
| Naginijan T.E. | 993(1458) | 933(1476) | 942(1501) | 995(1521) | 857(1556) | 844(1563) | 835(1757) | 803(1749) |
| Negheriting T.E. | 773(1458) | 800(1476) | 824(1501) | 861(1521) | 666(1556) | 672(1563) | 849(1757) | 754(1749) |
| Rajabarrie T.E. | 834(1458) | 788(1476) | 608(1501) | 860(1521) | 784(1556) | 711(1563) | 894(1757) | 782(1749) |
| Messamara T.E. | 605(1458) | 619(1476) | 602(1501) | 689(1521) | 519(1556) | 515(1563) | 695(1757) | 645(1749) |
| Rungamatty T.E. | 687(1458) | 684(1476) | 677(1501) | 739(1521) | 544(1556) | 504(1563) | 737(1757) | 704(1749) |
| **District av.(Sibsagar) of ATCL gardens** | **871(1458)** | **887(1476)** | **860(1501)** | **924(1521)** | **781(1556)** | **754(1563)** | **876(1757)** | **801(1749)** |
| Amluckie T.E. | 1317 1503) | 1335(1561) | 1401(1573) | 1473(1657) | 1221(1656) | 1094(1684) | 1281(1713) | 1206 (1741) |
| Dejoovalley T.E. | 1569(1503) | 1670(1561) | 1660(1573) | 1783(1657) | 1553(1656) | 1297(1684) | 1423(1713) | 1426(1741) |
| Longai T.E. | 1079(1503) | 1138(1561) | 1177(1573) | 1412(1657) | 1194(1656) | 983(1684) | 1208(1713) | 1034(1741) |
| **District av. (Nagaon) of ATCL gardens** | **1322(1503)** | **1381(1561)** | **1413(1573)** | **1556(1657)** | **1323(1656)** | **1245(1684)** | **1304(1713)** | **1222(1741)** |
| Longai T.E. | 923 (1145) | 904(1150) | 835(1167) | 915(1224) | 884(1296) | 782(1341) | 790(1550) | 792 (1663) |
| Isabheel T.E. | 873(1145) | 776(1150) | 947(1167) | 973(1224) | 853(1296) | 798(1341) | 852(1550) | 842(1663) |
| Bidyanagar T.E. | 478(1145) | 539(1150) | 744(1167) | 690(1224) | 704(1296) | 607(1341) | 698(1550) | 722(1663) |
| **District av. (Cachar) of ATCL gardens** | **958(1145)** | **740(1150)** | **842(1167)** | **859(1224)** | **814(1296)** | **729(1341)** | **780(1550)** | **785(1663)** |
| **Bholaguri T.E. (Darrang)** | **1453(1991)** | **1353(2016)** | **1607(2053)** | **1606(2049)** | **1574(2004)** | **1434(1999)** | **1480(2002)** | **1524(1958)** |
| **ATCL (Total)** | **977** | **988** | **1017** | **1083** | **949** | **869** | **983** | **930** |
| ASSAM | 1685 | 1717 | 1763 | 1770 | 1764 | 1779 | 1858 | 1853 |
| INDIA | 1731 | 1794 | 1742 | 1819 | 1768 | 1770 | 1809 | 1869 |
| SAMPLE A | 2940 | 2978 | 3017 | 2896 | 2659 | 2571 | 2500 | 2662 |
| SAMPLE B | 2259 | 2071 | 1771 | 1688 | 1663 | 1785 | 2030 | 2172 |
| SAMPLE C | 2091 | 2192 | 2230 | 2490 | 2484 | 2575 | 2564 | 2462 |

*** Figures in bracket indicate district average growth over previous years.**
**Source: Compiled from information colleted from sample units, Head office, ATCL and Tea Board.**

From Table 6.57 it is seen that the growth rate of yield per hectare of area under tea of the Corporation has been less than the average yields of comparative units and state and national averages. The growth pattern of the Corporation in comparison to the growth pattern of industry average does not hint an encouraging sign for the future of the Corporation. The rate of growth was never stable for the Corporation.

**TABLE – 6.57**

**COMPARATIVE GRWOTH OF AVERAGE YIELD PER HECTARE ATCL AND NON-ATCL (PC GROWTH OVER PREVIOUS YEARS)**

| Units | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 |
|---|---|---|---|---|---|---|---|
| ATCL | 1.1 | 2.9 | 6.5 | (-)12.4 | (-) 8.4 | 13.1 | (-) 5.4 |
| ASSAM | 1.9 | 2.7 | 0.4 | (-) 0.3 | 0.9 | 4.4 | (-) 0.3 |
| INDIA | 3.6 | (-) 2.9 | 4.4 | (-) 2.8 | 0.1 | 2.2 | 3.3 |
| SAMPLE UNIT A | 1.3 | 1.3 | (-) 4.0 | (-) 8.2 | (-) 3.3 | (-) 2.8 | 6.4 |
| SAMPLE UNIT B | (-) 8.3 | (-)14.5 | (-) 4.7 | (-)1.5 | 7.3 | 13.7 | 7.0 |
| SAMPLE UNIT C | 4.8 | 1.7 | 11.2 | (-) 0.2 | 3.7 | (-) 0.4 | (-) 4.0 |

**Source: Compiled from information colleted form individual sample units, Head office, ATCL and Tea Board.**

### 6.5.1 (III) Comparative Growth Pattern of Area Under Tea

Table 6.58 indicates the comparative growth pattern of area under plantation of ATCL, non-ATCL sample tea units and district, state and national average growth rate. The Table depicts a mixed picture regarding growth of area under tea. In 1991 as against the growth of area under tea of the state of 1.3 pc, and national growth of 1.0 pc, the net area of the Corporation went up by 0.8 pc. However, it was still better than the growth rate of two sample tea units A & C. In 1992, however, the rate of growth of the Corporation was better than all other sample units except for sample unit C. In 1993 growth rate of area under tea of Assam and India was negative. But during that period Corporation could maintain a positive growth rate. The Corporation had been maintaining the same growth rate for another two years when the state average was still maintaining a negative trend. However, in 1996 the Corporation maintained the same area under tea and its growth rate was negative in 1997.During that period all other sample units had a healthy growth.

**TABLE – 6.58**
**COMPARTIVE GROWTH OF AREA UNDER TEA**
**ATCL &NON-ATCL**
**(PC GROWTH OVER PREVIOUS YEARS)**

| Units | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 |
|---|---|---|---|---|---|---|---|
| Cinnamora T.E. | (-)0.2(2.4) | (-)0.1 (-0.1) | 0.5 (-1.1) | 5.1 (-3.0) | 3.1 (1.0) | 0 (0.8) | (-)2.4 (0.9) |
| Sycotta T.E. | 1.5(2.4) | 0.6(-0.1) | 1.1(-1.1) | 1.1(-3.0) | 4.8(1.0) | 0(0.8) | 0.1(0.9) |
| Deepling T.E. | 0(2.4) | 3.0(-0.1) | (-)0.6(-1.1) | (-)2.0(-3.0) | 3.9(1.0) | 0(0.8) | (-)0.2(0.9) |
| Naginijan T.E. | 1.4(2.4) | 4.0(-0.1) | 0.3(-1.1) | 1.9(-3.0) | 2.0(1.0) | 0(0.8) | (-)3.5(0.9) |
| Negheriting T.E. | 1.3(2.4) | 6.8(-0.1) | 0.4(-1.1) | 1.6(-3.0) | (-)0.1(1.0) | 0(0.8) | (-)6.0(0.9) |
| Rajabarrie T.E. | 0(2.4) | 3.5(-0.1) | 0(-1.1) | 0(-3.0) | 0(1.0) | 0(0.8) | 0.2(0.9) |
| Messamara T.E. | 0.4(2.4) | 0.3(-0.1) | 3.2(-1.1) | 3.1(-3.0) | (-)1.2(1.0) | 0(0.8) | (-)4.0(0.9) |
| Rungamatty T.E. | 0.1(2.4) | (-)2.5(-0.1) | 3.9(-1.1) | 2.1(-3.0) | 0.5(1.0) | 0(0.8) | 5.8(0.9) |
| **District av. (Sibsagar) of ATCL Gardens** | **0.6(2.4)** | **2.0(-0.1)** | **1.1(-1.1)** | **1.6(-3.0)** | **1.6(1.0)** | **0(0.8)** | **(-)1.3(0.9)** |
| Amluckie T.E. | 1.4(0.6) | 1.1(0.2) | 1.5 (-2.8) | 1.7 (0.4) | 0.3 (7.4) | 0(0.3) | (-)0.1(0.2) |
| Dejoovalley T.E. | 0(0.6) | 0(0.2) | 6.5(-2.8) | 2.1(0.4) | 0.1(7.4) | 0(0.3) | (-)1.3(0.2) |
| Longai T.E. | 0(0.6) | 0(0.2) | 2.7(-2.8) | 2.7(0.4) | 0(7.4) | 0(0.3) | 0.2(0.2) |
| **District av.(Nagaon) of ATCL gardens** | **0.5(0.6)** | **0.4(0.2)** | **3.6(-2.8)** | **2.2(0.4)** | **0.1(7.4)** | **0(0.3)** | **(-)0.4(0.2)** |
| Longai T.E. | 1.8(0.7) | 0.6(0) | 2.5 (-2.6) | 2.0 (-6.0) | 2.8 (-7.3) | 0(0.3) | (-)0.6(0.3) |
| Isabheel T.E. | 0(0.7) | 0(0) | 2.8(-2.6) | 0.9(-6.0) | 1.8(-7.3) | 0(0.3) | 1.0(0.3) |
| Bidyanagar T.E. | 3.7(0.7) | (-)3.5(0) | 0(-2.6) | 0(-6.0) | 0(-7.3) | 0(0.3) | (-)24.2(0.3) |
| **District av.(Cachar) of ATCL gardens** | **1.8(0.7)** | **(-)1.0(0)** | **1.8(-2.6)** | **1.0(-6.0)** | **1.5(-7.3)** | **0(0.3)** | **(-)8.6(0.3)** |
| **Bholaguri T.E. (Darrang)** | **0(0.3)** | **1.3 (0.1)** | **2.4 (-0.7)** | **0 (1.4)** | **8.6 (-0.4)** | **0(0.1)** | **(-) 3.8(0.1)** |
| **ATCL (Total)** | **0.8** | **0.9** | **1.7** | **1.8** | **1.7** | **0** | **(-)2.0** |
| ASSAM | 1.3 | 0.2 | (-)0.7 | (-)2.8 | (-)0.4 | 0.4 | 0.5 |
| INDIA | 1.0 | (-)0.1 | (-)0.5 | 1.8 | 0.3 | 1.0 | 0.6 |
| SAMPLE A | 0.4 | 0.4 | 0.9 | 0.5 | 1.6 | 0.5 | 0 |
| SAMPLE B | 4.0 | 0.4 | 1.9 | 2.2 | 0 | 2.9 | 0 |
| SAMPLE C | 0.3 | 2.1 | 3.9 | 0.8 | 0.7 | 3.0 | (-)1.2 |

*** Figures in bracket indicate respective district average growth over previous years.**
**Source: Compiled from information colleted from Sample units, Head office, ATCL and Tea Board.**

An important aspect that can be noticed from the Table is that for all the years the Corporation has been maintaining a stable growth rate but the growth rate of the state & the nation have not been so stable.

### 6.5.1 (IV) Comparative Growth of Price of Tea

Price of tea realized by a tea unit is a very important factor contributing to the viability of the unit. It depends on a large number of internal and external factors. Mere looking at the price realization of a tea unit would not help much in understanding its status until and unless these figures are compared with others.

Table 6.59 indicates price fetched by the industry during the period from 1990 to 1997. From the Table it is seen that for most of the years the average price fetched by the tea produced by the Corporation has been lower than the average price of Guwahati Tea Action Center, where maximum of tea of the Corporation are sold. On the other hand price fetched by the private sector sample units are also higher than the average price realized by the Corporation. However, it is worth mentioning here that the Corporation sell most of its tea through Guwahati tea auction center, but the private sector sample tea units sell their tea in Calcutta and other auction centers also. At the same time they also resort to ex-factory sale to a greater extent. However, growth pattern of price of tea shows an encouraging sign for the future of the Corporation, which has been higher for the last three years in comparison to other comparative units under study.

**TABLE –6.59**
**COMPARATIVE GROWTH OF PRICE OF TEA**
**ATCL &NON-ATCL**
**(IN RUPEES)**

| Units | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 |
|---|---|---|---|---|---|---|---|---|
| ATCL | 39.07 | 39.42<br>(0.9) | 42.12<br>(6.8) | 46.94<br>(11.4) | 41.38<br>(-11.8) | 49.42<br>(19.4) | 51.38<br>(4.0) | 75.17<br>(46.3) |
| Guwahati Tea Auction Center | 44.11 | 41.76<br>(-5.3) | 40.70<br>(-2.5) | 51.51<br>(26.6) | 44.16<br>(-14.3) | 50.93<br>(15.3) | 51.00<br>(0.1) | NA |
| India | 43.23 | 40.31<br>(-6.8) | 38.88<br>(-3.5) | 48.93<br>(25.8) | 40.61<br>(-17.0) | 47.99<br>(18.2) | 48.77<br>(1.6) | NA |
| Sample A | 44.00 | 47.54<br>(8.5) | 51.16<br>(7.6) | 55.80<br>(9.1) | 52.81<br>(-5.4) | 55.33<br>(4.8) | 54.29<br>(-1.9) | 74.58<br>(37.37) |
| Sample B* | 49.05 | 51.02<br>(4.0) | 59.45<br>(16.5) | 59.72<br>(0.5) | 58.85<br>(-1.5) | 61.06<br>(3.8) | 57.15<br>(-6.4) | NA |
| Sample C | 44.67 | NA | NA | 50.13 | 49.40<br>(-1.5) | 54.63<br>(10.6) | 54.27<br>(-0.7) | 78.40<br>(44.5) |

*** As actual of price could not be found, the figures were calculated by dividing sale proceeds of tea by production of saleable tea**
**** Figures in bracket indicates pc growth over previous years**
**Source: Compiled from information collected from Sample units, Head Office, ATCL & Tea Board.**
**NA : Not Available**

### 6.5.1 (V) Comparative Employee Strength

Table 6.60 indicates the comparative strength of employees of ATCL and Non-ATCL tea units along with national and state averages. It is worth mentioning here that the strength of employee of the tea units includes staff and executives also. During the study it has been noticed that employee strength of all the units remained almost constant throughout the period. Therefore, it was decided to convert the figure of employee strength into employee -area ratio so as to facilitate a comparative study. It is hoped that while doing so the position of the Corporation in light of the others could easily be assessed.

**TABLE – 6.60**

**COMPARATIVE EMPLOYEE STRENGTH AND EMPLOYEE-AREA RATIO**

**( AS ON 1997-98)**

| Units | Area Under Tea (Hectare) | Employee (Persons) | Employee Area Ratio |
|---|---|---|---|
| ATCL | 6981 | 16451 | 2.36 |
| ASSAM * | 228260 | 602022 | 2.64 |
| INDIA * | 433759 | 1164758 | 2.69 |
| SAMPLE UNIT A | 1406 | 3107 | 2.21 |
| SAMPLE UNIT B | 1727 | 4323 | 2.50 |
| SAMPLE UNIT C | 413 | 852 | 2.06 |

**Source: Compiled from information colleted from individual sample units; Head Office, ATCL and Tea Board**

*** Provisional**

It is seen from the Table that the engagement of employees per hectare of area under plantation of the Corporation has been lower than the national and state average. However, sample unit A and C engage still lesser number of employees per hectare of area under plantation.

### 6.5.2 Comparison of Financial Factors

Finance is the lifeblood of any industrial unit. Proper managing and administering of fund is very essential to be successful in the business. Performance of a business house may be studied by analysing its financial statements. For the purpose of facilitating comparative study between ATCL and Non-ATCL gardens following tools have been used.

i) Comparative analysis of Capital Structure
ii) Comparative analysis of Application of Funds
iii) Comparative analysis of Pattern of Distribution of Revenue, and
iv) Comparative specific Ratio Analysis

It is worth mentioning here that two annual reports of sample B (1992-93 and 1997-98 ) and one of sample A (1990-91)could not be made available. Therefore, figures of those years could not be incorporated. The comparison would have been more representative had the figures of all the years been found.

### 6.5.2 (I) Comparative Analysis of Capital Structure

Table 6.61 indicates the Capital Structure of public sector and private sector sample tea units of Assam. It is seen form the Table that while the sample units rely mostly on their own funds for carrying out their business activities the Corporation has been relying heavily on loan funds. It is seen that from 1994, the creditors have contributed more than 50 pc of total funds of the Corporation. However the position was reverse in case of sample units. In 1997-98 as high as 98 pc of total funds of sample unit B was funded by its own fund. One of the basic reasons behind this heavy dependence on outsiders by the Corporation has been paucity of funds in its various reserve accounts. Since 1992-93 the Corporation had no funds in its reserve accounts. On the other hand funds in the reserve accounts had contributed at least 69 pc of total funds used over the years by sample units. In 1997-98, 94 pc of total funds of sample unit A had come form reserve accounts. From this, it can be concluded that a high pc of revenue of the Corporation had to be paid to the creditors as interest against loan which has resulted into low profit or even loss to the Corporation.

**TABLE – 6.61**
**COMPARATIVE ANALYSIS OF CAPITAL STRUCTURE : ATCL & NON-ATCL**
**( IN PC OF TOTAL FUND )**

| Year | Share Holders Fund | | | | | | Loan Fund | | | Total Fund |
|---|---|---|---|---|---|---|---|---|---|---|
| | Capital | | | Reserve & Surplus | | | ATCL | Sample A | Sample B | |
| | ATCL | Sample A | Sample B | ATCL | Sample A | Sample B | | | | |
| 1990-91 | 14 | NA | 6 | 46 | NA | 78 | 40 | NA | 16 | 100 |
| 1991-92 | 18 | 10 | 5 | 44 | 70 | 75 | 38 | 20 | 20 | 100 |
| 1992-93 | 33 | 5 | NA | 42 | 87 | NA | 25 | 8 | NA | 100 |
| 1993-94 | 54 | 5 | 6 | -- | 91 | 75 | 46 | 4 | 19 | 100 |
| 1994-95 | 45 | 4 | 5 | - | 91 | 69 | 55 | 5 | 26 | 100 |
| 1995-96 | 41 | 4 | 6 | -- | 83 | 76 | 59 | 13 | 18 | 100 |
| 1996-97 | 43 | 4 | 5 | -- | 86 | 79 | 57 | 10 | 16 | 100 |
| 1997-98 | 46 | 4 | NA | -- | 94 | NA | 54 | 2 | NA | 100 |

**Source: Compiled from Annual Reports of the Units.**
**NA : Not Available**

### 6.5.2 (II) Comparative Analysis of Application of Fund

Comparative application of funds, as revealed by Table 6.62, shows that the private sector units apply most of their funds in fixed assets. Because of maintaining a good amount of funds in current assets, they have also been spending money in various other investments. In comparison to this the Corporation's position in respect of fixed assets has been very poor. This is because it could not afford to spend money in acquiring new assets. Over the period under study, percentage of total funds invested in fixed assets by it has been going down. It was highest in 1992-93 when 57 pc of its total funds was used in fixed assets. According to the provisional balance sheets, this figure has gone down to 24 pc in 1997-98. During this period the Corporation has been burdened by negative net current assets. It means that a part of its fixed assets was financed by working capital. It is seen from the Table that as the sample units have not incurred losses, they could utilize their funds in productive purposes, which the Corporation could not due to its deficit results. Deficits accounted for as high as 86 pc of its total funds in 1997-98. It means only 14 pc of its funds were invested in productive purposes.

