

**COMPETITIVENESS OF INDIA'S AGRICULTURAL EXPORTS**  
**- A CASE OF TEA EXPORTS**

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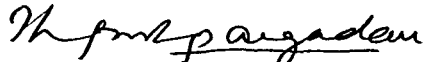
I hereby declare that the research for this dissertation titled " **COMPETITIVENESS OF INDIA'S AGRICULTURAL EXPORTS - A CASE OF TEA EXPORTS**" being submitted to the Jawaharlal Nehru University for the award of the Degree of Master of Philosophy was carried out entirely by me at the Centre for Development Studies, Trivandrum.

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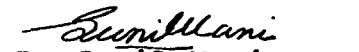
  
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## CHAPTER 1

### INTRODUCTION

The Import substitution strategy adopted during the early phase of post-independence period, was intended not only to speed up the process of industrialisation, but also to diversify India's trade towards non-agricultural exports. However, the overall trade performance has resulted in worsening India's Balance of Payments situation. This disturbing trend in Balance of Payments has been partly attributed to the increasing trend in import-intensity of manufactured exports. A recent study by the EXIM Bank (1991) has also lent empirical support to this view, that the import content of manufactured exports has increased from 32 per cent in 1980-81 to 42 per cent in 1989-90. In other words, it reveals that net foreign exchange contribution of India's manufactured exports has declined from 68 per cent in 1980-81 to 58 per cent in 1989-90. It is thus seen that India's trade in manufactured goods is largely of imports and hence costs its Balance of Payments. On the contrary, India's trade in primary commodities, in particular plantation crops, are least import intensive and earn foreign exchange closer to cent per cent.<sup>1</sup> As a consequence, the development policies pursued so far is seen to have neglected the trade potential of agricultural sector. However, agricultural sector continues to be the leading sector in earning net foreign exchange, so as to finance import-led industrialisation drive. The emphasis given to agricultural exports in the economic policy reforms initiated in

<sup>1</sup>. Mani.S (1992)



1991 is also an indicator of the growing realisation of its importance. Moreover, recent studies have maintained that there is need to provide incentives to boost agricultural exports in India, to ease the Balance of Payments crisis<sup>2</sup>.

Considering the growing population pressure, and the expanding domestic market, it is imperative to identify commodities that are first of all potentially exportable. However, most of the earlier studies on agricultural exports seem to have focussed on the issue of export instability rather than that of potential exportability. Hence, the present study focusses on the 'potential exportable hypothesis' taking a dominant agricultural commodity export, namely tea, as a case. At the outset, it may be qualified that unlike other agricultural commodities, plantation crops have virtually little import content and hence a positive net foreign exchange earner through their exports. However, a declining trend in plantation crop exports like tea, from India has been noticed in recent years. This would have adverse impact on the new economic policy in general, and trade policy reforms in particular. It is against this background that the present study makes a modest attempt at examining the trends in India's agricultural exports, taking tea as a case. As a prelude, this study briefly reviews the trade literature, in particular, agriculture trade to seek an analytical framework for understanding the potential competitiveness of Indian tea.

This chapter is organised in four sections. The first

<sup>2</sup>. See Reddy, Narayanan (1992) Singh, Prasad, Dingar (1992)

section sets out the theoretical issues pertaining to agricultural trade in developing countries. While doing so, factors constraining agricultural export performance of developing countries have been highlighted. The second section briefly reviews the debate on agricultural exports and its associated problems in developing countries. The third section explores the trends in India's agricultural commodity exports vis-a-vis total exports during the last four decades. The last section gives the scope and objectives of the study.

## SECTION 1

The concept of Comparative Advantage which is central to the Neo-classical theory of trade, essentially reflects the specialisation and gains from trade and hence, predicts the direction and terms of trade. The notion was initiated by David Ricardo who expounded that each country tends to specialise in the production of those commodities in which it has a comparative advantage and import those goods for which it possesses a comparative disadvantage. This formed the basis for free trade which, it claimed, leads to optimisation of global welfare. Eli-Heckscher and Bertil Ohlin later refined the principle and emphasized that differential endowment of factors of production between countries is the most important factor determining comparative cost differences, leading to International trade. Thus while Ricardo placed emphasis on physical and natural influences over competitiveness, technological and human factors were given importance by later economists.<sup>3</sup>

