

**PROBLEMS AND PROSPECTS OF
TEA PLANTATION INDUSTRY IN KERALA**

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CERTIFICATE

This is to certify that the thesis entitled “**Problems and Prospects of Tea Plantation Industry in Kerala**” is a bona fide record of the research work carried out by Mrs. Merlin Joseph, under my supervision and guidance for the degree of **Doctor of Philosophy** of the Cochin University of Science and Technology, in the Department of Applied Economics. The thesis is worth submitting for the degree of Doctor of Philosophy in Economics.

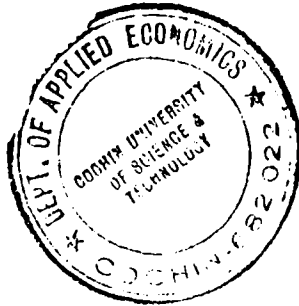


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Chapter I

INTRODUCTION

Tea is the most popular of all non alcoholic beverages in the world. Two-third of the world population drink tea. Tea, '*Camellia sinensis*,' is believed to have originated from South East Asia. However, the centre of origin is not clearly known. It may be the Tibetan Plateau including Sze-Chuan, Yu-nan, Sain, North East India or China. Chinese people were the pioneers in using tea for medicinal purpose. By the end of the sixth century, the Chinese began to regard tea as a beverage. In India tea plant was discovered in North East Assam during the early eighteenth century. Tea has become one of the powerful commodities of commercial value during the colonial period.

Starting from a luxury which only the rich could afford, tea has now become the world's cheapest and most widely used drink other than water. It has truly become a beverage of international fellowship, a bond that brings people together. Economically speaking too, tea is an extremely valuable source of much needed foreign exchange.

Tea plantation industry is a combination of industry and agriculture (plantation is a large estate on which crops such as tea, coffee, rubber etc. are grown). Production of leaf is an agricultural activity while its processing is an industrial activity. Most of the large estates process raw leaf in their own factories. Tea industry is of considerable importance in the national economy

of India in terms of income generation, earning foreign exchange, employment generation, and contribution to the national exchequer.

1.1 An overview of tea statistics

There are 2662353 hectares under tea in the world producing 3013807 tonnes of tea with an yield rate of 1132 kg./hectare. Total world demand for tea is 2893170 tonnes and world's import of tea for consumption is 122600 tonnes (Tea Board, 2000). Sixty per cent of the total area under tea in the world is located in China and India. Asian countries like India, China, Sri Lanka, Turkey, Indonesia and Japan are the leading producers of tea in the world. Major exporters of tea in the world are Sri Lanka, China, Kenya, India and Indonesia. Commonwealth of Independent States (CIS.), United Kingdom (UK), Pakistan, United States of America (USA), Arab Republic Emirates (ARE) and Japan are the leading importers of tea.

India continues to be the largest producer of tea accounting for 28.09 per cent of the global output. India is also the largest consumer of tea. In terms of area, it occupies about 19.05 per cent of the world tea area. Although India holds a leading position in production and export, the current position of tea trade reveals that its share in the world production and export has been declining steadily over the past three decades. The Indian export is stagnated around 200 million kg. which is 15.6 per cent of the total world export and 24.43 per cent of total tea production in India.

Tea plantations occupy 30.84 per cent of the total area under plantations in India and production of tea account for 46.49 per cent of the total national plantation output. According to statistics provided by the Tea Board, India, total area under tea in the country during the year 2000 was 507196 hectares which produced 846483 tonnes with an average yield rate of 1669 kg./hectare. The current Indian tea export is 206816 tonnes and import is 15230 tonnes. Total consumption of tea in India is 653000 tonnes (Tea Board, 2000).

1.1.1 Geographical distribution of tea

India's tea plantations can be largely grouped into two regions, North India and South India, occupying 77.68 per cent and 22.32 per cent respectively of the total area under tea in India. Assam and West Bengal are the important tea growing states accounting for 67.87 per cent and 27.84 per cent respectively of area under cultivation in North India. The remaining 4.29 per cent is located in Tripura, Bihar, Uttar Pradesh, Himachal Pradesh, Manipur, Sikkim, Arunachal Pradesh, Nagaland, Orissa and Meghalaya.

South India occupies 22.32 per cent of tea area (113199 hectares) and account for 24.16 per cent of output (204552 tonnes). In South India, Tamil Nadu, Kerala and Karnataka are the major tea growing states contributing 65.66, 32.48 and 1.86 per cent respectively. Karnataka occupies 0.42 per cent (2106 hectares) and Tamil Nadu occupies 14.66 per cent (74331 hectares) tea area of India.