### 6.5.2 (III) Comparative Distribution of Revenue

From Table 6.63 it is seen that while the Corporation has been spending around 50 pc of its total revenue as cost of operation, the two private sector sample units spend only 25 to 30 pc in this heading. On the other hand the sample units' administrative expenditure (including tax) has been more than that of the Corporation. It is seen that the Corporation has been spending more funds as finance charge in comparison to the sample units. It has been affecting the profitability position of the Corporation. It is also seen that percentage of total revenue spent by the Corporation as finance charge has gradually been increasing over the years. On the other hand amount kept by the Corporation as deprecation has been far below that of the sample units. It can be said that this practice might have affected the production process of the Corporation as it could not replace its machineries in time due to lack of fund in this heading.

**TABLE – 6.62**
**COMPARATIVE ANALYSIS OF APPLICATION OF FUND : ATCL & NON-ATCL**
**( IN PC TO TOTAL FUND )**

| Year | Net Fixed Assets | | | Net Current Assets | | | Other Investments | | | Profit & Loss (Debit Balance) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ATCL | Sample A | Sample B | ATCL | Sample A | Sample B | ATCL | Sample A | Sample B | ATCL | Sample A | Sample B |
| 1990-91 | 56 | NA | 93 | 2 | NA | 6.5 | - | NA | .5 | 42 | NA | - |
| 1991-92 | 55 | 76 | 98.5 | 5 | 10 | 1 | - | 14 | .5 | 40 | - | - |
| 1992-93 | 57 | 90 | NA | 2 | 8 | NA | - | 2 | NA | 41 | - | NA |
| 1993-94 | 28 | 86 | 84 | 14 | 14 | 15.5 | - | - | .5 | 58 | - | - |
| 1994-95 | 26 | 85 | 79 | 8 | 14.5 | 20.5 | - | .5 | .5 | 66 | - | - |
| 1995-96 | 23 | 77 | 79 | 3 | 22 | 20.6 | - | 1 | .4 | 74 | - | - |
| 1996-97 | 22 | 80 | 71 | (-)6 | 18 | 28.5 | - | 2 | .5 | 84 | - | - |
| 1997-98 | 24 | 81 | NA | (-)10 | 18 | NA | - | 1 | NA | 86 | - | NA |

**Source: Compiled from Annual Reports of Sample Units.**
**NA : Not Available**

**TABLE –6.63**
**COMPARATIVE DISTRIBUTION OF REVENUE :**
**ATCL & NON-ATCL (IN PC TO TOTAL REVENUE)**

| Area | Unit | 1990-91 | 1991-92 | 1992-93 | 1993-94 | 1994-95 | 1995-96 | 1996-97 | 1997-98 |
|---|---|---|---|---|---|---|---|---|---|
| Cost of operation | ATCL | 47 | 47 | 51 | 42 | 60 | 57 | 52 | 45 |
| | Sample A | NA | 23 | 27 | 24 | 26 | 26 | 30 | 25 |
| | Sample B | 24 | 34 | NA | 25 | 27 | 32 | 25 | NA |
| Administrative and other expanses (including tax) | ATCL | 41 | 45 | 44 | 37 | 55 | 52 | 48 | 42 |
| | Sample A | NA | 51 | 52 | 53 | 51 | 54 | 48 | 50 |
| | Sample B | 67 | 59 | NA | 59 | 61 | 60 | 60 | NA |
| Finance charge | ATCL | 5 | 7 | 10 | 8 | 14 | 19 | 18 | 14 |
| | Sample A | NA | 5 | 5 | 2 | 2 | 4 | 6 | 3 |
| | Sample B | 1 | 1 | NA | 3 | 4 | 5 | 3 | NA |
| Depreciation | ATCL | 1 | 2 | 2 | 2 | 3 | 3 | 2 | 2 |
| | Sample A | NA | 6 | 3 | 3 | 3 | 4 | 4 | 3 |
| | Sample B | 2 | 3 | NA | 4 | 4 | 4 | 3 | NA |
| Increase/decrease in stock | ATCL | (-)1 | (-).2 | (-)4 | 4 | - | (-)2 | 2 | (-)11 |
| | Sample A | NA | 4 | 3 | 1 | - | 3 | 4 | 3 |
| | Sample B | (-)1 | (-)1 | NA | (-)3 | 5 | 6 | 3 | NA |
| Total expenditure | ATCL | 93 | 101 | 103 | 93 | 132 | 129 | 122 | 92 |
| | Sample A | NA | 89 | 84 | 84 | 82 | 85 | 90 | 78 |
| | Sample B | 92.2 | 94.6 | NA | 88.6 | 99.7 | 94.5 | 93 | NA |
| Net profit/ loss after tax | ATCL | 7 | (-)1 | (-)3 | 7 | (-)32 | (-)29 | (-)22 | 8 |
| | Sample A | NA | 11 | 16 | 16 | 18 | 15 | 10 | 22 |
| | Sample B | 7.8 | 5.4 | NA | 11.4 | 0.3 | 5.5 | 7 | NA |

*** Source: Compiled from Annual Reports of Sample Units.**

### 6.5.2 (IV) Comparison of Ratios

For the purpose of facilitating a comparative analysis of the functioning of the sample tea units in private sector and public sectors, the following ratios have been calculated and interpreted. It is worth mentioning here that while calculating the ratios, same criteria have been adopted for all the units. These criteria have been discussed earlier in this chapter. It is hoped that this comparative study would also help in understanding the trend of business in the two sectors.

### 6.5.2 (IV) A Comparison of Current Ratio

From Table 6.64 it is seen that in comparison to ATCL the overall liquidity positions of the sample units are better. While the current ratio of the sample private sector units have shown a rising trend since 1993-94, the current ratio of the Corporation went down since then. From the Table it can be said that ATCL has not been able to maintain a satisfactory liquidity position over the last eight years period as compared to private sector tea units.

**TABLE – 6.64**

**COMPARARISON CURRENT RATIO :ATCL & NON-ATCL**

| UNITS | 1990-91 | 1991-92 | 1992-93 | 1993-94 | 1994-95 | 1995-96 | 1996-97 | 1997-98 |
|---|---|---|---|---|---|---|---|---|
| ATCL | 1.11 | 1.19 | 1.06 | 1.41 | 1.27 | 1.13 | 0.80 | 0.81 |
| SAMPLE A | NA | 1.36 | 1.14 | 2.13 | 2.14 | 3.94 | 3.28 | 2.84 |
| SAMPLE B | 1.10 | 1.02 | NA | 1.34 | 1.72 | 1.56 | 1.81 | NA |

**Source: Compiled from Annual Reports of Sample Units.**

**NA: Not Available**

### 6.5.2 (IV) B Comparison of Quick Ratio

From Table 6.65 it is seen that, while for all the years under study sample unit A has been maintaining a satisfactory quick ratio of 1:1, ATCL could maintain it only in 1993-94 and 1994-95. However, up to 1991-96 its quick ratios were near to the accepted norm. On the other hand the position of sample unit B has not been satisfactory in terms of quick ratio. It can be said from the figures in the Table that the

position of ATCL and sample unit B has not been satisfactory in the sense that they were not in a position to pay off their liquid liabilities in time. It is also seen from the Table that while quick ratio of the Corporation has been going down since 1994-95, the quick ratio of sample unit A started falling from 1996-97 only.

**TABLE – 6.65**

**COMPARAISON OF QUICK RATIO: ATCL & NON-ATCL**

| UNITS | 1990-91 | 1991-92 | 1992-93 | 1993-94 | 1994-95 | 1995-96 | 1996-97 | 1997-98 |
|---|---|---|---|---|---|---|---|---|
| **ATCL** | 0.95 | 0.89 | 0.93 | 1.25 | 1.10 | 0.95 | 0.73 | 0.58 |
| **SAMPLE A** | NA | 1.39 | 0.82 | 1.79 | 1.86 | 3.32 | 2.83 | 2.31 |
| **SAMPLE B** | 0.89 | 0.74 | NA | 0.56 | 0.74 | 0.61 | 1.00 | NA |

**Source: Compiled From Annual Reports of Sample Units.**

**NA: Not Available**

### 6.5.2 (IV) C Comparison of Absolute Liquid Ratio

Table 6.66 indicates comparative absolute liquidity positions of ATCL and two private sector sample tea units. It is seen from the Table that the position of the Corporation and sample A has been almost same over the years. Up to 1995-96 the Corporation's absolute liquidity position has been above accepted norm of .75. But the other unit has been unable to maintain the same during the period under study. Comparing the ratio of the Corporation with that of sample A, it is seen that since 1993-94 the ratio of the Corporation has been going down whereas the ratio of the sample unit A has been going up since 1992-93.

**TABLE – 6.66**

**COMPARISON OF ABSOLUTE LIQUID RATIO : ATCL & NON-ATCL**

| UNITS | 1990-91 | 1991-92 | 1992-93 | 1993-94 | 1994-95 | 1995-96 | 1996-97 | 1997-98 |
|---|---|---|---|---|---|---|---|---|
| ATCL | 0.89 | 0.84 | 0.87 | 1.18 | 1.01 | 0.89 | 0.66 | 0.54 |
| SAMPLE A | NA | 0.99 | 0.74 | 1.60 | 1.75 | 3.02 | 2.34 | 1.67 |
| SAMPLE B | 0.86 | 0.61 | NA | 0.32 | 0.54 | 0.41 | 0.74 | NA |

**Source : Compiled From Annual Reports of Sample Units.**

**NA: Not Available**

The above three ratios are useful tools to analyse the short-term solvency position of a concern. It is seen from these three ratios that during the last eight year period the current ratio and the quick ratio of the Corporation has not been satisfactory and it depicts a poor short-term solvency position of the Corporation. However, the absolute liquid position of the Corporation has been satisfactory and in comparison to some private sector units it has been better over the years. It is worth mentioning here that the trend of the ratios are not much encouraging as they have been going down gradually whereas the private sector sample units have been maintaining a positive growth.

### 6.5.2 (IV) D Comparison of Debt-Equity Ratio

Table 6.67 reveals the proportionate claims of shareholders and creditors against the assets of the three units under study. Form the Table it is seen that in comparison to the private sector sample units, the Corporation has been maintaining a very high Debt-Equity ratio. It is seen from the Table that during the period under study sample unit A has never had a Debt-Equity ratio higher than 0.3, which was the lowest in case of the Corporation. On the other hand the two private sector sample units have been maintaining a stable Debt-Equity mixture, while it has been fluctuating in case of the Corporation. It can be said from the Table that the policy of the managements of the private sector sample units have been to use lesser outside

funds in the business whereas the Corporation has been using higher external funds than its own funds.

**TABLE – 6.67**

**COMPARISON OF DEBT-EQUITY RATIO : ATCL & NON-ATCL**

| UNITS | 1990-91 | 1991-92 | 1992-93 | 1993-94 | 1994-95 | 1995-96 | 1996-97 | 1997-98 |
|---|---|---|---|---|---|---|---|---|
| ATCL | 0.6 | 1.0 | 0.3 | 0.9 | 1.3 | 1.4 | 1.4 | 0.9 |
| SAMPLE A | NA | 0.3 | 0.09 | 0.04 | 0.05 | 0.1 | 0.1 | 0.02 |
| SAMPLE B | 0.2 | 0.2 | NA | 0.2 | 0.4 | 0.2 | 0.2 | NA |

**Source : Compiled From Annual Reports of Sample Units.**

**NA: Not Available**

### 6.5.2 (IV) E Comparison of Solvency Ratio

Solvency ratio indicates to what extent the assets of an unit are financed by the creditors of the concern. From Table 6.68 it is seen that during the period of last eight years under study the solvency position of the Corporation has been very poor. While, during the period under study the lowest solvency ratio of the Corporation was 61.9 pc in 1990-91 the highest solvency ratio of sample A was registered 40 pc in 1991-92 and of B 49.4 pc in 1991-92. Both the private sector units have been maintaining a stable solvency position. At the same time it has been fluctuating very much in case of ATCL. Another important finding of the study is that while the ratio has been going down over the years in the private sector sample units, it has been going up in the Corporation.

**TABLE – 6.68**

**COMPARISON OF SOLVENCY RATIO (IN PC) : ATCL & NON-ATCL**

| UNITS | 1990-91 | 1991-92 | 1992-93 | 1993-94 | 1994-95 | 1995-96 | 1996-97 | 1997-98 |
|---|---|---|---|---|---|---|---|---|
| ATCL | 75.8 | 74.8 | 61.9 | 105.5 | 133.8 | 160.1 | 193.6 | 162.5 |
| SAMPLE A | NA | 40.0 | 20.6 | 14.7 | 15.8 | 18.9 | 16.6 | 10.8 |
| SAMPLE B | 48.4 | 49.4 | NA | 44.9 | 42.4 | 41.0 | 38.0 | NA |

**Source : Compiled From Annual Reports , NA: Not Available.**

The two ratios discussed above, reveal the long-term solvency position of the units under study. It is seen from the ratios that the long -term solvency position of the Corporation has been deplorable and shows a gloomy picture of its future position. At the same time the private sector sample units were enjoying a healthy position.

### 6.5.2 (IV) F Comparison of Ratio of Return on Total Capital

Table 6.69 indicates the return on total capital employed by the three units under study. This ratio indicates the rate of profit made by the units before making payment of interest and tax on its total capital employed over the years.

**TABLE – 6.69**

**COMPARISON OF RATIO OF CAPITAL EMPLOYED: ATCL & NON-ATCL**

| UNITS | 1990-91 | 1991-92 | 1992-93 | 1993-94 | 1994-95 | 1995-96 | 1996-97 | 1997-98 |
|---|---|---|---|---|---|---|---|---|
| ATCL | 4.8 | 3.1 | 3.3 | 11.6 | (-)7.8 | (-)4.1 | (-)1.7 | 17.6 |
| SAMPLE A | NA | 25.7 | 12.6 | 11.7 | 12.3 | 10.1 | 7.6 | 15.5 |
| SAMPLE B | 52.2 | 22.6 | NA | 25.6 | 5.3 | 19.0 | 17.5 | NA |

**Source: Compiled from Annual Reports of Sample Units.**

**NA : Not Available**

From the Table it is seen that the rate of profit made by the Corporation has been far below the profit made by the two private sector sample units. It is seen that while the ratio of the private sector units have been very high, the ratio of the Corporation has been negative for the last three years from 1994-95 to 1996-97. It implies that during those years the Corporation suffered losses even if considered before deducting interest and tax.

### 6.5.2 (IV) G Comparison of Ratio of Net –Surpluses to Total Income

Table 6.70 indicates the comparative position of the three units under study in respect of net profit (profit after interest and tax) on its total revenue collection The Table clearly differentiates the status of the Corporation in terms of profitability from the two private sector sample tea units.

**TABLE – 6.70**

**COMPARISON OF RATIO OF NET SURPLUSES TO TOTAL INCOME: ATCL & NON-ATCL**

| UNITS | 1990-91 | 1991-92 | 1992-93 | 1993-94 | 1994-95 | 1995-96 | 1996-97 | 1997-98 |
|---|---|---|---|---|---|---|---|---|
| ATCL | 6.6 | (-) 0.7 | (-) 3.1 | 6.5 | (-) 32.5 | (-) 29.2 | (-) 22.2 | 8.3 |
| SAMPLE A | NA | 11.4 | 15.7 | 16.1 | 18.2 | 15.1 | 9.8 | 21.7 |
| SAMPLE B | 7.7 | 5.3 | NA | 11.1 | 0.3 | 5.2 | 7.3 | NA |

**Source: Compiled from Annual Reports of Sample Units.**

**NA: Not Available**

From the Table it is clear that for almost all the years the expenses of the Corporation has been exceeding its revenue. But at the same time the sample units have been enjoying a good profit. The fact that these ratios are calculated after taking into consideration the finance charges and taxes, has not affected the ratios of the private sector sample units. But this has affected the ratios of the Corporation to a great extent. While all the units under study are to pay taxes at equal rate, it can be

said that the finance charges has been making a lot of difference between the units in the two sectors- private & public.

The above two ratios are very much useful in judging the profitability position of the units. It is seen from the two ratios that the sample units under private sector have been enjoying a good margin of profit both in terms of capital employed and total revenue collection.

### 6.6 Health of Sample Public Sector Tea Units: An Over View

*From the foregoing discussions it is now clear that the public-sector tea units* of Assam have not been performing well. Its performance in the financial sector as well as non -financial sector has been poor. After comparing the performance of the public sector units with some sample units in private sector, it would now be appropriate to see how the other public sector tea units of the country have been performing. In a bid to gather information from the other public sector tea units of the country to throw light on their performance, all these units were contacted. But due to lack of response from their side that aspect of the study could not be covered. However, one such unit of Sikkim has responded favourably and some information have been collected from it. Here an attempt has been made to see the growth of that unit over the recent eight years of 1990-91 to 1997-98.

The unit is one of the oldest public sector units of the country with only one tea garden under it. Table 6.71 indicates the growth of the unit for the last eight years. From the Table it is seen that the sample public sector tea unit enjoys a sound position in financial and non-financial terms. Over the years its production went up by 16.7 pc and yield per hectare went up by 14.9 pc. At the same time it was also noticed that for most of the years the yield per hectare of the unit has always been higher than the district average yield per hectare. The ratio of manpower used to area under cultivation has also been satisfactory. The employee- area ratio of the unit was 2.32 persons per hectare of area under tea in 1997-98, which was below the national average of 2.69 persons for the year.

**TABLE – 6.71**

**GROWTH OF SAMPLE TEA UNIT IN PUBLIC SECTOR**

**1990-91 TO 1997-98**

| Year | Gross Area (Hectare) | Area Under Tea (Hectare) | Production (Kg) | No. Of Workers | Yield per Hectare (Kg./Hectare | Profit (Rs in Lakh) |
|---|---|---|---|---|---|---|
| 1990-91 | 224.30 | 169.63 | 95856 | 310 | 565 (526) | 86.72 |
| 1991-92 | 224.30 | 169.63 | 97579 | 305 | 575 (556) | 85.13 |
| 1992 | 224.30 | 169.63 | 83608 | 355 | 492 (571) | 50.87 |
| 1993 | 224.30 | 172.27 | 95622 | 368 | 555 (515) | 29.81 |
| 1994 | 224.30 | 172.27 | 102042 | 386 | 592 (558) | 62.02 |
| 1995 | 224.30 | 172.27 | 116379 | 392 | 675 (593) | 120.76 |
| 1996 | 224.30 | 172.27 | 106529 | 390 | 618 (674) | 91.35 |
| 1997-98 | 224.30 | 172.27 | 111830 | 400 | 649(NA) | 96.23 |

*** Figures in bracket indicates district average yield per hectare of the State for the year. **NA: Not Available.**

**Source: The Tea Unit.**

**TABLE – 6.72**

**COMPARATIVE GROWTH BETWEEN ATCL &**

**SAMPLE PUBLIC SECTOR UNIT**

**1990-91 TO 1997-98**

| Indicators | ATCL | Sample Public Sector Unit |
|---|---|---|
| PC GROWTH OF AREA UNDER TEA | 5.05 | 1.6 |
| PC GROWTH OF PRODUCTION | (-) 6.8 | 16.7 |
| PC GROWTH OF YIELD PER HECTARE | (-) 4.8 | 14.9 |
| PC GRWOTH OF EMPLOYEE-AREA RATIO | (-) 5.6 | 32.9 |

**Source: Compiled from information collected from the Head Offices of the Units.**

From Table 6.72 it is seen that over the last eight years the sample unit in public sector has grown better than ATCL. While over the years the area under tea of the sample unit went up by only 1.6 pc, the employee area ratio of the unit went up by

32.9 pc. From the figures it is seen that the unit has been able to provide employment opportunity to a large number of people over the years, which has been a very important philosophy of the public sector units in India. But at the same time the unit has also been able to earn a substantial amount of profits during the period. It was possible for the unit because it has been able to maintain a substantial growth rate of yield per hectare. Growth rate of production and yield per hectare of the unit has been far better than ATCL. While the growth rate of production and yield per hectare of ATCL went down by 6.8 pc and 4.8 pc respectively, the same have gone up by 16.7 pc and 14.9 pc in case of the sample unit in public sector over the period under study.