<sup>3</sup>. Goldin, Brown (1992)

Although the original Ricardian theory is related to agriculture, the subsequent literature on Comparative advantage shifted its focus of attention to industry in the developed countries. Moreover, the relevance of comparative advantage to agriculture under the present trade scenario seems to have limited applicability in view of the distortions imposed on agricultural trade. It is thus argued that Comparative advantage in many cases has been 'acquired' by the countries through protectionist policies, rather than being 'endowed'. During the course of development after the Second World War, countries adopted a wide range of measures to insulate farmers against foreign competition which can be broadly categorised as border measures and domestic interventions. Border measures like tariffs, quotas and variable import levies and also quality standards and surveillance are used to inhibit imports. In addition to border measures, countries often subsidise farm inputs and provide special assistance for marketing farm products.

On the one hand, developed countries protect their agricultural sector in order to maintain their farm incomes on par with incomes from other sectors and also to maintain self sufficiency in the name of food security. In order to achieve this objective, countries follow policies which provide extra incentives to agricultural sector by either announcing high support prices of output or by subsidising the inputs heavily or a combination of both<sup>4</sup>. Such policies of protection and other farmer income support measures often give rise to surpluses. To dispose off these, farmers are given subsidies to aid exports. In order to protect

<sup>4</sup>. Gulati A, Sharma A N (1992)

domestic cultivators from foreign competition, imports are controlled by the government or heavy duties are imposed on them. This results in greater allocation of resources to the agricultural sector than would have been the case under free trade conditions. Thus, industrial countries protection restricts markets, lowers world export prices and destabililise them.

On the other hand, although the development strategies of most developing countries have been to increase agricultural production, achieve food self-sufficiency and raise rural employment and income by providing huge subsidies, their own economy-wide policies appear to have militated against agricultural production and particularly against agricultural exports. The strong policy bias toward rapid industrialisation during the 50s and 60s via import substitution strategy followed by most developing countries meant higher levels of protection to industries relative to agriculture. This strategy resulted in artificial lowering of the relative prices of agricultural products vis-a-vis industrial products, thereby penalising the farmers who received lower international prices for their products, and also paid higher international prices for industrial inputs such as fertilizer and pesticides.<sup>5</sup> In some cases, developing countries tax their primary exports in order to earn revenue.

<sup>5</sup>. For an extensive bibliography, see World Bank 1986, pp 162-168.

A recent study by Gulati and Sharma (1992), revealed that world agriculture is subsidised to the tune of 18 per cent of its value. Major exporters of agricultural commodities like the US and European communities subsidise their farm sector by 26 per cent and 36 per cent respectively. Japan topped the list in extending the highest subsidy equivalent of 72.5 per cent of its agricultural produce. Less developed countries like Pakistan, Egypt, Bangladesh and India appeared to tax their producers. India taxes its agricultural sector to the extent of -2.33 per cent.<sup>6</sup>

These policy distortions arising from interventions in domestic and global markets, can alter the comparative advantage to the extent that the potential comparative advantage is not realized. However, with the current trends in global trade liberalisation and domestic structural adjustment programmes, Comparative advantage is expected to play a greater role in regulating and directing production and trade. Hence, trade liberalisation and the reduction of government interventions in agriculture are likely to increase the significance of factor endowments and comparative advantage in determining the future trends in agricultural production and trade.

<sup>6</sup>. The coverage of the value of agricultural production of India was 37 per cent in the study.

## SECTION II

### Debate on Primary Commodity Exports: A Case for Developing Countries

The role of agricultural exports in development has been a subject of debate for many years. Following the arguments for free trade, the application of the basic principles of Comparative advantage implied that less developed countries (LDCs) with their abundant supply of natural resources should specialize in the production and export of agro-based commodities. While developed countries with their abundant capital and Comparative Advantage in capital intensive finished products should produce and export these capital intensive goods to LDCs. However, the stagnation in export earnings of major developing countries during the 1950s cast serious doubts on the credibility of free trade. Two schools of thought have been developed related to this:

#### a) Demand Deficiency Thesis:

The origin of demand deficiency thesis can be traced to the Trade-Engine hypothesis which dichotomized the world into developed countries which produce and export manufacturing goods and the developing countries which produce and export primary products. Trade, viewed as an engine, was believed to transmit growth impulses from developed to developing countries<sup>1</sup>. The theory established a causal relation between income growth in developed countries and export volumes in LDCs. The view was that "since industrialised countries demand for imports depend on their income, their economic growth is very important to the export and

<sup>1</sup>. Kravis (1970)

growth prospects of developing countries" (World Bank, 1978). This obviously means that any attempts by LDCs to adopt autarkic growth would be futile due to the adverse movements in their terms of trade. Ragnar Nurkse (1959) was the main exponent of this hypothesis.

However, this view changed and the Trade-Engine hypothesis was treated with scepticism as it was believed to lead to fall in demand for exports of developing countries to the developed. The relevance of Trade-Engine hypothesis was questioned considering the changes undergone in the export portfolios of developing countries during the past few decades (Reidel, 1984). LDCs no longer confine themselves to exporting primary commodities, but have diversified their composition of exports to include manufacturing, overtime. Similarly, the developed countries also export agricultural commodities. Kravis (1970) questioned the validity of Nurkse's thesis and asserted that trade was more a 'handmaiden' rather than an engine of growth. The alleged engine of growth was later dismissed by Nurkse as no longer operating satisfactorily in the 20th century due to restrictive demands of industrial countries for the traditional exports of developing countries. Some of the reasons cited for this change are:

- a) Shift in the composition of industrial output of advanced economies from industries with high raw material content to low content.
- b) Exports of developing countries which is concentrated in agricultural commodities have low income elasticity of demand, once a high standard of living is attained. This tendency is based on 'Engel's Law' which states that the pace of agricultural growth is hindered by the growth in demand for its output and the proportion of household spending on food declines as incomes rise.

- c) Agricultural protectionism, and
- d) Increased use of synthetic substitutes for primary commodities.

Thus developing countries are always confronted with Balance of Payments deficit leading to a structural tendency for their terms of trade to deteriorate vis-a-vis the industrial countries. This laid the foundation for import- substitution strategy and it was proposed that developing countries should industrialize via protection and import substitution. Singer (1950) and Prebisch (1964) supported this view.

**b) Supply-Deficiency Thesis:**

Cairncross (1960) argued that it is the internal supply factors like export taxes, high population growth, low elasticity of demand, maintenance of overvalued exchange rates, which is the cause for stagnation of exports of developing countries. Beida (1962) also supported this view and asserted that the volume of exports of many developing countries remained constant, while export unit values rose which is a strong evidence for supply deficiency thesis.

Moreover, the successful development experiences of countries like Japan, Taiwan, Singapore, South Korea proved that export led growth are favourable when compared to import substitution policies. Studies have also established a positive correlation between export growth and GNP growth for LDCs<sup>8</sup>.

<sup>8</sup>. Balassa (1978), Feder (1982) Tyler (1981)



Empirical evidence thus strongly proved that supply factors are responsible for stagnation in export earnings than deficiency in demand. This is particularly true for developing countries like India, where tremendous growth of population has adversely affected exports of agricultural commodities.

Another point of contention of exporting primary commodities is that they face the additional problem of instability, as their prices are expected to vary more than the prices of industrial products because :

- a) Agricultural markets are sensitive to climatic changes,
- b) The short run responsiveness of supply and demand to changes in prices is usually less in the case of agricultural products than it is in industrial markets, and
- c) Output of most crops are seasonal.

In spite of the shortcomings of primary exports, the natural resource advantages are invariably the main basis of a developing country's exports. During the early stages of development, developing countries are dependent on agricultural exports as the main source of export earnings and large shares of production, employment and export are concentrated in primary sector. With economic growth, this sector declines in favour of secondary sector and in the more advanced stages of development, both primary and secondary sector lose in favour of service sector. For most developing countries the role of agriculture remains critical because its progress determines the speed at which countries can industrialize. Studies have shown that agriculture has played an important role in the economic transformation of developing countries and has contributed positively to economic growth (Erh-

Cheng Hwa, 1983; Johnston and Mellor, 1961). Moreover, with the ongoing liberalisation of world trade in agricultural commodities there is greater scope for developing countries like India to promote exports in primary commodities.