In Kerala tea growing districts are Idukki, Wayanad, Kottayam, Kollam, Thiruvananthapuram, Trissur, Malappuram and Palakkad. Though tea is grown in all these districts there is considerable spatial concentration in two districts, Idukki and Wayanad. They account for about 87.24 per cent of the total tea area of Kerala. Idukki has 72.40 per cent and Wayanad has 14.84 per cent of tea growing area in the State (Tea Board, 2000).

Tea is one of the traditional plantation crops in Kerala and the State is the fourth largest producer of the crop in the country, with a relative share of 8.19 per cent. Kerala alone accounts 2.30 per cent of the world production. Kerala's tea production is 33.91 per cent of the South Indian production. The tea area of Kerala is 7.25 per cent of area under tea in India and 1.38 per cent of the area under tea in the world and it is 32.48 per cent of the area under tea in South India. According to Association of Planters of Kerala (APK), tea export of Kerala is approximately 40 per cent of South Indian tea export. Kerala exports 44436 tonnes of tea (21.49 per cent of total tea exports from India) and it is about 3.35 per cent of world tea export. Area under tea accounts for 5.78 per cent of the total area under plantations in Kerala and the production of tea accounts for 9.13 per cent of the total plantation output in Kerala.

According to the Tea Board, India, total area under tea in Kerala was 36762 hectares in 2000 and it produced 69355 tonnes of tea. Productivity of tea in Kerala (1887 kg./hectare) is higher than that of South India (1807

At the State and central level the tea plantation sector contributes to the exchequer by various types of taxes and duties. At the state level there are agricultural income tax, land tax, plantation tax, state sales tax/purchase tax, building tax, machinery licence fee and professional tax. At the central level there exists central income tax, cess under commodity acts, excise duty, central sales tax and factory licence fee.

1.2.1 Employment generation

Tea Plantation industry provides employment to many people especially poor and weaker sections of the population. Average daily number of labour in Indian Tea Plantations is 1032267 (Tea Board, 1997-'98). Of this 490187 are male, 492899 are female and 49181 are adolescents.

The average daily number of employees in tea plantations in Kerala during 1997 was 74776. Besides this, approximately 125000 temporary employees are working in tea plantations in Kerala. This is approximately 6.35 per cent of the total employment in Kerala (including all sectors) (Tea Board, 1997- '98, Government of Kerala, 2000). The total number of employees in tea plantations in Kerala constitutes about 7.24 per cent of the total number of tea plantation employees in India. In Kerala the percentage of male workers in tea plantations is 45.96 per cent (34365) and female is 52.95 per cent (39592) and adolescents constitutes 1.09 per cent (819).

1.3 Statement of the problem

Tea plantation industry is an important industry in Kerala. It plays crucial roles in income generation, foreign exchange earning and employment generation both directly and indirectly. However, the overall performance of this industry is found to have been unimpressive.

Since the market for tea is of an international one, trade liberalisation is expected to have a substantial impact on this industry. Trade liberalisation and free import of tea, import of inferior quality of tea and re-export of it mixing with the traditional product have caused problems both in the domestic and international markets. As a result of opening up of the market for tea, there exists competition among producers at the international level. Competitiveness has become the key to success. Those units who are having the cost of production above the average international price will find difficult to continue to operate. In the case of Kerala most of the units are in this category.

The disintegration of the former USSR(United Soviet Socialist Republic) which accounted for more than half of the total exports of India caused serious problems in Indian tea exports and it has very much affected Kerala tea because USSR used to be the major market for Kerala tea. Tea companies are facing severe problems such as high cost of production and low price realisation.

The employees are facing the major problem of insufficient wage rate compared to the living expenditure and they are found to be dissatisfied with poor working conditions. In sum the tea plantation industry is facing a crisis. In this context the present study attempts to examine the problems and prospects of tea plantation industry and proposes to undertake a detailed analysis of its growth performance in terms of trends in output, area and yield.

1.4 Hypothesis

The study hypothesises that tea plantation industry in Kerala is stagnating since the late seventies.

1.5 Theoretical framework

Theoretically, cash crops are favoured for their potential contribution to growth, employment and external balance. The expansion of cash cropping is recommended to exploit comparative advantage and provide the basis for industrial development through inter-sectoral linkages. The contribution of cash crops to the output growth can be summarised in three propositions:

- (i) Cash cropping allows improved factor utilisation in both the short and long terms. In the short term, it provides both profit and a means of increasing income through the exploitation of comparative advantage. In the long term, these benefits can be reinforced by indirect effects, including specialisation, economies of scale, and greater managerial efficiency associated with higher levels of exchange.