## 6.7 APPLICATION OF "SICKTU MODEL" TO ATCL

After exploring the health of Assam Tea Corporation at length, it would now be appropriate to see whether the Corporation is sick. In this respect the 'SICKTU MODEL' suggested earlier would be useful. The model, which is based on Chapter III, Section 16 B (1) of the Tea Act, 1953, takes into consideration the following four factors (1) Operational results (2) Average yield (3) payment of dues, and (4) Manner of management. According to it a tea unit is considered to be sick if, in three out of the last five years, immediately preceding the year in which such opinion is formed the tea undertaking or the unit:

a) has made losses; or
b) has average yield lower than the district average yield by twenty five percent or more; or
c) has habitually made default in payment of legal dues; or
d) has been managed in an undesirable manner, detrimental to the industry & public.

On the basis of these criteria it would now be seen whether ATCL is a sick unit. As the gardens of the Corporation spread over a number of districts of Assam the judgment may well be made for the Corporation in general and individual gardens in particular.

### 6.7.1 Operational Results

Table 6.73 indicates operational results of the Corporation for the recent five years from 1993-94 to 1997-98. It is seen from the Table that most of the gardens of the Corporation have been incurring losses almost regularly. But strictly following this criterion of 'SICKTU MODEL' the Sycotta, Deepling, Naginijan, Rajabarrie and the gardens taken form Brahmaputra group (Negheriting, Messamara, Rungamatty) are found to be sick. On the other hand the Corporation as a whole can be said sick from this criterion as it suffered losses in the three years from 1994-95 to 1996-97.

### 6.7.2 Average Yield

Table 6.74 indicates yield per hectare of the gardens of the Corporation for the last five years. At the same time it also shows the district average yield after deducting 25 pc from it. As the gardens of the Corporation spread over various districts of the state therefore average yield of these districts have been shown separately after deducting 25 pc from it. It would help making a comparative study in order to see whether the Corporation falls under this criterion of determining sickness. It is clear from the Table that as the average yield of the Corporation has been less than 75 pc of the respective district average where the gardens of the Corporation are situated each garden of the Corporation except Bholaguri in Darrang district and Dejoovalley in Nagaon district can be said to be sick. The average yield of the Corporation for the last five years has also been less than the average yield of Assam and India even after deducting 25 pc. In this context it is worth mentioning that the districts in question here are the tea districts as identified by Tea Board.

### 6.7.3 Payment of Dues

According to the Model, a tea unit may be considered sick if it has habitually made default in the payment of various dues to the employees and the government. It includes dues to the labours like wages, provident fund, gratuity etc. It has been explored during the study that the Corporation has been regularly making default in paying provident fund to the Provident Fund Authorities for its labours. As on 1997-98, total accumulated arrear dues of it against provident fund has been Rs. 311.68 lakhs. At the same time the arrear dues of the Corporation against gratuity has been Rs. 37.60 lakhs. Therefore, from this point of view also the Corporation may be adjudged sick.

**TABLE – 6.73**
**SICKNESS DETRMINATION IN ATCL**
**(OPERATIONAL RESULTS)**

| Garden | 1993-94 | 1994-95 | 1995-96 | 1996-97 | 1997-98 | Remark |
|---|---|---|---|---|---|---|
| Cinnamora | Profit | Loss | Loss | Profit | Profit | -- |
| Sycotta | Profit | Loss | Loss | Profit | Loss | Sick |
| Deepling | Loss | Loss | Loss | Loss | Loss | Sick |
| Naginijan | Loss | Loss | Loss | Loss | Loss | Sick |
| Rajabarrie | Loss | Loss | Loss | Loss | Loss | Sick |
| Negheriting | -- | -- | -- | -- | -- | -- |
| Messamara | Loss | Loss | Loss | Loss | Profit | Sick |
| Rungamatty | -- | -- | -- | -- | -- | -- |
| Amluckie | Profit | Loss | Loss | Profit | Profit | -- |
| Dejoovalley | Profit | Loss | Loss | Profit | Profit | -- |
| Loongsoong | Profit | Loss | Loss | Profit | Profit | -- |
| Longai | Profit | Loss | Loss | Profit | Profit | -- |
| Isabheel | Profit | Loss | Loss | Profit | Profit | -- |
| Bholaguri | Profit | Profit | Loss | Profit | Profit | -- |
| ATCL | Profit | Loss | Loss | Loss | Profit | Sick |

**Source: Provisional Annual Reports, ATCL.**

**TABLE – 6.74**
**SICKNESS DETRMINATION IN ATCL**
**( YIELD PER HECTARE )**

| Gardens | 1993-94 | 1994-95 | 1995-96 | 1996-97 | 1997-98 | Remarks |
|---|---|---|---|---|---|---|
| Cinnamora | 1107 (1141) | 901(1167) | 903 (1172) | 992 (1318) | 865 (1312) | Sick |
| Sycotta | 1041(1141) | 871(1167) | 878(1172) | 928(1318) | 765(1312) | Sick |
| Deepling | 1098(1141) | 1109(1167) | 1007(1172) | 1078(1318) | 1090(1312) | Sick |
| Naginijan | 995(1141) | 857(1167) | 844(1172) | 835(1318) | 803(1312) | Sick |
| Negheriting | 861(1141) | 666(1167) | 672(1172) | 849(1318) | 754(1312) | Sick |
| Rajabarrie | 860(1141) | 784(1167) | 711(1172) | 894(1318) | 782(1312) | Sick |
| Messamara | 689(1141) | 519(1167) | 515(1172) | 695(1318) | 645(1312) | Sick |
| Rungamatty | 739(1141) | 544(1167) | 504(1172) | 737(1318) | 704(1312) | Sick |
| **Dist av.(Sibsagar) of ATCL gardens** | **924(1141)** | **781(1167)** | **754(1172)** | **876(1318)** | **801(1312)** | **Sick** |
| Amluckie | 1473 (1243) | 1221 (1242) | 1094 (1263) | 1281 (1285) | 1206 (1306) | Sick |
| Dejoovalley | 1783(1243) | 1553(1242) | 1297(1263) | 1423(1285) | 1426(1306) | - |
| Loongsoong | 1412(1243) | 1194(1242) | 983(1263) | 1208(1285) | 1034(1306) | Sick |
| **District av. (Nagaon) of ATCL gardens** | **1556(1243)** | **1323(1242)** | **1245(1263)** | **1304(1285)** | **1222(1306)** | - |
| Longai | 915 (918) | 844 (972) | 782 (1006) | 790(1163) | 792 (1247) | Sick |
| Isabheel | 973(918) | 853(972) | 798(1006) | 852(1163) | 842 (1247) | Sick |
| Bidyanagar | 690(918) | 704(972) | 607(1006) | 698(1163) | 722(1247) | Sick |
| **Dist. Av. (Cachar) of ATCL gardens** | **859(918)** | **814(972)** | **729(1006)** | **780(1163)** | **785(1247)** | **Sick** |
| **Bholaguri (Darrang)** | **1606 (1537)** | **1574(1503)** | **1434 (1499)** | **1480 (1502)** | **1524 (1469)** | - |
| **ATCL (Total)** | **1083** | **949** | **869** | **983** | **930** | **Sick** |
| **Average of ATCL districts.** | **1210** | **1221** | **1235** | **1317** | **1333** | - |
| Assam average* | 1328 | 1323 | 1334 | 1394 | 1390 | - |
| India average* | 1364 | 1326 | 1328 | 1357 | 1402 | - |

*** Figures in bracket indicates district average yields after deducting 25 pc. Assam average and India average figures are shown after deducting 25 pc from the actual figures.**
**Source: Head office ATCL & Tea Board**

### 6.7.4 Manner of Management

According to the Model if a tea unit has been managed in such a manner, which is detrimental to the industry as a whole and to the interest of the public, the unit may be considered sick.

It is seen in the earlier discussions that the Corporation has been facing acute financial crisis due to regular losses. The total accumulated loss of the Corporation as on 1997-98 has been Rs. 5020 lakhs, whereas the total shareholders fund including reserve and surplus as on the same period was Rs. 2754 lakhs. This shows the highly deplorable situation of the Corporation. Under such condition it cannot be expected to do any good to the industry and to the public interest. On the contrary, all the losses have been borne by the public indirectly as it is a public enterprise. The fund invested in the Corporation by the creditors and the financial institutions are not safe. The facilities and the dues provided by the Corporation to its employees in comparison to its counterparts in the private sector are not satisfactory. It has not been able to pay its dues to the workers for long. Instances are there when it did not release its retired workers, as it could not pay the dues to them in time. It has been observed during the study that there has been an internal feeling of dissension and distrust on the part of the rank and file of the Corporation. Agitations carried out by the employees of the Corporation from time to time against its management to fulfill their demands may be cited as example in support to this. In view of these, the activities carried out by the Corporation can not be said to be in the better interest of the tea industry. Moreover sickness in one unit may plunge the entire industry to sickness.

From the discussions made above it can be said that ATCL has failed to satisfy all the four acid tests of sickness determination and the Corporation may be considered as sick.

## 6.8 CONCLUSION

The analysis made above shows clearly that while the private sector sample units have been enjoying a commendable health, ATCL gardens are in a deplorable state of affairs, though both are carrying out business in the same climatic, socio-economic and political conditions. The comparative analysis between public sector and private sector sample tea units have shown that over the years, though the area under tea of the Corporation has grown at a faster rate and at the same time the growth rate of yield per hectare has been slightly better than some of the comparative units, still the yield per hectare of the Corporation has been far below the comparative units. As on 1997-98 the average of the three private sector sample units regarding yield per hectare has been around 2.6 times more than the average yield per hectare of the Corporation's gardens.

The comparison in the financial sphere has shown that while the Corporation has been reeling under acute financial crisis due to poor financial performance the private sector units have been enjoying a good financial health. It is seen from the foregoing discussions that while the private sector units have been relying heavily on their own funds, the capital structure of the Corporation has been such that it relies mostly on borrowed funds. As a result of that a huge amount of fund has been regularly going from its total revenue collection as finance charges. It can also be concluded that the borrowed funds were not used in productive proposes, as a result of which the yield per hectare of the Corporation has also been lower. On the other hand, while the private sector units have been paying finance charge at around 4 pc of the total revenue collection, the Corporation has been paying it at around 15 pc. Further, a huge accumulated loss has forced the Corporation to maintain a very poor pc of fixed assets to its total funds. While the sample units in the private sector have been applying as high as around 80 pc of its total funds in fixed asset, the Corporation, for the last two years, has been maintaining only around 15 pc of its funds in fixed assets. During the last two years under study the Corporation has been bearing the burden of negative working capital. This shows the poor short- term solvency position of the Corporation.

The long- term solvency position of the Corporation has also been very poor while comparing with those of the sample units in the private sector. Over the period

under study, the Corporation always had adverse Debt –Equity ratio and Solvency ratio. And finally it is seen that all these factors have contributed to the poor profitability position of the Corporation. The discussions made above also suggest that the Corporation may well be considered sick as it falls under all the criteria of sickness determination as advanced by the proposed SICKTU Model. However, it is noticed that the trend of growth of the Corporation over the recent eight years has been encouraging. From this point of view, it may be considered as a viable unit. By taking up some immediate corrective measures the premier public sector tea unit of the country may be converted into a healthy one.

To conclude, it can be said that in order to improve the functioning of the Corporation two of its most critical problems will have to be addressed immediately. In the financial sphere, attempt will have to be made to reduce dependence on outside funds. It would reduce making payment of high finance charges. This would also lead to better profitability on one hand and develop long term solvency of the Corporation on the other. In the non-financial sphere, every possible attempt would have to be made to increase the yield per hectare of the Corporation. This would also lead to good revenue collection leading to good profitability. This has exactly been happening in the sample public sector tea unit of Sikkim, as studied earlier. However, a separate discussion on the problems and remedial measures of the Corporation has been made in the next chapter.

# CHAPTER VII

## Problems and Remedial Measures

# CHAPTER-VII

## PROBLEMS AND REMEDIAL MEASURES

### 7.1 INTRODUCTION

After exploring the health status, it would now be appropriate to diagnose the constraints behind the sluggish growth of Assam Tea Corporation (ATCL). Being a public sector unit, it is handicapped by certain constraints from the day of its establishment. It is seen from the discussions made earlier that most of the public sector units in the country have been incurring heavy losses. Being in the plantation sector, ATCL possesses certain problems, which are not common in other public sector units. It is noteworthy that the gardens owned by ATCL were already sick when they were taken over by it. The problem areas of ATCL were studied in detail. These problems can be grouped into various types as mentioned below:

1. Problems Related to Objectives
2. Organistional Problems
3. Geographical Problems
4. Production Problems
5. Financial Problems
6. Personnel Problems
7. Problems Related to Planning
8. Marketing Problems

#### 7.1.1 Problems Related to Objective

Objective is the end point of a managerial programme for the achievement of which all the efforts of an enterprise are directed. It is considered as the guide in channelising the activities. On the basis of the established objectives the working plans of the enterprise are chalked out and accordingly the actual performance are rated with those of desired. Hence it is very essential to have a proper and clear- cut objective for any organisation.

However, like all other public sector units, ATCL is also handicapped by lack of any clear-cut economic objective. It is seen from the discussions made earlier that ATCL was formed to protect the interest of the tea industry in general and to safeguard the interest of the tea garden employees in particular. At that time it was not expected to earn any surplus. Therefore, it has been rendering its services for protecting the services of its sixteen thousand employees by taking over such gardens, which were on the verge of closure. But while doing so the Corporation never considered the economic side of running the gardens. As a result of that it has constantly been incurring annual deficits, which has accumulated to the extent of around Rs.50 crores at the end of the financial year 1997-98. The management is often guided by socialistic approach in taking decisions in policy matters and day to day activities. As a result of that very often they have to sacrifice the economic interest of running the gardens. It leads to diversion of funds to the welfare activities and non-productive (non-operating) activities, which any other garden in private sector would not do in normal course of business. Under such situations the units in private sector would spend maximum amount of funds in developmental works of the garden like replantation, extension plantation, expenditure in agricultural inputs etc.

But now the time has come when the public sector units are also expected to earn surplus. If not, they are to follow an optimum policy of operating at no profit no loss. Under the changing economic conditions the management of the Corporation has been under constant pressure to deliver the goods with a different philosophy. Even threats come from the government side that public enterprises would have to generate funds for its survival and that the government would not provide budgetary support to them any more. Under such changing situations the management of the Corporation is in a juxtaposition of self-contradictory objectives which they are to follow.

### 7.1.2 Organisational Problems

It was observed during the study that the Corporation is yet to prepare a comprehensive organisational structure. The organisation chart provided by the Head Office authorities does not clearly show the positions and their inter-relationship in the organisation. However, it is apparent from the organisation chart that the overall organisational structure of ATCL can broadly be classified into three distinct hierarchy.

The Board of Directors is the top-level authority of the Corporation. It is its supreme policy making body. According to clause 91 of the Articles of Association of the Corporation, until otherwise determined by a resolution passed at a General Meeting, the number of Directors of the Corporation shall not be less than three nor more than fifteen. The Govt appoints the Directors. It may appoint one of the Directors as the Chairman Cum Managing Director. Some times two different Directors may be appointed to hold the offices of Chairman and Managing Director. They may be appointed to hold the office for a fixed period or for an indefinite period.

The executives of the Head Office constitute the second group of managerial personnel. The executive team is headed by the General Manager(s) of the Corporation. They operate their activities under the Directors.

The General Managers in charge of various gardens, the respective garden managers and assistant manager constitute the third group of managers of the Corporation. There is provision for four General Managers of the Corporation and two of them are to be stationed at Jorhat and Nagaon Districts. Entire gardens of the Corporation are divided into two groups. Gardens of Jorhat, Sibsagar and Golaghat are considered group "A" gardens and the gardens of Karimganj, Nagaon and Sonitpur are in Group "B". General Manager of Jorhat district look after the gardens of group "A" while the General Manager of Nagaon district look after the gardens of Group "B". The two General Managers represent the Head Office at the garden level. The organizational chart of ATCL, showing various positions and their relationship with each other is presented in Table 7.1.

From the Table it is seen that the structure at the Head Office level has been top heavy with superfluous designations. This has created a very complex structure in the Head Office level, which is against the principle of a good organisation. On the other hand a number of key positions have been lying vacant since long. Further, sufficient emphasis has not been given in the administration at garden levels. The gardens of the Corporation are spread throughout the length and breath of the state.

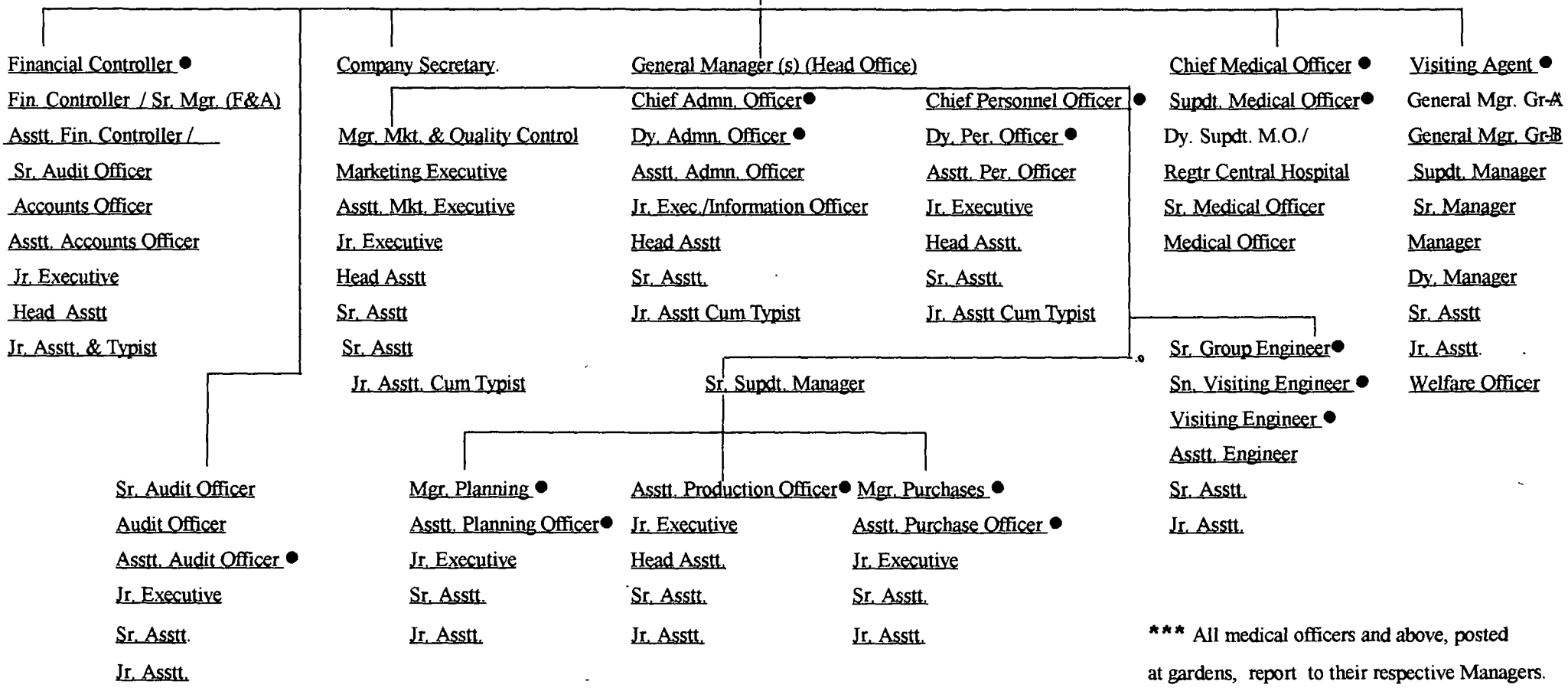
## TABLE: 7.1

### HIERARCHY CHART(ATCL)

**BOARD OF DIRECTORS**

**CHAIRMAN**

**MANAGING DIRECTOR**




*** All medical officers and above, posted at gardens, report to their respective Managers.

● Vacant position

**Source :- Head Office , ATCL**

**Position as on 1.1.1998**

Moreover, the garden level mangers do not enjoy any autonomy in discharging their duties. For all the sundries, they need to rush to the Head office. On the other hand they are held accountable for poor performance in their respective gardens.