### SECTION III

#### India's Agricultural Export Performance: An overview

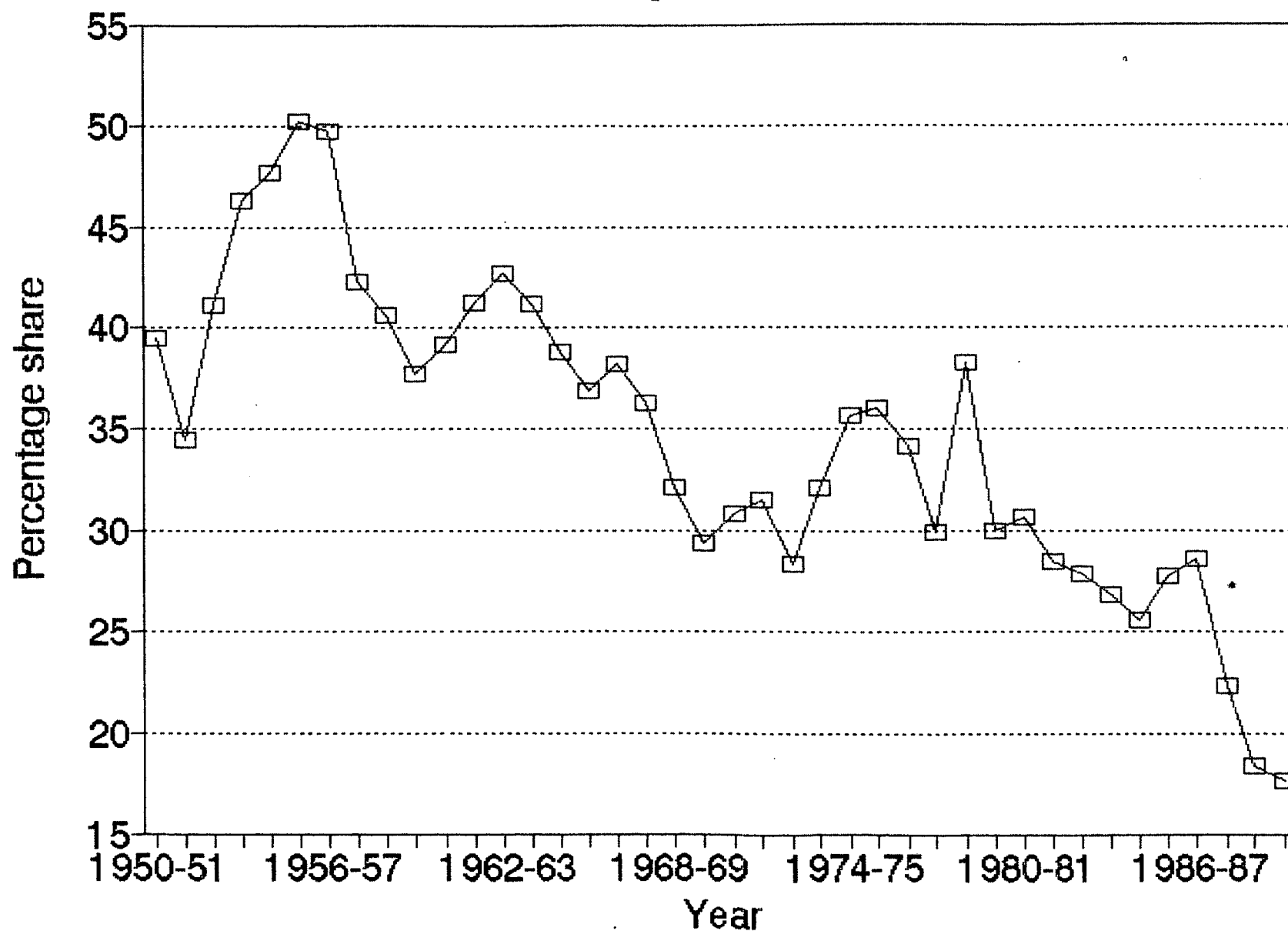
After looking into the problems and prospects of agricultural exports of developing countries in general, this section analyses the agricultural exports of India. Agricultural commodities constitute a major component of external trade in India. The major items included in India's agricultural exports are tea, coffee, spices, tobacco unmanufactured, raw cotton and waste, cashew kernels, fruits and vegetables. Before assessing the performance of India's agricultural exports, it would be interesting to look into India's net agricultural exports (deficit or surplus).