- (ii) The exploitation of comparative advantage in the short-run maximises the investible surplus, which meets a necessary condition for maximum long-run growth. In the international context, cash crops may also attract foreign factors of production to speed the growth process.
- (iii) Cash cropping contributes to growth through linkage effects, both production and consumption (Maxwell and Fernando, 1989).

Considering these theoretical aspects, the topic for study is very relevant in the present era of globalisation. Trade liberalisation and the resultant import of inferior quality of tea and the re-export of it mixing with the traditional products have virtually maligned the market for Indian tea. The instability in price with slump has placed the companies in uncertainties; and they began to adjust with the price changes. The adjustments seem to have been reflected in setting a strategy for short-term maximisation of profit rather than expecting the long term returns. At the producer level, the short-run is that time period during which the productive capacity of a producer is fixed. This means that short-run supply variations are restricted only to the variations in the use of variable factors in combination with the fixed productive capacity.

In the case of cultivation of tea, the short-run adjustments are limiting the quantity of harvesting, continuing with old plants, not extending area under cultivation, absence of technological innovations etc. Similarly in the case of manufacturing factories they continue with the vintage technology

producing only standard products of black tea, absence of product diversification, conventional plucking etc.

The propositions (i) and (ii) are expected to operate in an improving phase and when downswing began the units will not be reinvesting the already accumulated surplus. In this context the present study attempts to examine the growth performance of the tea plantation industry in Kerala and to observe the factors affecting the performance of it. The proposition (i) pre-empted improved factor utilisation, including labour absorption. Thus the study also has to look into the aspects relating to labour in the tea plantation industry.

1.6 Objectives of the study

The overall objective of the study is to examine the problems and prospects of the tea plantation industry in Kerala. The specific objectives are the following:

1. To trace the historical evolution of tea plantation industry in India with special reference to Kerala and to study the performance of tea plantation industry in Kerala.
2. To examine the trends in growth of tea Industry in Kerala vis - a - vis other neighbouring producing states in India in terms of area, production and productivity.
3. To study the problems of tea plantation industry in Kerala.

1.7 Methodology and Data base

1.7.1 Data base

The study is based on both primary and secondary data. The sources of secondary data are publications and reports of Tea Board, India, United Planters Association of Southern India (UPASI), Association of Planters of Kerala (APK), State planning Board, Kerala, different Tea Companies and various other unpublished works like Ph.D. Theses, M.phil. dissertations and other Research Reports, Books, Journal articles, etc. 'Tea Statistics' and 'Tea Digest' issued by Tea Board, India is the main source of secondary data.

Primary data are collected for understanding the problems of Tea Plantation Industry. In Kerala tea plantations are mainly concentrated in Idukki and Wayanad districts and they account for 87.24 per cent of area under tea in Kerala. Idukki accounts 72.40 per cent and Wayanad accounts 14.84 per cent of the total tea area of Kerala. Therefore Primary data were collected from these districts. There are 89 large tea companies, 163 large estates and 3956 small growers in Kerala (Tea Board, 1998). According to Tea Board, India tea companies having estate area above 10.12 hectares are considered as large ones. Here the study, based on primary survey, concentrates only on large tea companies, since large companies possess about 93 per cent of the total tea area of Kerala. The average daily number of employees in tea plantations in Kerala during 1997 was 74776. Primary data were collected from sample units of the universe (89 large tea companies). The total tea planted area of the sample units (21114.46 hectares) constitutes 61.86 per cent of the total tea planted area of

the universe (34130.91 hectares). Table 1.1 gives details on selection of sample.

Table 1.1 Selection of sample

	Area (in hectares)
Total Universe	34130.91
Sample Units	21114.46
Percentage to Universe	61.86

Sample companies were selected based on the area contribution. Since the major five companies possess 60.38 per cent of the total tea area of the large companies, all these companies were selected for the study. Mananthavady Tribal Plantation Co-operative limited is being undertaken by Government of Kerala through co-operative society managed by Board of Directors with the purpose of more tribal participation. So this company was also selected for the study. Besides this to understand the problems and prospects of small companies (but having tea area above 10.12 hectares), three small companies are also selected for the study.

To study the problems faced by the companies, data were collected from the selected companies' estate managers and owners [owners in the case of companies having single estate (Owner manager type)]. Information on the problems employees face were also been collected from 900 employees of the selected units or companies. Total number of permanent employees in selected sample estates is 4382. The surveyed 900 permanent employees constitute

20.54 per cent of the total sample estates' permanent employees. A detailed primary survey was conducted using schedules. Data were collected both from employees (worker side) and from employers (company side). Different schedules were used for collecting data from employees and employers. Data were collected through interview method.