It is also seen that two different work cultures prevail in Head Office and in the gardens of the Corporation. The approach of the Head Office is bureaucratic in nature. The employees in the Head Office follow a working pattern which is followed in any Government department, but the gardens on the other hand follow the typical tea garden pattern of working. This has created a wide gap between the Head Office staff and the garden administrators. Some of the garden level administrators expressed their dissatisfaction and anger over the issue.

Another important limitation of the Corporation lies in its top-level authority itself. As is seen from the organizational chart, the Chairman and the Managing Director are two of its most powerful positions. They exercise supreme authority as far as policy making of the Corporation is concerned. To discharge their duties effectively these persons should be experienced in plantation activities. But it is observed that for most of the years, these positions have been held by IAS officers. They had no experience in plantation industry. Moreover, there were instances when the post of Chairman was lying vacant for quite some period. The persons in the helm of affairs without any plantation experience can not be expected to do justice to the Corporation. This is evidenced from the loss suffered by the Corporation for most of the years.

From Table 7.2 and 7.3, it is seen that since its establishment up to 1st of January 1998, office of the Chairman has been occupied by the IAS officers for around 68 pc of the time. Only three tea planters were appointed as Chairman of the Corporation over the years. Like that only two tea planters were appointed as Managing Director over the years.

Another organizational problem, which has been creating impediments in the growth of the Corporation is the short tenure of its Chairmen and Managing Directors. It is seen from the Tables that except for the first Chairman and Managing Director, rest had served for a very short period of time. Such short periods were not enough

for them to take up any plan for the betterment of the Corporation. On the other hand many of them were also entrusted responsibilities to look after activities of more than one govt. departments. This has been indeed detrimental for the long- term interest of the Corporation.

**TABLE: 7. 2**

**CHAIRMEN OF ATCL**

| Chairman | Background | From | To | Tenure | | |
|---|---|---|---|---|---|---|
| | | | | Y* | M* | D* |
| 1st | I.A.S. | 09.02.1972 | 20.07.1980 | 08 | 05 | 11 |
| 2nd | I.A.S. | 21.07.1980 | 26.05.1981 | 00 | 10 | 05 |
| 3rd | M.L.A | 27.05.1981 | 10.07.1984 | 03 | 01 | 14 |
| 4th | Planter | 11.07.1984 | 03.01.1986 | 01 | 05 | 23 |
| 5th | Minister, Industry | 04.01.1986 | 07.08.1986 | 00 | 07 | 03 |
| 6th | Planter | 08.08.1986 | 20.06.1988 | 01 | 10 | 12 |
| 7th | I.A.S. | 21.06.1988 | 03.08.1988 | 00 | 01 | 14 |
| 8th | I.A.S. | 04.08.1988 | 08.03.1989 | 00 | 07 | 04 |
| 9th | M.L.A. | 19.03.1989 | 07.08.1990 | 01 | 05 | 00 |
| 10th | M.L.A. | 08.08.1990 | 29.11.1990 | 01 | 03 | 21 |
| Vacant | -- | 30.11.1990 | 21.01.1991 | 00 | 01 | 21 |
| 11th | I.A.S. | 22.01.1991 | 24.09.1991 | 00 | 08 | 02 |
| 12th | Planter | 25.09.1991 | 10.06.1996 | 04 | 08 | 15 |
| 13th | I.A.S. | 11.06.1996 | 20.12.1996 | 00 | 06 | 00 |
| 14th | M.L.A. | 21.12.1996 | Continue | -- | - | -- |

***Y=Year, M=Month, D=Day.** **Source: Head Office, ATCL**

TABLE :7.3

MANAGING DIRECTORS OF ATCL

| Managing Director | Background | From | To | Tenure | | |
|---|---|---|---|---|---|---|
| | | | | Y* | M* | D* |
| 1st | Rtd.Dir,A.T.A. | 09.02.1972 | 30.08.1980 | 08 | 06 | 21 |
| 2nd | I.A.S. | 01.09.1980 | 26.05.1981 | 00 | 08 | 25 |
| Vacant | ------ | 27.05.1981 | 03.09.1981 | 00 | 03 | 07 |
| 3rd | I.A.S. | 04.09.1981 | 06.03.1984 | 02 | 06 | 02 |
| 4th | Planter | 07.03.1984 | 30.01.1988 | 03 | 10 | 23 |
| 5th | I.A.S. | 01.02.1988 | 03.08.1988 | 00 | 06 | 02 |
| 6th | I.A.S. | 03.08.1988 | 09.04.1989 | 00 | 08 | 06 |
| 7th | I.A.S. | 10.04.1989 | 21.08.1989 | 00 | 04 | 11 |
| 8th | I.A.S. | 22.08.1989 | 03.02.1992 | 02 | 05 | 12 |
| 9th | I.A.S. | 04.02.1992 | 04.08.1992 | 00 | 06 | 00 |
| 10th | I.A.S. | 05.08.1992 | 07.09.1992 | 00 | 01 | 02 |
| 11th | Planter | 08.09.1992 | 10.06.1996 | 02 | 09 | 02 |
| 12th | I.A.S. | 11.06.1996 | 10.06.1997 | 01 | 00 | 00 |
| 13th | I.A.S. | 11.06.1997 | Continue | -- | -- | -- |

*** Y=YEAR, M=MONTH, D=DAY.** **Source : Head Office, ATCL**

### 7.1.3 Geographical Problems

Traditionally the entire tea plantation area in the state of Assam may be divided into two tea belts. One is the low yielding belt and comprises of greater Cachar and greater Sibsagar districts. On the other hand the rest is the high yielding belt. It is seen form Table 7.4 that most of the gardens of the Corporation are in low yielding belt. As a result of that the production of the Corporation's gardens are low. Out of its fifteen gardens, eleven are located in the low yielding belt of the state. It

comprises of around 74.11 pc of total grant area and 77.77 pc of total area under tea of the Corporation. On the other hand only 25.89 pc of grant area and 22.23 pc of area under tea of the Corporation are in high yielding belt. As a result of that average yield of the Corporation has been very low.

In Table 7.4 the average yield per hectare of the districts have been calculated by taking average of last eight-years yields. It is done considering the fact that yields of a particular year is highly affected by the climatic condition in an area for the year. Hence to have a true picture an average of last eight-year span has been taken. From the Table it is seen that only one of its gardens (smallest in size, with only 109 hectares of land) is situated in high yielding belt of Darrang distract. It is also pertinent to indicate here that as on 1997-98, 22.23 pc of total area under tea in the high yielding belt contributed to 30.50 pc of the total production of the Corporation, whereas the other 77.77 pc of total area under tea in low yielding belt contributed to the tune of 69.50 pc of the total production of the Corporation.

TABLE :7. 4

LOCATIONAL PROFILE OF ATCL GARDENS

IN LOW YIELDING AND HIGH YIELDING BELTS

| Garden | District | Grant Area (Hect) | Area under Tea (Hect) | Dist.Average * Yield(kg/Hect) |
|---|---|---|---|---|
| Rajabarrie | Sibsagar | 501.05 Hect | 148.81 Hect | 1573 |
| Deepling | Sibsagar | 807.94 Hect | 333.29 Hect | 1573 |
| Naginijan | Jorhat | 1403.24 Hect | 397.19 Hect | 1573 |
| Sycotta | Jorhat | 1519.32 Hect | 868.97 Hect | 1573 |
| Cinnamora | Jorhat | 807.95 Hect | 725.59 Hect | 1573 |
| Negheriting | Golaghat | 1163.34 Hect | 553.60 Hect | 1573 |
| Rungamatty | Golaghat | 379.47 Hect | 435.60 Hect | 1573 |
| Messamara | Golaghat | 705.00 Hect | 406.02 Hect | 1573 |
| Isabheel | Karimganj | 1019.30 Hect | 571.81 Hect | 1317 |
| Longai | Karimganj | 1709.35 Hect | 742.13 Hect | 1317 |
| Bidyanagar | Karimganj | 731.12 Hect | 246.30 Hect | 1317 |
| **Total of low yielding belt gardens** | | **10747.08Hect (74.11)** | **5429.31Hect (77.77)** | -- |
| Amuluckie | Nagaon | 1515.07 Hect | 615.08 Hect | 1636 |
| Dejoovalley | Nagaon | 549.21 Hect | 312.96 Hect | 1636 |
| Loongsoong | Nagaon | 1441.92 Hect | 514.93 Hect | 1636 |
| Bholaguri | Sonitpur | 248.44 Hect | 109.00 Hect | 2009 |
| **Total of high yielding belt gardens** | | **3754.64Hect (25.89)** | **1551.97Hect (22.23)** | --- |
| ATCL Total | Assam | 14501.72 Hect | 6981.28 Hect | --- |

*** Average yield of last eight years (1990 to 1997)**

**** Figures in brackets indicate pc to ATCL total.**

**Source: The Assam Directory & Tea Areas Hand Book 1996-97, Head Office, ATCL and Tea Board.**

### 7.1.4 Production Problems

As has been seen from the discussions made in the earlier chapters that the Corporation has been lagging behind to a great extent in average production of tea in comparison to the district, state and national average. Average yield per hectare of land along with cost control are the two most critical areas for attaining success in tea plantation industry. During the course of study a lot of areas have been identified which are responsible for low yield of the gardens of the Corporation. These problems are related to field and factory as highlighted below.

#### 7.1.4.A Problems of Field Practices

In order to sustain a high rate of yield per hectare it is very important for any tea unit to have high percentage of tea bushes in the economic age group of below 50 years. Existence of higher proportion of uneconomic tea bushes brings down the yield rate lower. Generally a tea bush takes 5 years to start yielding at reasonable economic level, and again after 50 years it comes down to an uneconomic level. However, it was observed during the course of study that a high percentage of tea bushes of the Corporation are in the uneconomic age group. From table 7.5 it is seen that tea bushes in the range of 50 to 100 years of age cover about 37pc of tea area and more than 100 years of age cover about 8 pc of total tea area of the Corporation. There are certain gardens of the Corporation, where tea bushes of the age group of above 100 years occupy around 40 pc of tea area. In consequence, the average yield per hectare of its gardens is very low. In contrast to this the situation is just reverse in private sector tea units. None of the two sample units has any tea bush of 100 or more years of age. Hence, the average yield per hectare of these gardens is higher than yield rate of Assam, which is lower in case of the Corporation.

**TABLE :7. 5**
**AGE GROUP OF TEA BUSHES**
**(PC TO TOTAL AREA UNDER TEA)**
**AS ON 1.1. 1998**

| Units | Below 5Years | 6 to 10 Years | 10 to 20 Years | 20 to 30 Years | 30 to 40 Years | 40 to 50 Years | 50 to 100 Years | 100 Years and above | Average yield(kg) |
|---|---|---|---|---|---|---|---|---|---|
| Rajabarrie | --- | 1.98 | 7.18 | 4.67 | 16.24 | 21.69 | 51.76 | --- | 782 (1749) |
| Deepling | --- | 10.00 | 12.00 | --- | --- | 37.00 | 10.00 | 31.00 | 1090 1749) |
| Naginijan | --- | 13.00 | --- | 9.00 | --- | 17.00 | 61.00 | --- | 803 (1749) |
| Sycotta | 3.00 | 9.00 | 6.80 | 9.20 | 20.00 | 16.00 | 36.00 | --- | 765 (1749) |
| Cinnamora | 2.80 | 15.00 | 10.00 | 9.10 | --- | 25.40 | 37.70 | --- | 865 (1749) |
| Negheriting | --- | 13.00 | 8.00 | --- | 20.00 | --- | 19.00 | 40.00 | 754 (1749) |
| Rungamatty | 7.92 | 8.05 | 2.04 | 5.20 | 21.46 | 33.16 | 11.53 | 10.60 | 704 (1749) |
| Messamara | 7.69 | --- | 10.13 | --- | 11.32 | 6.86 | 44.58 | 13.84 | 645 (1749) |
| Isabheel | --- | 6.00 | -- | --- | 8.00 | 24.00 | 62.00 | --- | 842 (1663) |
| Longai | --- | 8.00 | --- | 10.00 | --- | 29.00 | 53.00 | --- | 792 (1663) |

## TABLE: 7. 5 ( Contd.)
## AGE GROUP OF TEA BUSHES
## (PC TO TOTAL AREA UNDER TEA)
## AS ON 1.1. 1998

| Units | Below 5Years | 6 to 10 Years | 10 to 20 Years | 20 to 30 Years | 30 to 40 Years | 40 to 50 Years | 50 to 100 Years | 100 Years and above | Average yield(kg) |
|---|---|---|---|---|---|---|---|---|---|
| Bidyanagar | --- | 20.00 | --- | 16.00 | --- | 32.00 | 32.00 | --- | 722 (1663) |
| Amluckie | --- | 6.00 | --- | 17.00 | 20.00 | 20.00 | 35.00 | 2.00 | 1206 (1741) |
| Dejoovalley | --- | 26.00 | 8.00 | 13.00 | 20.00 | 26.00 | 14.00 | 4.00 | 1426 (1741) |
| Loongsoong | --- | 5.00 | 3.00 | --- | --- | 29.00 | 39.00 | 23.00 | 1034 (1741) |
| Bholaguri | --- | 15.51 | 5.00 | 17.81 | 9.85 | 9.80 | 47.50 | --- | 1524 (1958) |
| ATCL | 1.40 | 10.40 | 4.80 | 7.40 | 9.80 | 21.90 | 36.90 | 8.30 | 930 (1853) |
| Sample A | 3.80 | 9.40 | 22.50 | 20.00 | 22.40 | 1.60 | 20.30 | --- | 2662 (1853) |
| Sample C | 10.90 | 20.60 | 19.80 | 4.00 | --- | 41.50 | 3.20 | --- | 2462 (1853) |

*** Figures in bracket indicate district average and state average yield (in case of ATCL, Sample A and C)per hectare**
**Source: Head Office, ATCL & Information collected from sample tea units.**

Another essential requirement for sustainable productivity in a tea unit is just and timely application of various agricultural inputs like fertiliser, pesticide, weedicide etc. Along with these, provision of proper drainage and irrigation are of utmost importance for healthy growth of crop in a tea unit. Weed growth in tea gardens is very intensive, particularly during the first three years of age of a tea bush as ground is not completely covered by bush canopy. During this period weeds should be controlled effectively without any soil disturbance. For this purpose suitable and effective weed control measures should be adopted. At the same time use of sufficient amount of pesticides are sine qua none for higher yield of tea. However, untimely use of these agricultural inputs does not yield result. Therefore, in order to increase productivity in a tea unit, it is very essential to adopt sound agricultural practices. But during the course of study it was revealed that the Corporation has been unable to provide just and timely agricultural inputs in its gardens. From Table 7.6 it is seen that the Corporation has been spending a very nominal amount in agricultural inputs (store) as against the average expenditure of the private sector sample tea units. It is observed during the course of study that while the sample units had spent around Rs. 10,000 to Rs.11,000 per hectare of land on stores of agricultural inputs, the Corporation had spent only around Rs. 1,000 to Rs.1,600 of stores per hectare. The results of this difference are seen in the average yield per hectare. It is evident from Table 7.6 that inability to use sufficient amount of agricultural inputs has been a major reason behind poor production of the Corporation.

The garden managers of the Corporation stated that agricultural inputs are not made available at proper time. As the managers do not have any financial autonomy to purchase the requirements, they are to depend on the Head Office for their supplies. Therefore, many a times they could not use the inputs in time. Further, use of modern tools of agricultural inputs is a far cry for the Corporation.

Another very essential requirement to sustain productivity in the tea gardens is taking up of replantation work at a faster rate. Replantation is the process of gradual uprooting of old and uneconomic tea bushes and plantation of high yielding variety of clones in the fallow lands. It is an urgent necessity in case of ATCL as tea bushes of more then 50 years of age have covered more then 45 pc of its total plantation area.

**TABLE :7. 6**
**COMPARATIVE USE OF AGRICULTURAL INPUTS**
**ATCL AND SAMPLE UNIT**

| Use of Stores | Units | 1992-93 | 1993-94 | 1994-95 | 1995-96 | 1996-97 | 1997-98 |
|---|---|---|---|---|---|---|---|
| Area under tea (Hectare) | ATCL | 6439.46 | 6557.12 | 6681.76 | 6802.20 | 6801.20 | 6734.98 |
| | Sample A | 1360.00 | 1372.00 | 1379.00 | 1401.00 | 1408.00 | 1406.00 |
| Fertiliser (Rupees) | ATCL | 5342166 (830) | 6272068 (957) | 7389729 (1405) | 7458009 (106) | 4247537 (625) | 5426641 (806) |
| | Sample A | 4940880 (3633) | 4994080 (3640) | 5044382 (3658) | 5140269 (3669) | 5272960 (3745) | 5234538 (3723) |
| Weedicide (Rupees) | ATCL | 3381628 (525) | 1908273 (291) | 2671202 (400) | 1825979 (268) | 1497111 (220) | 2665748 (396) |
| | Sample A | 1977440 (1454) | 2004492 (1461) | 2022993 (1467) | 2059470 (1470) | 2102144 (1493) | 2096346 (1491) |
| Pesticide (Rupees) | ATCL | 1576724 (245) | 1346170 (205) | 1234108 (185) | 1223616 (180) | 900766 (132) | 1749844 (260) |
| | Sample A | 2993360 (2201) | 3034864 (2212) | 3065517 (2223) | 3124230 (2230) | 3165185 (2248) | 3185996 (2266) |

**TABLE :7. 6 ( Contd.)**
**COMPARATIVE USE OF AGRICULTURAL INPUTS**
**ATCL AND SAMPLE UNIT**

| Use of Stores | Units | 1992-93 | 1993-94 | 1994-95 | 1995-96 | 1996-97 | 1997-98 |
|---|---|---|---|---|---|---|---|
| Irrigation (Rupees) | ATCL | 44934 (7) | 135277 (21) | 23948 (4) | 120838 (18) | 160096 (24) | 277783 (41) |
| | Sample A | 4259520 (3132) | 4319056 (3148) | 4357640 (3160) | 4441170 (3170) | 4474624 (3178) | 4514666 (3211) |
| Total Agricultural Inputs (Rupees) | ATCL | 10345452 (1607) | 9661788 (1473) | 11318987 (1694) | 10628442 (1563) | 6805510 (1001) | 10120016 (1503) |
| | Sample A | 14171200 (10420) | 14352491 (10461) | 14490532 (10508) | 14765139 (10539) | 15014912 (10664) | 15031546 (10691) |
| Average Yield (Kg/Hect) | ATCL | 1017 | 1083 | 949 | 869 | 983 | 930 |
| | Sample A | 3017 | 2896 | 2659 | 2571 | 2500 | 2662 |

*** Figures in bracket indicate average expenditure per hectare of area under tea.**

**Source : Monthly Expenditure sheets of ATCL & information collected from sample garden.**

With the present state of technology, a replanted tea bush come into full bearing in two to three years time and productivity can be sustained at a higher level as before.[1] P.C. Barooah[2] committee has recommended that at least 2 pc annual rate of replantation is necessary for maintaining healthy yield rate of a tea unit. But it is noticed that the Corporation has not done any replantation work nor they have taken up any rejuvenation work in its gardens for a long period time.

Tea plants are very sensitive to sunshine and they should fairly be protected from it for sustained productivity. In order to protect the green leaves from sunshine it is very essential to have proper shade facilities in the gardens. As a basic rule, the shade tree should be planted along tea rows at 6.0m x 6.0m spacing. They should be pruned periodically keeping in view their growth, soil fertility, age of plantation, rainfall distribution etc. On the other hand to protect the green leaves from being stolen or being damaged by cattle stock, it is very essential to have proper fencing system in the gardens. However, these two requirements are conspicuously lacking in most of the gardens of the Corporation.

One of the major field deficiencies of the Corporation has been high percentage of vacant area in the plantation fields. It is reported that about 6 pc of total plantation area has been lying vacant in the Corporation. As a result of that yield of the gardens is low. This high rate of vacancy has been responsible for wastage of man hours and chemicals etc. Table 7.7 shows the garden-wise vacant areas in ATCL gardens as on 1.1.1998.

Another notable deficiency of the Corporation has been the lower utilization of grant area in plantation work. From Table 7.4 it is seen that as on 1.1.1998 the Corporation could utilize only 6981.28 hectares out of 14501.72 hectares of grant area. This is only 48.14 pc of potential area. It is also noticed from the Table that in high yield belt of the state the Corporation has about 3754.64 hectares of grant area of which only 1551.97 hectares have been utilized for plantation so far. This is only 41.33 pc of total grant area. Inability to utilise more potential area of plantation has been a major constraint in enhancing production of the Corporation.

(1). Proceeding of the 32nd Tocklai Conference, Page 11, Jorhat, 1994

(2). Government of India, Barooah Committee Report on Tea, New Delhi 1961

TABLE:7. 7

GARDEN WISE VACANT AREA AS ON 1.1.1998

ATCL

| Garden | Area Under Tea | Vacant Area | PC Vacant Area to Total Area Under Tea |
|---|---|---|---|
| Deepling | 333.29 Hect | 13.10 Hect | 3.93 |
| Naginijan | 397.19 Hect | 13.78 Hect | 3.47 |
| Rajabarrie | 148.81 Hect | Nill | Nill |
| Negheriting | 553.60 Hect | 27.72 Hect | 5.01 |
| Bholaguri | 109.00 Hect | 4.74 Hect | 4.35 |
| Dejoovalley | 312.96 Hect | 5.25 Hect | 1.68 |
| Cinnamora | 725.59 Hect | 6.00 Hect | 0.83 |
| Amluckie | 615.08 Hect. | 5.00 Hect | 0.81 |
| Loongsoong | 514.93 Hect | 20.00 Hect | 3.88 |
| Rungamatty | 435.60 Hect | 24.32 Hect | 5.58 |
| Sycotta | 868.97 Hect | 87.00 Hect | 10.01 |
| Longai | 742.13 Hect | 75.00 Hect | 10.11 |
| Messamara | 406.02 Hect | 25.00 Hect | 6.16 |
| Isabheel | 571.81 Hect | 68.00 Hect | 11.89 |
| Bidyanagar | 246.30 Hect | 63.69 Hect | 25.86 |
| ATCL | 6981.28 Hect | 438.60 Hect | 6.28 |

**Source: Head Office, ATCL**

### 7.1.4.B Problems of Factory Practices

Tea is perhaps the only beverage, which is manufactured by natural process without using any artificial ingredients. The entire process of tea manufacturing is so sensitive that right from plucking of green tea leaves and its transportation to the factories for processing into finished product is to be carried out with utmost care and diligence. Slightest deviation from standard practice may cost a great deviation in quality leading to poor price realization. It is also essential to use modern technologies of production with new machinery installations. However, the Corporation is yet to modernise all its factories. No factory of the Corporation is equipped with even a monorail essential for speedy completion of work with less time. Most of them are

still using old machineries for carrying out production process. As a result of that the factories consume more man-days and wastages are high.

While visiting some of the factories of the Corporation it was noticed that many machineries are lying idle. The factory in-charge of some of the gardens revealed that due to lack of fund, proper care could not be taken in maintaining the existing machineries. This has been causing frequent breakdown of machineries. They admitted that breakdown of machineries sometimes cause damage to the quality of tea.

Most of the leaf houses and factory buildings of the Corporation are old and worn out. As most of the activities in the factories are manual, it is very essential to have hygienic conditions in them for maintaining quality of tea. But that is not being properly taken care of by the Corporation.

### 7.1.5 Financial Problems

The financial problems of ATCL have already been discussed at length in the previous chapter. Some of these problems are discussed below.

It is a general principle of business that accounts be kept updated and on the basis of performance of previous years, which are reflected in the annual accounts, strategy for future are prepared. However, the Corporation is yet to complete the process of finalizing and adapting annual accounts since 1992-93.

Due to lack of internal generation of funds the Corporation has been depending heavily on outside sources. As a result a huge amount is spent every year as finance charge. On the other hand as the Corporation is already overburdened with external funds it is difficult for it to procure additional loans for utilization in developmental works. Poor profitability has also been a major constraint in obtaining loan for the Corporation. It is also noteworthy that due to the failure on its part ATCL has been unable to procure subsidized loans from Tea Board. As the Corporation has been unable to set aside sufficient funds in various reserves it is difficult for it to modernize its factories on its own. Poor debt-equity ratio and current ratio indicate to the problem of unfavourable capital structure and shortfall of working capital. From

the discussions made in the previous chapter it is also seen that for many years the Corporation is having negative current assets, and a deadly combination of high geared capital structure and over capitalisation.

Poor financial position of the Corporation may be attributed to the facts that on one hand the average cost of production of per kilogram of tea has been increasing every year and on the other hand price realization of per kilogram of tea has not been increasing proportionately. In fact, in certain years average cost of production exceeded price realization of per kg of tea produced. However, the situation has been reverse in sample tea units in the private sector.

It is seen from Table 7.8 that over the said period the cost of production of tea of ATCL has gone up by over 68 pc whereas the cost of production of profit making sample tea unit in private sector in the same period has gone up by 25.44 pc only. It is also seen that for all the years under study the sample units have been fetching higher price over ATCL. This imbalance in production has resulted in annual deficit in the Corporation. In this context it is worth-mentioning that cost of production in the Table has been calculated by dividing the total expenditure for the year by total volume of made tea produced by the Corporation in that year.

**TABLE :7.8**
**COMPARATIVE COST OF PRODUCTION AND PRICE REALISATION ATCL & NON-ATCL**

| Unit | Cost/Price | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 |
|---|---|---|---|---|---|---|---|---|
| ATCL | Cost of Production | 39.01 | 42.09 (7.9) | 42.80 (10.79) | 56.40 (31.8) | 66.41 (17.85) | 65.27 (-1.7) | 65.56 (0.4) |
| | Price Realisation | 39.42 | 42.12 (6.9) | 46.94 (11.4) | 41.38 (-11.8) | 49.52 (19.4) | 51.38 (4.0) | 75.17 (46.3) |
| SAMPLE A | Cost of Production | 38.40 | 35.58 (-7.3) | 50.81 (42.8) | 40.41 (-20.5) | 43.09 (6.7) | 54.80 (27.2) | 48.17 (-12.1) |
| | Price Realisation | 47.54 | 51.16 (7.6) | 55.80 (9.1) | 52.81 (-5.4) | 55.33 (4.8) | 54.29 (-1.9) | 75.48 (39.0) |

**Source: Annual Report of Sample unit & Head Office, ATCL**

***Figures in bracket indicate pc growth over previous years.**

### 7.1.6 Personnel Problems

Employees are the backbone of any industrial unit. It is the most important factor for healthy growth of an enterprise. It is more important in case of a labour intensive industry like tea plantation. In considering the size and scale of operation, this has been even crucial factor in case of ATCL. But unfortunately this has been one of the weakest area of the Corporation.

As has already been mentioned, at the time of take over, most of the gardens were overstaffed. On the other hand due to an agreement signed between the owners of the tea gardens and Assam Chah Mazdur Sangha (ACMS), the Trade Union of tea garden labours, the management of ATCL has to keep intact the same proportion of labour force, which were there in the gardens as on 1.1.1969. As a result of that the Corporation has been forced to carry the burden of over-staff and has been spending a huge additional sum of money in salary & other welfare works of these surplus workers of the gardens. At the same time these surplus labours are not interested to leave their respective gardens so as to help the Corporation in accommodating them in some other gardens where they could be effectively deployed.

The Corporation has also been suffering from low labour productivity. From Table 7.9 it is seen that productivity of labour of ATCL has been far lower than National, State and Sample units level.

**TABLE :7. 9**

**COMPARATIVE PRODUCTIVITY OF LABOUR:**

**NATIONAL, STATE, ATCL, AND SAMPLE UNITS,1997-98**

| Unit | Production (kg) | Labour | Production Per Labour (Kg) |
|---|---|---|---|
| INDIA | 810613000 | 1041000 | 779 |
| ASSAM | 425430000 | 602022 | 707 |
| ATCL | 6224447 | 16451 | 378 |
| SAMPLE A | 3469700 | 3107 | 1117 |
| SAMPLE B | 3200000 | 4323 | 740 |
| SAMPLE C | 1016834 | 852 | 1193 |

**Source: Compiled from Annual Report of the Units and Tea Board**

Due to lack of sufficient annual surplus, the Corporation has been unable to provide all fringe benefits and welfare amenities to the employees, which are provided by its counterparts in the private sector. When met, a few employees of the Corporation have openly expressed their dissatisfaction over it. This suggests that there is problem of low morale among the employees of the Corporation. It may also be pointed out as a cause behind poor production per labour of the Corporation.

Another problem of the Corporation in this regard is that, unlike other tea units in private sector where merit-based rewarding system, including promotion, is strictly adopted, the Corporation follows government policy of rewarding on the basis of reservation, which discourage efficiency to a large extent. On the other hand as the employees know that there is cent -per -cent job security, as some of the managers alleged, they do not even worry for their efficiency. The management is also unable to follow the "carrot and stick" policy for that purpose.

One of the basic requirements in a modern business unit has been adoption of professional attitude by its managerial cadres. Professional people are always prepared to take risks and culminate dynamism in the organisation instead of merely following the age- old rules. However, the Corporation, with a bureaucrat at its top is more interested in continuing the traditional bureaucratic policy of doing work instead of infusing any dynamism in it. This is evidenced from the fact that the Corporation has been unable to evolve a strategy, which may better suit the already sick tea gardens, for increasing the yield. In many of its gardens the yield has been going down since take over by the corporation. It is seen from Table 7.10 that most of the cadres were not given any training in plantation and managerial activities, nor all of them are professionally qualified.

**TABLE – 7.10**

**MANAGERIAL PROFILE OF ATCL**

**(AS ON 1/1/1998)**

| Position | Qualification | Training (Pre-Employment) | Experience (Pre-Employment) |
|---|---|---|---|
| Manager Deepling TE | B.Sc. | Trained in T.E.S. | 20 Yrs. |
| Manager Naginijan TE | B.A. | Untrained | 2 Yrs. |
| Manager Rajabarrie TE | B.Sc. | Untrained | 6 Yrs. |
| Manager Negheriting TE | P.U. | Trained in T.E.S. | 15 Yrs. |
| Manager Bholaguri TE | B.A. | Untrained | 4 Yrs. |
| Manager Dejoovalley TE | B.A. | Untrained | 3 Yrs. |
| Manager Cinnamora TE | B.Sc. | Untrained | Nil |
| Manager Amluckie TE | M.A. | Untrained | 10 Yrs. |
| Manager Loongsoong TE | P.U. | Trained in T.E.S. | 11 Yrs. |
| Manager Rungamatty TE | P.U. | Untrained | 10 Yrs. |
| Manager Sycotta TE | P.U. | Untrained | 4 Yrs. |
| Manager Longai TE | B.Sc. | Trained in T.E.S. | 18 Yrs. |
| Manager Messamara TE | B.A. | Untrained | Nil |
| Manager Isabheel TE | Dip. (Mech. Engg.) | Untrained | Nil |
| Manager Bidyanagar TE | M.Sc. | Trained in T.E.S. | 6 Yrs. |
| Company secretary | FICSI & L.L.B. | Trained | 2 Yrs. |
| Sr. Suptt. Manager | Dip. (Mech. Engg.) | Untrained | 20 Yrs. |
| Sr. F & A. Officer | B.Com. | Untrained | 2 Yrs. |
| Suptt. Manager (Nagaon) | B.Sc (Agri) | Untrained | 5 Yrs. |
| Sr. Accounts Officer (Audit) | B.Com | Untrained | 8 Yrs. |
| Mgr.Project Implementation | B.Sc. | Untrained | ½ Yrs. |
| Mgr. Quality control | B.A. | Untrained | 5 Yrs. |
| Mgr. Planning | B.Com. | Untrained | Nil |
| Accounts officer (Tax) | B.Com. | Untrained | Nil |
| Accounts officer (Gen) | B.Com. | Untrained | 3 Yrs. |

*** F.I.C.S.I = Fellow of Institute of Company Secretaries of India .**

*** T.E.S.= Tocklai Experimental Station.**

**Source : Head office, ATCL .**

### 7.1.7 Problems Related to Planning

For healthy growth of any business unit it is very essential to have a proper planning cell. The planning department should consider all the probable alternative courses of action properly and only after their due analysis a judicious decision should be taken regarding any sort of future investment.

It is observed that the planning cell of ATCL has not been successful in adopting and executing plans successfully. On the other hand the Corporation has never appointed technically sound persons to man the cell and the responsibility of such a crucial job has been assigned to some non-technical persons. It is also pertinent in case of project implementation cell as well. It is already stated that the yield rate of the gardens of the Corporation was very poor at the time of their takeover. Considering the fact that even after more than twenty five years of time the yield rate has not grown, rather declined, it can be assumed that the planning activities of the Corporation has been either ineffective or there is lack of such activities at all. Though some other associated factors are there, still lack of adequate comprehensive long-term plan has been responsible for this sluggish growth of yield rate of the Corporation.

For proper growth of tea bush and to have healthy yield rate, it is very essential to make proper plan and soil testing before taking up plantation activity in an area. However, it was observed during the study that in certain cases lack of proper "area study" before plantation has been mostly responsible for low yield rate in ATCL. In Amluckie tea estate it is seen that certain blocks with young tea bushes in the age group of around 30 years is yielding less than a block with bushes more than 110 years of age. Whereas the latter yielding more than 1000 kg per hectare the former yielding less. While investigated, it was revealed by the authority that the soil of the area was not efficient due to lack of vital elements congenial for tea cultivation. It was admitted that the soil in the block with young tea was not properly tested while taking up plantation work. As a result of that the expenditure in agricultural inputs in that area are more but the yield rate is not at per at least with the garden average even. Such problems are there in some other gardens of the Corporation also.

Further, there are reports of spending huge amount of funds in the Corporation without considering its profitability and necessity. In 1992-93 more than 16 lakhs of rupees were spent for renovation of factory, including installation of CTC machine, Repairing Dryer, Electrification, Construction of Withering Trough etc. of Rajabarrie tea estate. However, in the very next year the said factory was closed down and dismantled.

### 7.1.9 Marketing Problems

Price fetched by a tea unit, is responsible to a great extent on the market image of the unit. Market image, on the other hand, is reflected by, besides other factors, the realization of price by the unit. Therefore, it is a very complex phenomenon and the units need to devote considerable effort on this matter. The market image of the Corporation has been very poor and as a result of that it has been unable to fetch a good price on its tea for most of the years. This has been affecting the health of the Corporation considerably. However, the efforts put by the Corporation to improve the image of its tea in the market has not been appreciable. Many a time it failed measurably to tap the fabourable market situations for getting higher prices. For example in 1993 the price of tea in Guwahati Tea Auction Centre went up by 26.6 pc and price of Indian Tea as a whole went up by 25.8 pc over the previous year but during that period growth rate of price of ATCL tea was 11.4 pc only. No such concrete steps have been taken so far to create an image of its tea. One of the way of creating a better image of the products in the market is adoption of quality management measures. However, the effort of the Corporation in this regard has not yielded much result. Technically qualified persons do not man the quality control cell, nor its efforts could increase the price of tea of the Corporation.

In this regard it is noteworthy that ATCL has been selling all its products through Guwahati Tea Auction Center while the most of the Private sector units of the state are selling maximum of its total tea output through ex-factory sale system. It helped them in fetching higher price than realised in tea auction center. Significantly, according to the legal provisions, a tea unit up to 2000 was to sell 75 pc of its tea through auction centers, which most of the private tea units were not following strictly.

## 7.2 CAUSAL ANALYSIS OF HEALTH OF ATCL

The detailed study of the health of ATCL has revealed the factors responsible for its ill health. The study has been able to establish the cause and effect relationships among the elements of the system. Based on the findings from the study an aggregate causal loop diagram, as presented in Figure 7.1 has been developed.

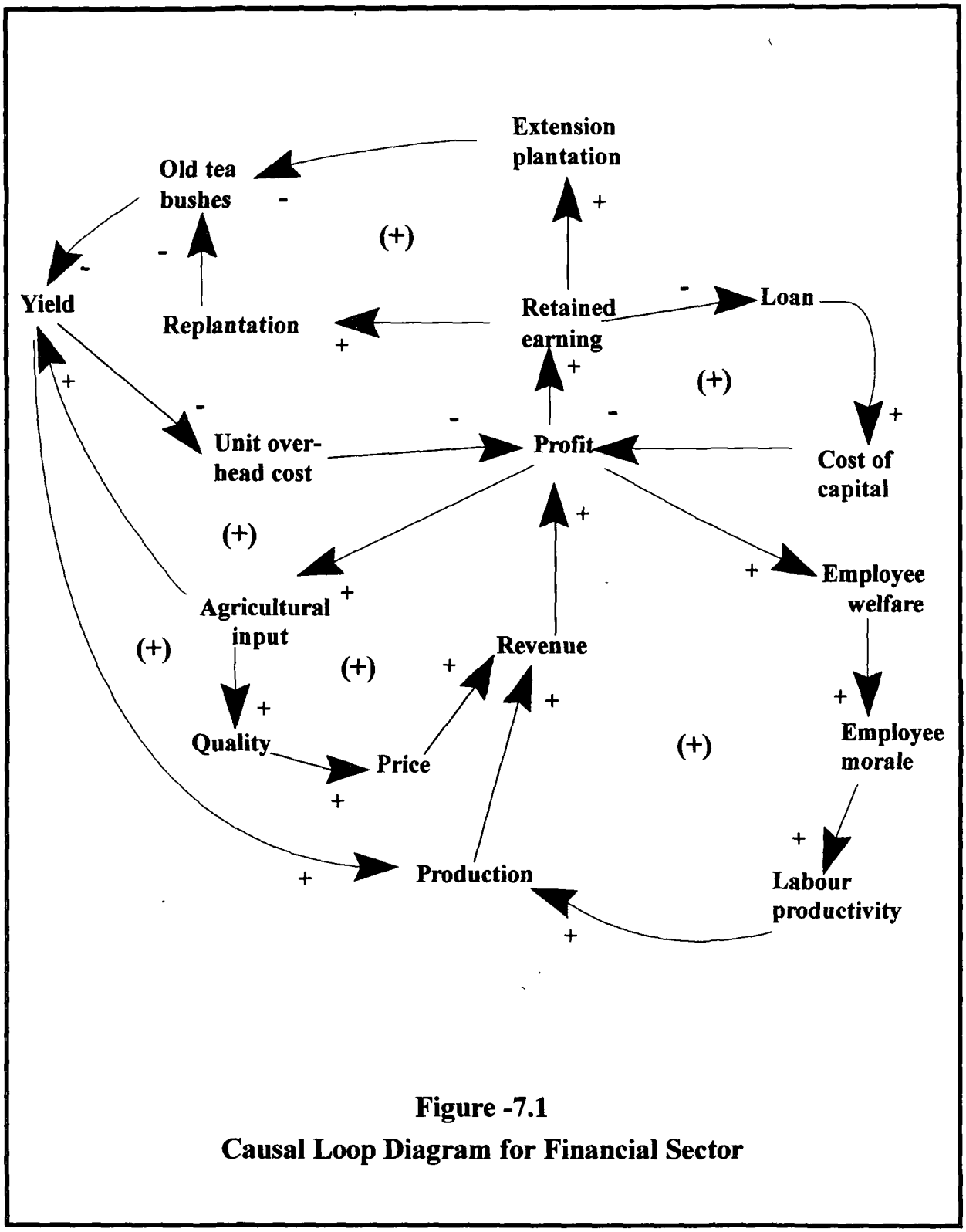



**Figure -7.1**
**Causal Loop Diagram for Financial Sector**

The diagram in Figure 7.1 contains six loops, and all the six loops are positive feedback loops. The basic characteristic of positive feedback loop is that the factors in the loop contribute or reinforce their growth or decline. An analysis of each loop will help to understand the problem of the ATCL in a batter way. Such an understanding would help in suggesting remedial measures for the problems of ATCL.