The 900 respondents, included field workers (including pluckers), field supervisors/officers, factory workers, factory supervisors/officers and others which include balasevika, creche (day care) aya, tapal man., dispensary nurse, watch man, welfare officer and estate office workers. Each category's percentage share are as follows: field workers –64 per cent (33 per cent male and 67 per cent female), field supervisors/officers –6 per cent (only male), factory workers – 14 per cent (only male), factory supervisors/officers – 2 per cent (only male), others –14 per cent (69 per cent male and 31 per cent female). Thus out of the total respondents 53 per cent are male and 47 per cent female.

Survey data were supplemented through informal discussions with the officials of the selected Tea Companies, Tea Board, India (Ernakulam Branch) and Association of planters of Kerala,Ernakulam/ Thiruvananthapuram.

1.7.2 Tools of analysis

The analysis of the contribution of tea industry to the state's economy and trends in growth are based on the available secondary data. The trends in growth have been analysed by estimating growth rates of area, production and productivity, employing an exponential model. Estimates are made for Kerala, karnataka and Tamil Nadu, South India, North India and for

India, for the period 1950 to 2000. Since there was a trend break in the year 1977, estimates for two periods - for 1950 to 1977 (period I) and for 1977 to 2000 (period II) were made employing kinked exponential model, which gives growth rates for the two periods.

Statistical methodology of estimation of growth Rates

Growth rate of a variable is defined as the rate of change per unit of time. Growth rate can be measured statistically by estimating a functional form of growth overtime. In the present study, an exponential trend is employed which gives a uniform rate of growth. The exponential trend is given by,

$$\ln Y = a + bt$$

Where, Y = the variable under consideration.

t = time point.

a = constant to be estimated

b = growth rate to be estimated.

In order to study the structural shift (trend break) separate growth rates are to be estimated for the two time periods. The period – wise growth rates can be estimated by employing,

$$\ln Y_t = a_1 + b_1 (D_1t + D_2k) + b_2 (D_2t - D_2k) + U_t$$

Where, b_1 and b_2 are the growth rates for the two periods with a kink at time point k.

$D_1 = 1$ for the first period

= 0 other wise

$D_2 = 1$ for the second period

= 0 other wise

To study the factors contributing to such trends, a decomposition analysis has been made by computing area effect and yield effect. The area effect and yield effect on productivity were analysed for the different states using the growth decomposition estimates.

Statistical methodology for decomposition of growth rate into area effect and yield effect.

Output growth of tea can be partitioned into the contributions of changes in area under tea and changes in output of tea. The Production function for this estimation is given by,

$$Q_t = A_t Y_t$$

Where

$$Q = \text{output}$$

$$A = \text{Area}$$

$$Y = \text{Yield}$$

$$t = \text{time point}$$

Given the above multiplicative identity, the exponential growth rates of the components on the right hand side sum up to the growth rate on the left – hand side term, output:

$$b_Q = b_A + b_Y$$

Where

$$\ln Q_t = a_Q + b_Q t$$

$$\ln A_t = a_A + b_A t$$

$$\ln Y_t = a_Y + b_Y t$$

Now the area effect and yield effect on output growth can be estimated by,

$$AE = \left[\frac{b_A}{b_Q} \right] \times 100$$

Where, AE = area effect

Similarly, yield effect (YE)

$$YE = \left[\frac{b_Y}{b_Q} \right] \times 100$$

where, YE = Yield effect.

Socio – Economic conditions of employees in the sample area were analysed using t - test and χ^2 - test

1.8 Limitations of the study

The following are the major limitations of the study.

1. The literature available on the topic is limited.
2. Because of shyness or fear the tea plantation workers especially women are reluctant to provide information about their working and living conditions and their problems.
3. Now-a-days most of the tea companies face severe problems. So, many company owners and managers (employers) are reluctant to give actual information. Some company owners did not even give permission for data

collection in their company estates. Therefore, the selection of sample for primary survey was a tedious task.

4. Tea plantations are very vast and situated in remote rural areas. It also made the primary survey very tedious and time consuming.

1.9 Period of the study

The analysis based on secondary data covers the period 1950 to 2000. The statistics relating to various aspects of the plantation sector are available from 1950 onwards. The authentic data for the same published by Tea Board, India is presently available till the year 2000. The primary survey was conducted during the year 2000 to 2001.

1.10 Organisation of the study

The study is organised under six chapters, including the introductory chapter. A detailed survey of literature is given in chapter two. In the third chapter an overview of the historical evolution of tea plantation industry is given. Importance of tea plantation in Kerala economy (part I) and analysis of its growth performance (part II) are made in chapter four. The profile and problems of tea plantation industry are examined in chapter five. This chapter is divided into two parts. Part I deals with the profile and problems of tea companies and Part II examines the profile and problems of tea plantation employees. The summary of findings and recommendations are given in the sixth chapter.