### 7.2.1 Old Tea Bush – Production-Profit – Extension Plantation Loop

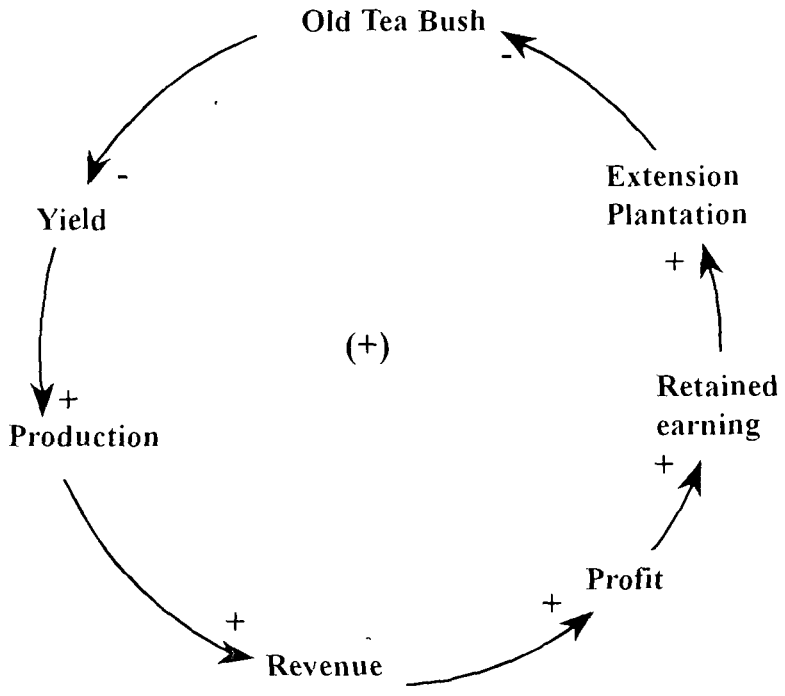



**Figure – 7.2**

From Figure 7.2 it is seen that the presence of high percentage of old bushes has been responsible for its low average yield rate resulting low production. This contributes to low revenue collection and low profit. Because of poor profit it fails to plough back its profits in extension plantation, which again results in presence of large quantity of old tea bushes.

### 7.2.2 Old Tea Bush - Yield –Overhead Cost – Profit – Extension Plantation Loop

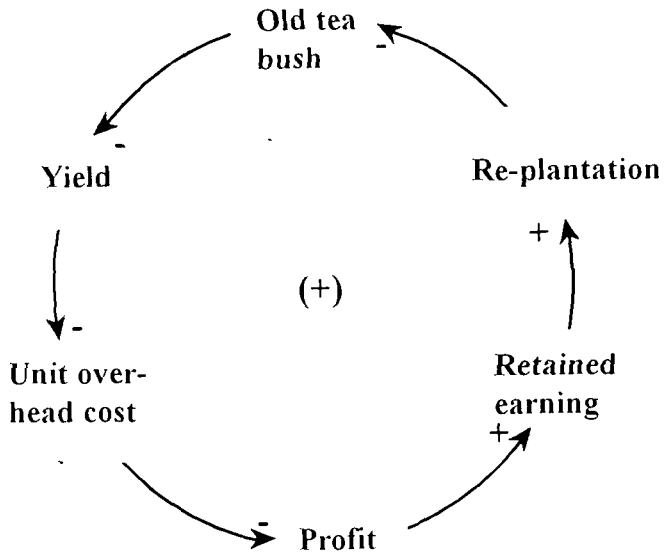



**Figure 7.3**

From Figure 7.3 it is seen that presence of high percentage of old tea bushes in the gardens result in low average yield of tea that increases the unit overhead cost resulting in low profit. Low profit is responsible for its low retained earning. As a result of that it fails to take up replantation work that further increases the percentage of old tea bushes in its gardens.

### 7.2.3 Yield – Production – Profit –Agricultural Input Loop

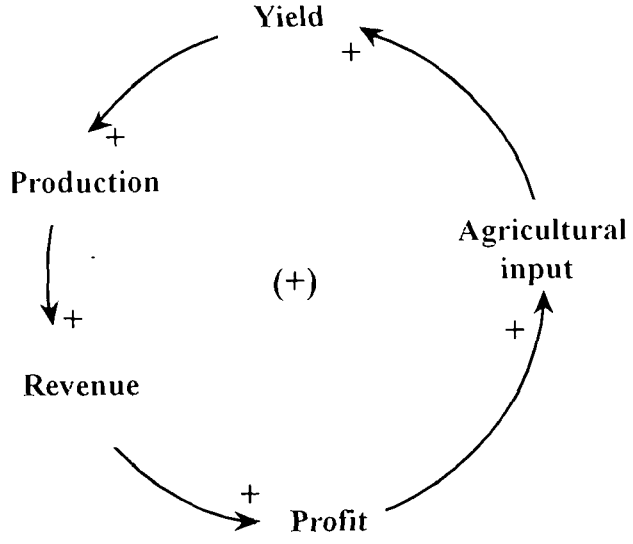



**Figure 7.4**

From Figure 7.4 it is observed that the Corporation produces lower quantity of tea due to its low yield rate and consequently its revenue collection is also low. This resulted low profit leading to low agricultural input, which cause low average yield of tea of the Corporation.

### 7.2.4 Profit – Agriculture Input – Quality – Price Loop

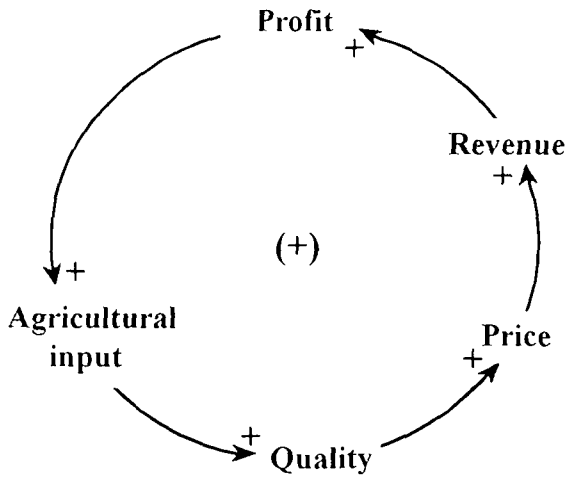



**Figure 7.5**

From Figure 7.5 it is observed that low profit of the Corporation is responsible for low agricultural input which affects its quality and price of tea. Low price has adverse impact on revenue collection, which further detoriates the profitability of the Corporation.

### 7.2.5 Profit – Employee Welfare – Labour – Productivity – Production Loop

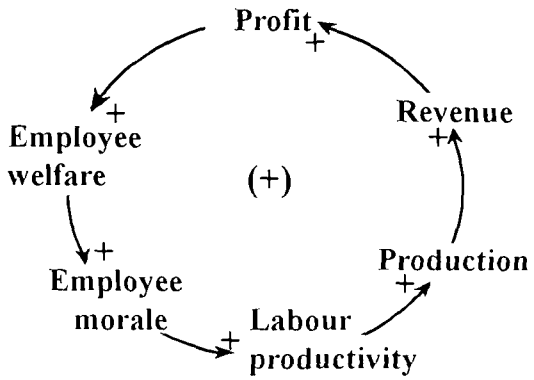



**Figure 7.6**

From Figure 7.6 it can be observed that due to low profit, the Corporation could not provide adequate welfare facilities to its employees which adversely affect their morale and productivity. In consequence to this production of the Corporation is hampered. As a reason of that revenue collection and profit of the Corporation is low.

### 7.2.6 Profit – Retain Earning – Loan – Cost of Capital Loop

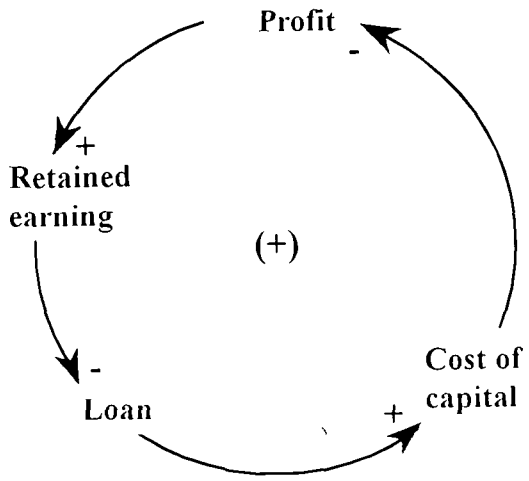



**Figure 7.7**

Figure 7.7 depicts that low profit of the Corporation result in low retained earning. It has to depend on outside funds for its various developmental purposes forcing it to pay higher amount as cost of capital. This reduces the profit of the Corporation.

### 7.2.7 Analysis of Aggregate Causal Loop

For each loop, the element "profit" is common. It suggests the fact that everything is depended on reinforcing the profit status of the organisation. The positive nature of the loops shows that the ATCL is in the grip of a vicious circle having a decaying trend. In other words because of constant decline of certain factor (s) all other factors are in the decline.

The most important and controlling factor in the system is the "Old Tea Bushes". It appears in loop 7.1 and loop 7.2 discussed above. Old tea bushes (uneconomic), which constitute around 45 pc of total area under tea with ATCL, give

a very low yield that leads to higher unit overhead cost to make the profit lower. It results insufficient profit or even in making losses. Low yield rate also lowers the total production of the Corporation and results in lower profit. Thus, it is essential that emphasis be given on reducing the percentage of old tea bushes if the ATCL wants to come out of the vicious circle.

## 7.3 REMEDIAL MEASURES

From the discussions made above it is seen that the Assam Tea Corporation Ltd. is handicapped with a host of problems, for which it has been unable so far to generate sufficient revenue. This has jeopradised its goal of protecting the interest of its employees. It is indeed high time to consider seriously some plans to restructure the Corporation in order to bring it back to the right path of development. In considering the limitations associated with the Corporation the following schemes of remedial measures are suggested to overcome the problems stated earlier.

### 7.3.1 Financial Scheme

**7.3.1A** The first and foremost requirement for taking up any corrective plan in a business is fund. But for a loss-making unit the major problem is the shortfall of fund. Therefore, for ATCL, before formulating any corrective plan, it is very essential to consider the ways & means of financial support. In this regard govt. should come forward with sufficient financial support. The Corporation should be assisted by exempting it to pay interest on its borrowings and tax exemption for a period of five years. This would help the Corporation in diverting fund in long-term developmental purposes of the gardens so as to increase yield. It is expected that during this period it would be able to gain sufficient return and after 5 years it would be able to pay interest on the borrowings including the arrears. The Corporation on its own accord should also try to generate more & more funds for the garden developmental activities. One such way may be to reduce unnecessary cost and wastage.

**7.3.1.B** The fallow lands should be utilised in value added agricultural activities like planting valuable trees and other cash-crops. This would help in realizing extra funds, which would be used in agricultural practices in the gardens.

### 7.3.2 Production Scheme

**7.3.2.A** From the discussions made earlier regarding the problems of the Corporation it is seen that at present there is very poor yield rate of its gardens. Therefore every activity should be taken up to increase yield per hectare of the Corporation. For this, special emphasis should be given in implementing a time bound replantation scheme. On the other hand, vacant lands inside the plantation area should be covered under plantation. Moreover, arrangements should be made for proper shading, fencing, and irrigation etc. Further, efforts should be made to increase the level of use of agricultural inputs and expansion of irrigation facilities to all the gardens. Maximum efforts should be made in timely use of agricultural inputs.

**7.3.2.B** In order to remove the problem of high cost of production, planned effort should be made to maximize utilization of the grant area of the gardens of smaller and uneconomic size.

**7.3.C** A comprehensive scheme of rationalization should be evolved so as to increase efficiency and reducing wastage.

### 7.3.3 Marketing Scheme

**7.3.3.A** Efforts for creating the quality image of its tea in the market should be made by the Corporation. For this purpose standards of the tea producing machineries should be raised in a phase manner. But quality of tea is something, which cannot be attained by the use of machines only. For this, efficient handling of the entire production process is essential. There is need for efficient & experienced supervisors and the need of the hour is that the Corporation should entrust the responsibility of quality control upon a qualified person and create quality awareness among the employees.

**7.3.3.B** In order to increase its earnings from sale of tea, it should reconsider its marketing policy. To certain extent it should go for ex-factory sale also. Emphasis should be laid on publicity of its tea in domestic as well as on global market.

### 7.3.4 Personnel Scheme

**7.3.4 A** The Corporation needed to put emphasis on the development of its various operational departments. For that purpose the planning and finance departments should be entrusted to experienced and technically sound professionals.

**7.3.4 B** More flexibility should be infused in the working practice of ATCL. Autonomy should be given to the garden managers to a certain limit. Every garden manager should be provided with a contingency fund depending on the size of the gardens to be utilised in extreme difficult situations like drought, plant disease etc. He should be authorised to use the fund and be made accountable to the MD for its uses. Moreover, organizational structure should be simplified by eliminating superfluous positions from the head office, delegating more powers to the garden executives and decentralising the decision making powers.

**7.3.4.C** In order to remove dissatisfaction of gardens staff and to reduce the emotional gap between the Head Office and garden staffs a policy of compulsory transfer form garden to the Head Office and vice-versa should be adopted.

**7.3.4.D** Garden-wise plan should be adopted to enhance productivity. This will result in more efficient use of plans. A scheme to award managers of profit making garden should be considered. Some novel system of efficiency-based payment for the managerial cadres and a remuneration pattern based on Taylor's differential piece rate system for the labourers should be considered. These will help in enhancing their efficiency and productivity. For that purpose, a regular system of performance appraisal of the employees should be evolved.

**7.3.4.E** A system of giving compulsory training in respective fields should be adopted for the staff and executives of the Corporation.

**7.3.4.F** Efforts should be made by the management of the Corporation to win the confidence of the employees. Management should adopt a policy of periodic consultation with the workers in order to get their views on various decision making process. This would go a long way in morale building and increasing productivity of the employees of the Corporation.

**7.3.4.G** A strong monitoring agency should be established with provisions like sudden inspection of accounts and surprise visit to various fields of activities. The team should be headed by an authority of not lesser than the rank of general manager, directly reporting to the M.D. He should be authorised to take instant action against any defaulters. It would help in enforcing discipline, financial or otherwise, and accountability in the Corporation.

**7.3.4.H** The employees should give emphasis on proper reporting and leaving of work place. This would help in removing laxity on the part of workers and increasing in utilization of work force.

### 7.3.5 Organisational Scheme

**7.3.5.A** Implementation of plan is hampered due to frequent change of top management of the Corporation. Therefore, continuity of the top management should be ascertained. A policy of fixing tenure of not less than 5 years of span for the Chairman and Managing Director may be considered.

**7.3.5.B** While participating in the Delphi Study it was revealed by some of the top officials of the Corporation that directly or indirectly various Govt. officials in the activities of the Corporation exert pressure. It is suggested by them that ATCL should be made free from interferences by the Govt. by signing an MoU, bound on both parties, whereby, the state provides the necessary financial support and the Corporation provides the profits by increasing its crop and efficiency.

**7.3.5. C** Instead of IAS officials, top-level executives of the Corporation having sound knowledge in tea should be appointed on the basis of their experience in the tea plantation sector only. It would help in a long way in removing the bureaucratic work culture from the Corporation. Moreover, at present the Chairman and MD of ATCL are entrusted responsibilities as head of some other departments as well. This practice should be discontinued for better performance of ATCL.

### 7.3.6 Planning Scheme

**7.3.6.A** Government may also consider a scheme of leasing the uneconomical gardens to two or three parties for a fixed period. The lease agreement should fix a reasonable duty on the tea produced. Besides, the agreement should preserve the interest of the workers of the Corporation. It would help in streamlining the management of such gardens.

**7.3.6.B** From the available documents it is seen that certain cost control measures were suggested by some internal auditors of the Corporation from time to time. However, these suggestions were not given due weightage and hence were not implemented. A few of such suggestions are worth mentioning here.

**7.3.6.B.i** There should be a clear- cut policy of consumption of energies (coal, oil etc) in the gardens. The consumption of 1 Kg. of coal must not exceed one kg of tea, whereas 32ltrs of T.D. oils should produce 100 kg of tea. Such standards would help in controlling and reduction of wastage in tea manufacturing.

**7.3.6.B. ii** The importance of Jorhat office should be restored as it is situated in a location, which is almost central to all the ATCL gardens. A system of quarterly purchase of items through Jorhat office should be made as it is having a huge storing capacity as well. This would also reduce transportation cost. On the other hand if quarterly purchasing system is adopted, the Corporation would be able to save funds otherwise spent on tied-up for items purchased once for the whole year.

### 7.4 Causal Analysis of Ways and Means for Revival

In addition to the suggestions given above a diagrammatic representation of a concrete plan showing ways and means for improving the profitability of ATCL could also be formulated as given in Figure 7.8.

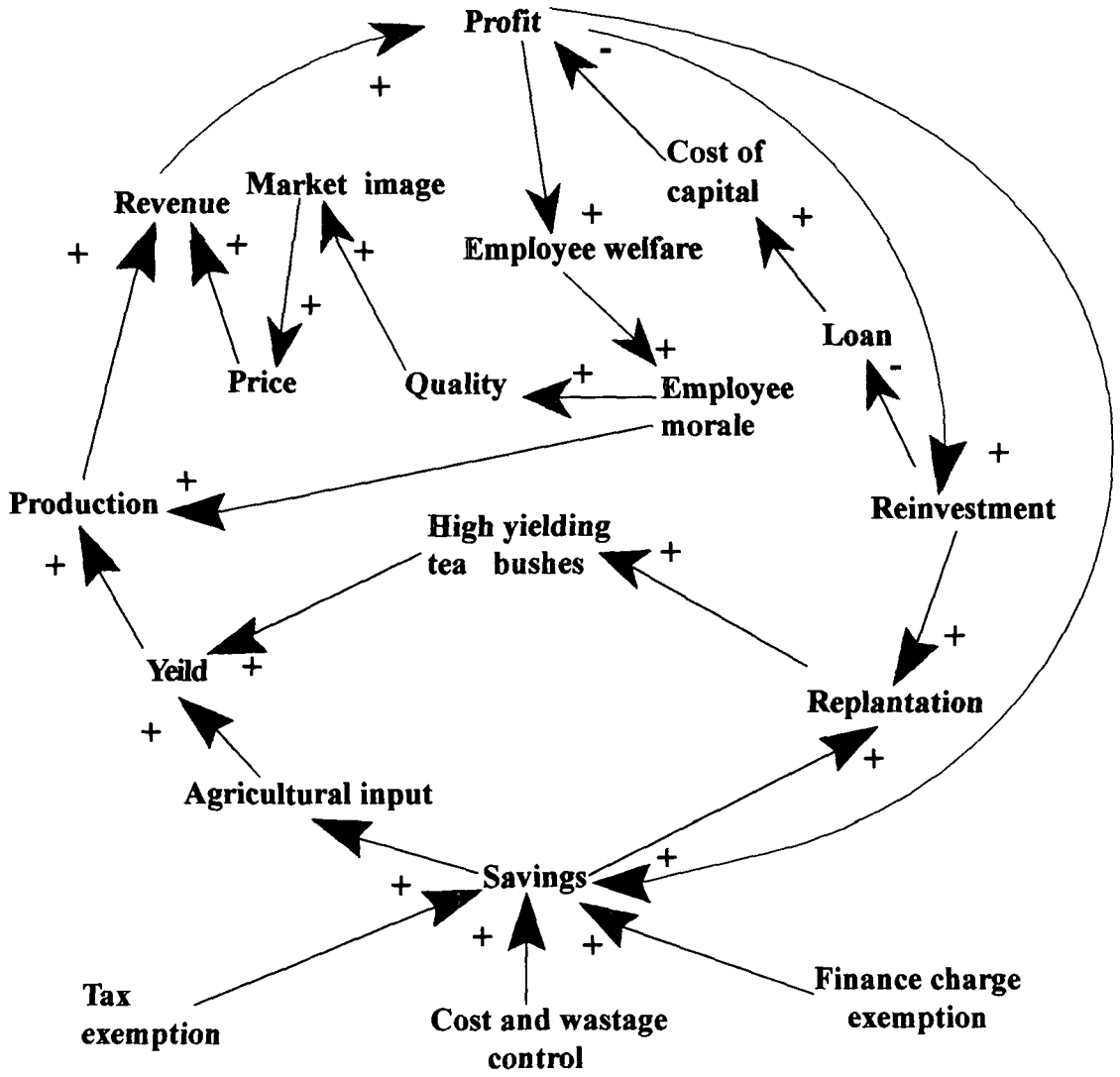



**Figure - 7.8**
**Causal Loop Diagram for**
**Ways and Means for Revival**

It is seen from earlier discussion that the Corporation has been spending huge amount of funds continuously against finance charges and taxes. Its expenditure against finance charges in 1992-93 was 10 pc, in 1993-94 8pc, in 1994-95 14 pc in 1995-96 19 pc, in 1996-97 18 pc and in 1997-98 14 pc of total revenue collection. However, its expenditure against use of agricultural inputs (store) was only 3.6 pc of total revenue collection in 1992-93, 2.8 pc in 1993-94, 5.3 pc in 1994-1995, 4.9 pc in 1995-96, 4.2 pc in 1996-97 and 3.4 pc in 1997-98. The Government, being the managing authority of ATCL, should come forward with a relief measure of declaring a moratorium on the payment of taxes and by paying all its finance charges for a period ranging from 5 year to 10 years. Further, the Corporation on its own accord should try to eliminate all its unnecessary expenditures, and slowly adopt rationalization measures.

The above schemes would result into a large savings and the entire amount should be diverted into two areas - - on increase in agricultural inputs on one hand and replantation work on phase manner on the other. Replantation would increase the percentage of economic tea bushes resulting increase in average yield. The use of larger funds on agricultural inputs would also increase the per hectare average yield of its gardens. This would increase production and profit of the concern.

After 5 to 10 years time it can be expected that ATCL would be able to give sufficient facilities to its employees, return accumulated tax and finance charges to the Government.

However, while adopting all these measures, it is highly desirable that there is honesty, sincerity and professionalism on the part of its management, workers and the Government.

# CHAPTER VIII

## Conclusion and Recommendation for Future Work

# CHAPTER-VIII

# CONCLUSION AND RECOMMENDATION FOR FUTURE WORK

## 8.1 CONCLUSION

This thesis addresses to the aspects of functioning and problems of the tea gardens in the public sector. From the discussions made earlier, it is clear that the public sector tea units of the country have been occupying a large plantation area. Thousands of people are being directly engaged in these units. Besides, many more are indirectly dependent on such units. At present there are 54 such tea units with a total plantation area of 19,172.23 hectares operating in India. Out of a total of ten public enterprises on tea in India, two are Central Govt. undertakings and the rest are State Government undertakings. Government of Assam established Assam Tea Corporation Ltd. (ATCL) in 1972 as a public enterprise to venture directly into tea cultivation and manufacturing activities. Its total plantation area is 35 pc (6735.00 hectare) of the total plantation area in Indian public sector tea industry.

It is established from the study that ATCL, ever since its establishment, has been unable to maintain its commercial character. Except for a few years, it has been incurring losses continuously. Its net worth has already turned negative and as on 1.1.1998 its total accumulated loss was more than Rupees fifty crores.

Further, ATCL has been unable to provide the necessary amenities to its employees for a long period of time. The statutory dues of the Corporation towards its employees like gratuity, provident funds etc. have not been paid for long.

Besides, ATCL has not been able to increase production and yield per hectare in most of its gardens. It is observed that production and yield of the ATCL gardens have been much lower than district averages. Rather, since their takeover, production and yield per hectare have gone down drastically in such gardens.

During the course of this study it was observed that a number of factors are responsible for such a dismal performance by the premier pubic sector tea unit of the country. The primary factors, as have been observed, are old tea bushes & poor & untimely distribution of agricultural inputs in the gardens of the Corporation. Besides, high cost of production is another attributing factor for it. On the other hand the present organizational structure of the Corporation are not conducive for its healthy growth. Many superfluous positions were created in its structure and manning of such positions have also not been proper for sustained growth. It is observed that govt. policy towards the management of the Corporation has not been practical. Persons having experience in tea plantation have rarely been appointed as its Chairman. Again, most of its Chairmen served for a shorter period only. In a short period they were unable to take up the activities seriously. However, lack of professionalism has also been a major cause for inefficiency in the organisation.

These factors have been collectively responsible for the sluggish growth of the Corporation. As a result of that the basic objectives behind the establishment of the Corporation have been jeopardised.

After a careful analysis of the problems confronted by ATCL it is suggested that an emergency comprehensive rehabilitation scheme be immediately taken up for its revival. Emphasis should be placed for reducing cost of production and percentage of uneconomic tea bushes. Timely use of agriculture inputs is another requirements of the gardens. This would increased average per hectare yield of the gardens of ATCL. Further the governments should come up with a scheme of exempting ATCL from paying taxes and finance charges for a period of 5 to 10 years. The Government in the conditions should take up these measures that the entire savings resulting from the exemption would be diverted for the developmental purposes of the gardens.

## 8.2 RECOMMENDATION FOR FUTURE WORK

As has been stated earlier, tea science and economy provides excellent scope for study. Study on public sector tea units itself is a large area and provides vast opportunities for research work. During the course of study it has been felt that a lot

of areas of operation and management of Assam Tea corporation are there, which need more minute study which could not be covered in this thesis. A brief highlight on the probable future works on the functioning and problems of Assam Tea Corporation has been given below.

### 8.2 1 Quality Management

Price of tea produced by a tea unit depends to a large extent on the quality of tea produced by the unit. Tea quality is a sensitive phenomenon and need diligence and extra care and skill by the supervisor and labourers. However, it has been observed that this is an area where ATCL needs to concentrated move. Its affords in the direction of quality management considered insufficient. It is indicated by the fact that the price fetched by its produced in normal years has been lower than most other tea units. It can be assumed that by improving quality of its tea, the price realization could be enhanced. Hence, there is a need for a special study on quality management of the Corporation.

### 8.2.2 Labour Management

Tea is a labour intensive industry. Success of a tea unit depends to a great extent on the efficiency of the labourers and its effective labour deployment. However, it is witnessed that there has been a problem of surplus labour force in most of its gardens. The management of ATCL has been facing difficulties in effective deployment of its surplus labour force and production per worker of ATCL has been below the average expected quantity. Hence , a special study may well be under taken on labour policy of the Corporation. This would help in exploring different aspects of its labour-management relationship and also in identifying the constraints behind the poor yield per worker of ATCL.

### 8.2.3 Organisation Structure

During the course of study it has been observed that the organizational structure of the Corporation is unsound. It is responsible for the creation of gap between the Head Office and the garden level management of the Corporation. Besides, limited authority delegated to the garden managers has been matter of great concern for the health of the Corporation. It is also seen that a lot of superfluous position have been created in the Head Office level while not much emphasis has

been given on strengthening the garden level management of the Corporation. It is felt under such a backdrop that a special study on the organisation structure of the Corporation would be able to address a lot of its problems.

### 8.2.4 Simulation of the System

A Causal loop diagram to depict the growth aspect of ATCL has been presented in this thesis. This causal loop diagram could be enlarged to portray in details the ATCL in various segments like – Personnel, Finance, Cultivation and Manufacturing, and Marketing. System Dynamics flow diagrams could then be developed and the system/subsystems could be simulated once the model is validated. Various long-term and medium-term policies could be tested through this model. Such an exercise would make the policy planning aspect more objective. It is suggested that a System Dynamics study be taken up to formulate policies for the healthy growth of ATCL.

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## ANNEXURE 1.1
## EXPENDITURE IN AGRICULTURAL INPUTS, ATCL
## 1992-93

| Garden/District | Area Under Tea (Hect) | Expenditure on Agricultural Inputs (Stores) in Rupees | | | | | | Yield Per Hectare (kg) | |
|---|---|---|---|---|---|---|---|---|---|
| | | Chemical (Weed Control) | Fertiliser | Pest & Disease | Irrigation | Total Stores Used | Used Per Hectare | Garden Average | District Average |
| Amluckie /Nagaon | 594.74 | 3,66,467 | 7,40,687 | 1,60,244 | 16,380 | 12,83,778 | 2158.60 | 1401 | 1573 |
| Dejoovalley/ Nagaon | 291.43 | 1,77,463 | 3,24,240 | 85,492 | 23,322 | 6,10,517 | 2094.90 | 1660 | 1573 |
| Loongsoong/Nagaon | 487.46 | 3,41,924 | 3,87,758 | 92,305 | Nil | 8,21,987 | 1686.30 | 1177 | 1573 |
| Rajabarrie/ Sibsagar | 148.44 | 32,203 | 87,330 | 5,041 | Nil | 1,24,574 | 839.20 | 608 | 1501 |
| Deepling/ Sibsagar | 329.98 | 1,39,098 | 1,75,358 | 1,06,717 | Nil | 4,21,173 | 1276.40 | 1119 | 1501 |
| Naganijan/Jorhat | 394.83 | 2,01,836 | 3,69,598 | 1,07,231 | Nil | 6,78,665 | 1718.90 | 942 | 1501 |
| Sycotta/Jorahat | 810.35 | 4,81,730 | 6,80,207 | 1,86,232 | Nil | 13,48,169 | 1663.70 | 974 | 1501 |
| Cinnamora/Jorhat | 683.21 | 6,12,270 | 6,57,740 | 1,43,291 | Nil | 14,13,301 | 2068.60 | 1134 | 1501 |
| Negheriting/ Golaghat | 577.85 | 1,95,110 | 3,94,024 | 1,06,868 | Nil | 6,96,002 | 1204.50 | 824 | 1501 |
| Rungamatty/ Golaghat | 386.00 | 1,39,552 | 2,65,764 | 1,11,039 | Nil | 5,16,355 | 1337.70 | 677 | 1501 |
| Messamara/Golaghat | 402.26 | 95,566 | 2,42,590 | 71,897 | Nil | 4,10,053 | 1019.40 | 602 | 1501 |
| Isabheel/Karimganj | 536.23 | 2,53,125 | 4,30,839 | 1,67,360 | 5,232 | 8,56,556 | 1597.40 | 947 | 1167 |
| Longai/Karimganj | 694.84 | 2,67,603 | 4,76,032 | 2,09,894 | Nil | 9,53,529 | 1372.30 | 835 | 1167 |
| Bholaguri/Sonitpur | 101.84 | 77,681 | 1,09,999 | 23,113 | Nil | 2,10,793 | 2069.80 | 1607 | 2053 |
| **ATCL** | **6439.46** | **33,81,628** | **53,42,166** | **15,76,724** | **44,934** | **1,03,45,452** | **1606.60** | **1036** | **1574** |

**Source: Monthly Expenditure Sheets, Head Office, ATCL, & Tea Board.**

**ANNEXURE 1. 2**
**EXPENDITURE IN AGRICULTURAL INPUTS, ATCL**
**1993-94**

| Garden/District | Area Under Tea (Hect) | Expenditure on Agricultural Inputs (Stores) in Rupees | | | | | | Yield Per Hectare (kg) | |
|---|---|---|---|---|---|---|---|---|---|
| | | Chemical (Weed Control) | Fertiliser | Pest & Disease | Irrigation | Total Stores Used | Used per Hectare | Garden Average | District Average |
| Amluckie /Nagaon | 603.40 | 2,34,797 | 2,81,292 | 1,41,047 | 1,09,114 | 7,66,250 | 1269.90 | 1473 | 1657 |
| Dejoovalley/ Nagaon | 310.43 | 1,24,530 | 4,41,880 | 64,215 | 26,163 | 6,56,788 | 2115.70 | 1783 | 1657 |
| Loongsoong/Nagaon | 500.46 | 1,66,072 | 4,63,343 | 22,974 | Nil | 6,52,389 | 1303.60 | 1412 | 1657 |
| Rajabarrie/ Sibsagar | 148.44 | 42,797 | 1,35,922 | 6,233 | Nil | 1,84,952 | 1246.00 | 860 | 1521 |
| Deepling/ Sibsagar | 327.86 | 50,259 | 3,91,300 | 92,168 | Nil | 5,33,727 | 1627.90 | 1098 | 1521 |
| Naganijan/Jorhat | 395.87 | 1,02,611 | 3,69,598 | 1,02,706 | Nil | 5,74,915 | 1452.30 | 995 | 1521 |
| Sycotta/Jorahat | 819.40 | 2,72,214 | 10,76,868 | 1,36,988 | Nil | 14,86,070 | 1813.60 | 1041 | 1521 |
| Cinnamora/Jorhat | 686.86 | 2,48,042 | 9,03,645 | 1,44,267 | Nil | 12,95,954 | 1886.80 | 1107 | 1521 |
| Negheriting/ Golaghat | 580.35 | 1,43,759 | 5,80,636 | 1,88,789 | Nil | 9,13,184 | 1573.5 | 861 | 1521 |
| Rungamatty/ Golaghat | 401.00 | 67,903 | 2,90,453 | 1,00,868 | Nil | 4,59,224 | 1145.2 | 739 | 1521 |
| Messamara/Golaghat | 415.25 | 60,781 | 2,42,590 | 71,897 | Nil | 3,75,268 | 903.7 | 689 | 1521 |
| Isabheel/Karimganj | 551.23 | 1,23,463 | 4,53,656 | 1,38,410 | Nil | 7,15,529 | 1298.1 | 973 | 1224 |
| Longai/Karimganj | 712.33 | 2,11,880 | 5,13,486 | 1,11,675 | Nil | 8,37,041 | 1175.1 | 915 | 1224 |
| Bholaguri/Sonitpur | 104.24 | 59,165 | 1,27,399 | 23,933 | Nil | 2,10,497 | 2019.3 | 1606 | 2049 |
| **ATCL** | **6557.12** | **19,08,273** | **62,72,068** | **13,46,17** | **1,35,277** | **96,61,788** | **1473.5** | **1111** | **1613** |

**Source : Monthly Expenditure Sheets, Head Office, ATCL, & Tea Board.**
*** Figures in bracket indicate pc increase over previous years.**

**ANNEXURE 1. 3**
**EXPENDITURE IN AGRICULTURAL INPUTS, ATCL**
**1994-95**

| Garden /District | Area Under Tea (Hect) | Expenditure on Agricultural Inputs (Stores) in Rupees | | | | | | Yield Per Hectare (kg) | |
|---|---|---|---|---|---|---|---|---|---|
| | | Chemical Weed Control | Fertiliser | Pest & Disease | Irrigation | Total Stores Used | Used per Hectare | Garden Average | District Average |
| Amluckie /Nagaon | 613.45 | 2,78,868 | 6,69,551 | 98,840 | 94 | 10,47,353 | 1,707.3 | 1221 | 1656 |
| Dejoovalley/ Nagaon | 316.93 | 1,77,235 | 3,22,82 | 64,350 | 23,854 | 5,88,421 | 1856.6 | 1553 | 1656 |
| Loongsoong/Nagaon | 514.12 | 2,25,070 | 5,27972 | 71,244 | Nil | 8,24,286 | 1603.3 | 1194 | 1656 |
| Rajabarrie/ Sibsagar | 148.44 | 52,386 | 1,94273 | 32,418 | Nil | 2,79,077 | 1880.1 | 784 | 1556 |
| Deepling/ Sibsagar | 321.26 | 1,07,267 | 356,433 | 72,492 | Nil | 5,36,192 | 1669.0 | 1109 | 1556 |
| Naganijan/Jorhat | 403.20 | 1,84,304 | 4,83,999 | 69,648 | Nil | 7,37,951 | 1830.2 | 857 | 1556 |
| Sycotta/Jorahat | 828.42 | 3,30,881 | 7,78,252 | 90,298 | Nil | 11,99,431 | 1447.9 | 871 | 1556 |
| Cinnamora/Jorhat | 721.72 | 4,03,733 | 10,83,681 | 1,76,568 | Nil | 16,63,982 | 2305.6 | 901 | 1556 |
| Negheriting/ Golaghat | 589.60 | 1,92,132 | 4,97,030 | 1,50,538 | Nil | 8,39,700 | 1424.2 | 666 | 1556 |
| Rungamatty/ Golaghat | 409.54 | 1,39,735 | 4,20,978 | 60,482 | Nil | 6,21,195 | 1516.8 | 544 | 1556 |
| Messamara/Golaghat | 428.25 | 1,18,402 | 4,67,945 | 51,897 | Nil | 6,38,244 | 1490.4 | 519 | 1556 |
| Isabheel/Karimganj | 556.23 | 1,78,209 | 5,85,187 | 1,54,373 | Nil | 9,17,769 | 1650.0 | 853 | 1296 |
| Longai/Karimganj | 726.36 | 1,98,712 | 8,42,762 | 1,25,259 | Nil | 11,66,733 | 1606.3 | 884 | 1296 |
| Bholaguri/Sonitpur | 104.24 | 84,268 | 1,,58,684 | 15,701 | Nil | 2,58,653 | 2481.3 | 1574 | 2004 |
| **ATCL** | **6681.76** | **26,71,202** | **73,89,729** | **12,34,10** | **23,948** | **1,13,18,98** | **16940.0** | **966** | **1628** |

**Source : Monthly Expenditure Sheets, ATCL, H.O. & Tea Board.**

*** Figures in bracket indicate pc increase over previous years.**

**ANNEXURE 1.4**
**EXPENDITURE IN AGRICULTURAL INPUTS, ATCL**
**1995-96**

| Garden/District | Area Under Tea (Hect) | Expenditure on Agricultural Inputs (Stores) in Rupees | | | | | | Yield Per Hectare (kg) | |
|---|---|---|---|---|---|---|---|---|---|
| | | Chemical (Weed Control) | Fertiliser | Pest & Disease | Irrigation | Total Stores Used | Used per Hectare | Garden Average | District Average |
| Amluckie /Nagaon | 615.58 | 2,69,812 | 1,01,989 | 77,174 | 60,150 | 5,09,125 | 827.1 | 1094 | 1684 |
| Dejoovalley/ Nagaon | 317.18 | 1,12,788 | 7,22,321 | 48,958 | 60,688 | 9,44,755 | 2978.6 | 1297 | 1684 |
| Loongsoong/Nagaon | 514.12 | 1,52,176 | 8,36,313 | 68,546 | Nil | 10,57,035 | 2056.0 | 983 | 1684 |
| Rajabarrie/ Sibsagar | 148.44 | 27,384 | 1,61,790 | 21,779 | Nil | 2,10,953 | 1421.1 | 711 | 1563 |
| Deepling/ Sibsagar | 333.89 | 65,779 | 3,38,303 | 52,816 | Nil | 4,56,898 | 1368.4 | 1007 | 1563 |
| Naganijan/Jorhat | 411.43 | 95,389 | 4,37,362 | 73,575 | Nil | 6,06,326 | 1473.7 | 844 | 1563 |
| Sycotta/Jorhat | 867.86 | 3,25,000 | 6,35,678 | 1,04,672 | Nil | 10,65,350 | 1227.6 | 878 | 1563 |
| Cinnamora/Jorhat | 743.74 | 2,00,309 | 9,61,582 | 2,31,196 | Nil | 13,93,087 | 1873.1 | 903 | 1563 |
| Negheriting/ Golaghat | 589.17 | 129566 | 529850 | 88,277 | Nil | 747693 | 1269.1 | 672 | 1563 |
| Rungamatty/ Golaghat | 411.54 | 87943 | 518473 | 97165 | Nil | 703581 | 1709.6 | 504 | 1563 |
| Messamara/Golaghat | 422.92 | 60177 | 406527 | 1,10,252 | Nil | 576956 | 1364.2 | 515 | 1563 |
| Isabheel/Karimganj | 566.38 | 104543 | 904582 | 90,710 | Nil | 1099835 | 1941.9 | 798 | 1341 |
| Longai/Karimganj | 746.71 | 132004 | 697605 | 1,42,337 | Nil | 971946 | 1301.6 | 782 | 1341 |
| Bholaguri/Sonitpur | 113.25 | 63109 | 205634 | 16,159 | Nil | 284902 | 2515.7 | 1434 | 1999 |
| **ATCL** | **6802.21** | **1825979** | **7458009** | **12,23,61** | **1,20,838** | **10628442** | **1562.5** | **887** | **1647** |

**Source : Monthly Expenditure Sheets, ATCL, H.O. & Tea Board.**

*** Figures in bracket indicate pc increase over previous years.**

**ANNEXURE 1.5**
**EXPENDITURE IN AGRICULTURAL INPUTS, ATCL**
**1996-97**

| Garden/District | Area Under Tea (Hect) | Expenditure on Agricultural Inputs (Stores) in Rupees | | | | | | Yield Per Hectare (kg) | |
|---|---|---|---|---|---|---|---|---|---|
| | | Chemical (Weed Control) | Fertiliser | Pest & Disease | Irrigation | Total Stores Used | Used per Hectare | Garden Average | District Average |
| Amluckie /Nagaon | 615.58 | 277,567 | 4,97,646 | 61,113 | 104462 | 9,40,788 | 1528.3 | 1094 | 1713 |
| Dejoovalley/ Nagaon | 317.18 | 91,566 | 1,91,515 | 19,082 | 55634 | 3,57,797 | 1128.1 | 1297 | 1713 |
| Loongsoong/Nagaon | 514.12 | 1,26,013 | 4,39,549 | 52,861 | Nil | 6,18,423 | 1202.9 | 1208 | 1713 |
| Rajabarrie/ Sibsagar | 148.44 | 22,555 | 22,417 | 12,252 | Nil | 57,224 | 385.5 | 894 | 1757 |
| Deepling/ Sibsagar | 333.89 | 41,061 | 3,,37,962 | 38,561 | Nil | 4,17,584 | 1250.7 | 1078 | 1757 |
| Naganijan/Jorhat | 411.43 | 41,083 | 2,96,172 | 14,058 | Nil | 3,51,313 | 853.9 | 835 | 1757 |
| Sycotta/Jorhat | 867.86 | 1,62,503 | 3,83,399 | 1,13,619 | Nil | 6,59,521 | 759.9 | 928 | 1757 |
| Cinnamora/Jorhat | 743.74 | 2,14,797 | 4,78,374 | 1,6,436 | Nil | 8,,09,607 | 1088.6 | 992 | 1757 |
| Negheriting/ Golaghat | 589.17 | 71141 | 264153 | 76826 | Nil | 412120 | 699.5 | 849 | 1757 |
| Rungamatty/ Golaghat | 411.54 | 79507 | 297856 | 82081 | Nil | 459444 | 1116.4 | 737 | 1757 |
| Messamara/Golaghat | 422.92 | 46371 | 292363 | 64366 | Nil | 403100 | 953.1 | 695 | 1757 |
| Isabheel/Karimganj | 566.38 | 133557 | 336698 | 126365 | Nil | 596620 | 1053.4 | 852 | 1550 |
| Longai/Karimganj | 746.71 | 149959 | 307810 | 94333 | Nil | 552102 | 739.4 | 790 | 1550 |
| Bholaguri/Sonitpur | 113.25 | 39431 | 101623 | 28813 | Nil | 169867 | 1499.9 | 1480 | 2002 |
| **ATCL** | **6802.20** | **1497111** | **4247537** | **900766** | **160096** | **6805510** | **1000.5** | **981** | **1756** |

**Source: Monthly Expenditure Sheets, ATCL, H.O. & Tea Board.**

*** Figures in bracket indicate pc increase over previous years.**

## ANNEXURE 1.6
## EXPENDITURE IN AGRICULTURAL INPUTS, ATCL
## 1997-98

| Garden/District | Area Under Tea (Hect) | Expenditure on Agricultural Inputs (Stores) in Rupees | | | | | | Yield Per Hectare (kg) | |
|---|---|---|---|---|---|---|---|---|---|
| | | Chemical (Weed Control) | Fertiliser | Pest & Disease | Irrigation | Total Stores Used | Used per Hectare | Garden Average | District Average |
| Amluckie /Nagaon | 615.08 | 317999 | 760122 | 135323 | 197914 | 1411358 | 2294.6 | 1206 | 1741 |
| Dejoovalley/ Nagaon | 312.96 | 176149 | 372402 | 43558 | 61915 | 654024 | 2089.8 | 1426 | 1741 |
| Loongsoong/Nagaon | 514.93 | 268422 | 587359 | 116146 | Nil | 971927 | 1887.5 | 1034 | 1741 |
| Rajabarrie/ Sibsagar | 148.81 | 21974 | 131466 | 15960 | Nil | 169400 | 1138.4 | 782 | 1749 |
| Deepling/ Sibsagar | 333.29 | 190560 | 205912 | 61046 | Nil | 457518 | 1372.7 | 1090 | 1749 |
| Naganijan/Jorhat | 397.19 | 156474 | 288301 | 31826 | Nil | 476601 | 1199.9 | 803 | 1749 |
| Sycotta/Jorahat | 868.97 | 342437 | 605438 | 394000 | Nil | 1341875 | 1544.2 | 765 | 1749 |
| Cinnamora/Jorhat | 725.59 | 316669 | 682068 | 431141 | Nil | 1429878 | 1970.6 | 754 | 1749 |
| Negheriting/ Golaghat | 553.60 | 94409 | 284126 | 143000 | 17954 | 539489 | 974.5 | 754 | 1749 |
| Rungamatty/ Golaghat | 435.60 | 144041 | 274125 | 92628 | Nil | 510794 | 1172.6 | 704 | 1749 |
| Messamara/Golaghat | 406.02 | 57358 | 299983 | 54461 | Nil | 411802 | 1014.2 | 645 | 1749 |
| Isabheel/Karimganj | 571.81 | 279403 | 375482 | 58865 | Nil | 713750 | 1248.2 | 842 | 1663 |
| Longai/Karimganj | 742.13 | 262133 | 441987 | 150898 | Nil | 855018 | 1152.1 | 792 | 1663 |
| Bholaguri/Sonitpur | 109.00 | 37720 | 117870 | 20992 | Nil | 176582 | 1620.0 | 1524 | 1958 |
| **ATCL** | **6734.98** | **2665748** | **5426641** | **1749844** | **277783** | **10120016** | **1502.6** | **945** | **1778** |

**Source: Monthly Expenditure Sheets, ATCL, H.O. & Tea Board.**

*** Figures in bracket indicate pc increase over previous years.**

**ANNEXURE: 2.1**
**AVERAGE YIELD PER HECTARE, ATCL**
**(IN K.G.)**

| GARDEN | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 |
|---|---|---|---|---|---|---|---|---|---|
| Cinnamora | 1189 | 1317 | 1219 | 1235 | 1216 | 1230 | 1217 | 1131 | 1002 |
| Sycotta | 1163 | 1251 | 1038 | 1078 | 1097 | 1325 | 1146 | 1049 | 801 |
| Deepling | | | | 1812 | 2229 | 2219 | 2071 | 1713 | 1482 |
| Naginijan | 928 | 933 | 936 | 1010 | 1038 | 1137 | 930 | 674 | 656 |
| Rajabarrie | | 868 | 1021 | 1028 | 1294 | 1399 | 1210 | 1224 | 951 |
| Negheriting | | | 471 | 613 | 865 | 719 | 613 | 507 | 503 |
| Messamara | | | 419 | 485 | 574 | 524 | 470 | 358 | 458 |
| Rungamatty | | | 421 | 581 | 635 | 723 | 669 | 410 | 436 |
| Amluckie | 1137 | 1047 | 1115 | 1316 | 1612 | 1423 | 1280 | 1187 | 1284 |
| Dejoovalley | 1461 | 1735 | 1478 | 1534 | 1958 | 1749 | 1800 | 1886 | 1648 |
| Loongsoong | | | | | 1367 | 1221 | 980 | 1340 | 976 |
| Bholaguri | 1582 | 1863 | 1762 | 1873 | 1943 | 1923 | 1683 | 1853 | 1843 |
| Longai | | | | | 1304 | 1215 | 1114 | 1246 | 1120 |
| Isabheel | | | | | 1202 | 1011 | 953 | 1227 | 1044 |
| Bidyanagar | | | | | | | | | |
| **ATCL(Total)** | **1243** | **1288** | **988** | **1142** | **1310** | **1273** | **1153** | **1129** | **1015** |
| Growth* | | 3.6 | (-) 23.3 | 15.6 | 14.7 | (-) 2.8 | (-) 9.4 | (-) 2.1 | (-) 10.1 |

**Source: Head Office, ATCL.**
*** PC growth over previous years.**

**ANNEXURE: 2.2**
**AVERAGE YIELD PER HECTARE, ATCL**
**(IN K.G.)**

| GARDEN | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 |
|---|---|---|---|---|---|---|---|---|
| Cinnamora | 945 | 1170 | 1187 | 1111 | 939 | 954 | 1116 | 1004 |
| Sycotta | 744 | 866 | 950 | 908 | 832 | 827 | 816 | 689 |
| Deepling | 1276 | 1411 | 1365 | 1606 | 1424 | 1534 | 1364 | 1076 |
| Naginijan | 718 | 763 | 826 | 875 | 816 | 875 | 806 | 920 |
| Rajabarrie | 805 | 819 | 910 | 742 | 763 | 700 | 854 | 789 |
| Negheriting | 556 | 272 | 602 | 741 | 629 | 690 | 787 | 783 |
| Messamara | 442 | 485 | 442 | 518 | 423 | 436 | 509 | 526 |
| Rungamatty | 455 | 581 | 539 | 698 | 592 | 600 | 694 | 573 |
| Amluckie | 1262 | 1372 | 1425 | 1540 | 921 | 1244 | 1351 | 1227 |
| Dejoovalley | 1406 | 1612 | 1512 | 1641 | 1224 | 1313 | 1497 | 1408 |
| Loongsoong | 1133 | 1093 | 1160 | 1216 | 811 | 1012 | 993 | 844 |
| Bholaguri | 1582 | 1903 | 2073 | 1532 | 1462 | 1432 | 1442 | 1340 |
| Longai | 938 | 1050 | 1060 | 1096 | 996 | 1264 | 993 | 758 |
| Isabheel | 998 | 890 | 822 | 953 | 852 | 906 | 948 | 833 |
| Bidyanagar | | | | | | | | 356 |
| **ATCL(Total)** | **947** | **1021** | **1062** | **1084** | **906** | **985** | **1012** | **875** |
| Growth* | (-)6.7 | 7.8 | 4.1 | 2.1 | (-)16.4 | 8.7 | 2.7 | (-)13.5 |

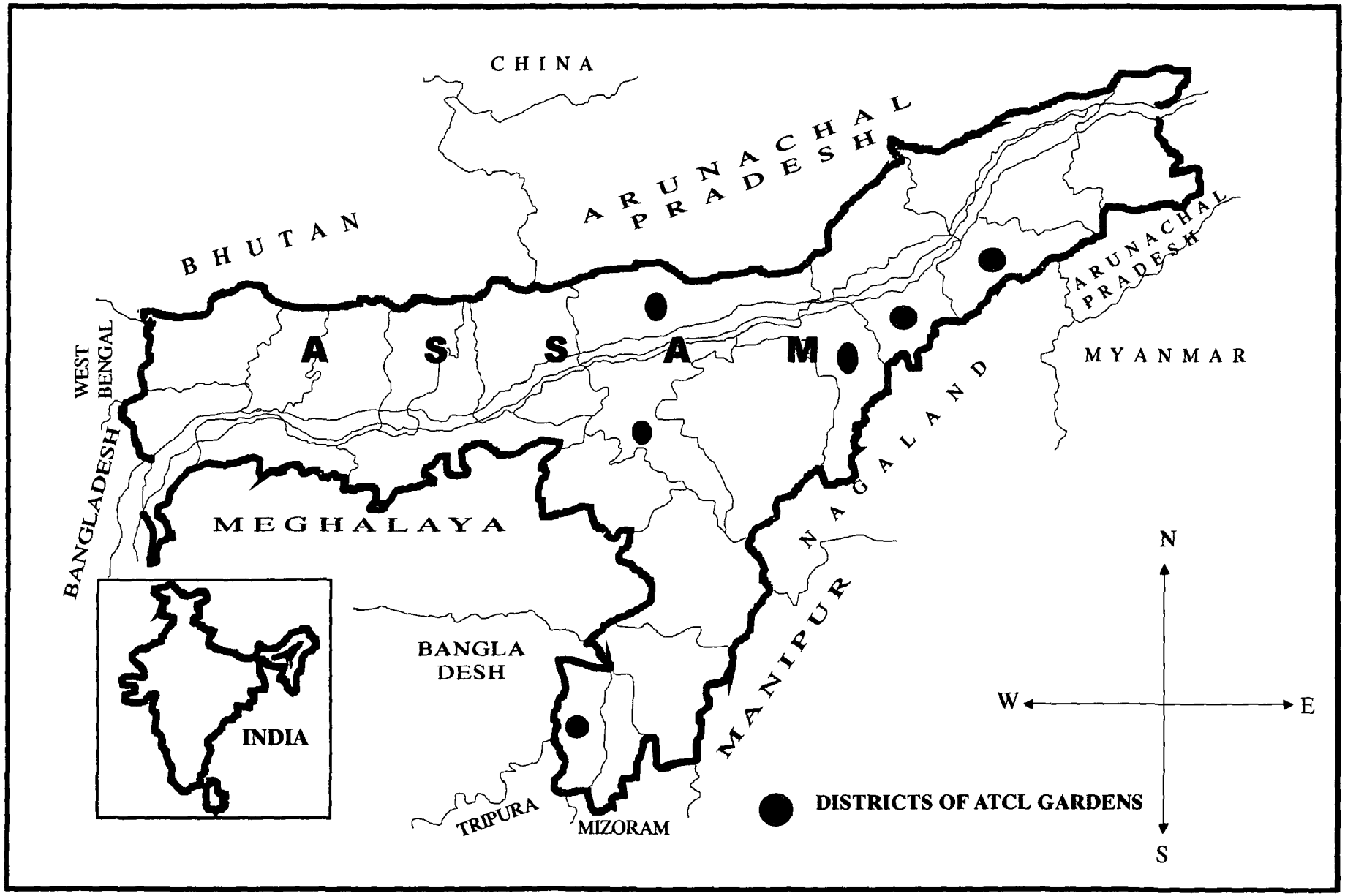
**Source: Head Office, ATCL.**
*** PC growth over previous years.**

**ANNEXURE: 2.3**
**AVERAGE YIELD PER HECTARE, ATCL**
**(IN K.G)**

| GARDEN | 1990 | 1991 | 19992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|---|---|---|---|---|---|---|---|---|---|
| Cinnamora | 1017 | 1085 | 1134 | 1107 | 901 | 903 | 992 | 865 | 946 |
| Sycotta | 831 | 921 | 974 | 1041 | 871 | 878 | 928 | 765 | 789 |
| Deepling | 1229 | 1269 | 1119 | 1098 | 1109 | 1007 | 1078 | 1090 | 1183 |
| Naginijan | 993 | 933 | 942 | 995 | 857 | 844 | 835 | 803 | 789 |
| Rajabarrie | 834 | 788 | 608 | 860 | 784 | 711 | 894 | 782 | 743 |
| Negheriting | 773 | 800 | 824 | 861 | 666 | 672 | 849 | 754 | 788 |
| Messamara | 605 | 619 | 602 | 689 | 519 | 515 | 695 | 645 | 696 |
| Rungamatty | 687 | 684 | 677 | 739 | 544 | 504 | 737 | 704 | 762 |
| Amluckie | 1317 | 1335 | 1401 | 1473 | 1221 | 1094 | 1281 | 1206 | 1498 |
| Dejoovalley | 1569 | 1670 | 1660 | 1783 | 1553 | 1297 | 1423 | 1426 | 1849 |
| Loongsoong | 1079 | 1138 | 1177 | 1412 | 1194 | 983 | 1208 | 1034 | 1290 |
| Bholaguri | 1453 | 1353 | 1607 | 1606 | 1574 | 1434 | 1480 | 1524 | 1754 |
| Longai | 923 | 904 | 835 | 915 | 884 | 782 | 790 | 792 | 911 |
| Isabheel | 873 | 776 | 947 | 973 | 853 | 798 | 852 | 842 | 983 |
| Bidyanagar | 478 | 539 | 744 | 690 | 704 | 607 | 698 | 722 | 881 |
| **ATCL(Total)** | **977** | **988** | **1017** | **1083** | **949** | **869** | **983** | **930** | **1057** |
| Growth* | 11.7 | 1.1 | 2.9 | 6.5 | (-)12.4 | (-)8.4 | 13.1 | (-)5.4 | 13.7 |

**Source: Head Office, ATCL.**

*** PC growth over previous years.**


CHINA
ARUNACHAL PRADESH
BHUTAN
ARUNACHAL PRADESH
WEST BENGAL
A S S A M
MYANMAR
BANGLADESH
NAGALAND
MEGHALAYA
INDIA
BANGLA DESH
MANIPUR
TRIPURA
MIZORAM
N
W
E
S
DISTRICTS OF ATCL GARDENS

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