It is seen from Table 1.1 that agricultural trade in India has undergone significant changes during the past four decades. They are as follows :

- 1) The share of agricultural exports as well as imports show a declining trend;
- 2) There has been a considerable decrease in agricultural exports from 44.16 per cent in 1960-61 to 31.72 in 1970-71. Between 1980-81 to 1989-90 there is again a sudden fall to 17.62 per cent (See Figure 1);

Figure 1.1

*Share of Agricultural exports  
in Total exports in India.*



- 3) In the case of agricultural imports, decline has been particularly sharp from 26.93 per cent in 1970-71 to 9.49 in 1980-81. Net agricultural exports which was negative initially became positive due to this trend; and,
- 4) Trade balance has been negative for all the years.

Table 1.1

Trends In India's Agricultural Trade<sup>9</sup>

(In crores)

	1950-51	1960-61	1970-71	1980-81	1989-90
1. Tot.agri.Ex.	221 (39.50)	284 (44.16)	487.01 (31.72)	2057 (30.65)	4879 (17.62)
2. Tot. agri.Im	269 (48.03)	328 (29.23)	440 (26.93)	1192 (9.49)	1334 (3.77)
3. Net agri. Ex.	-48	-44	47	865	3545
4. Net total trade	-2	-480	-99	-5838	-7735

Note - \* Figures in parentheses are the percentages to total exports and imports respectively.

Source: Various Issues of Economic Survey, Ministry of Finance Government of India.

Despite the declining trend in India's agricultural trade, the net foreign exchange earning out of agricultural exports has increased from 47 crores in 1970-71 to 3545 crores in 1989-90. (See Table 1.1) But it is seen from the same table that the overall trade deficit continues to increase. Thus it may be inferred that increase in agricultural exports would certainly ease the trade deficit. Since it is based on the aggregate level analysis, a disaggregated level analysis of commodity groups is carried out to ascertain the aggregate level trade performance.

<sup>9</sup>.Agriculture here is broadly defined to include farm products such as cereals, pulses, vegetables, fruits, animal husbandry. It also includes processed products such as sugar, edible and non-edible oils.

As far as the agricultural imports are concerned, Table 1.2 highlights some striking observations on the trends during the study period. They are as follows :

- 1) The decline in cereal imports appear to have been the cause for positive net agricultural exports when it declined from 48.4 per cent in 1970-71 to 8.4 in 1989-90. Its share increased again to 28.3 per cent in 1989-90.
- 2) Another positive aspect is the decline in imports of raw cotton and India appears to have become self-sufficient in this commodity.
- 3) Oilseeds and oil have caused a large outflow of foreign exchange during 1980-81. It then shows a decline to 15.8 per cent in 1989-90. Imports of raw cotton also show an increasing trend.

On the whole, it is discernable from the above observations that there has been a steady decline in agricultural imports during the study period, especially after 1970.

**Table: 1.2**  
Contributions of Various Commodities to  
India's Agricultural Imports (Selected Years)

( in per cent)

Sl. Commodity No.	1960-61		1970-71		1980-81		1989-90	
	Share in Agri. Tot.		Share in Agri. Tot.		Share in Agri. Tot.		Share in Agri. Tot.	
1. Food & Misc	10.1	2.9	6.6	1.8	23.5	2.2	na	
2. Cereals	55.2	16.1	48.4	13.0	8.4	0.8	28.3	1.1
3. Raw Cotton	25.0	7.3	22.5	6.1	0.0	0.0	0.7	0.0
4. Raw Wool	0.3	0.1	3.4	0.9	3.6	0.3	12.9	0.5
5. Jute	2.4	0.7	0.0	0.0	0.1	0.0	0.8	0.0
6. Oilseed & oil	1.5	0.4	8.9	2.4	59.5	5.6	15.8	0.6
7. Others	5.5	1.6	10.2	2.8	4.9	0.5	41.5	1.6

Source: Calculated from Economic Survey , Ministry of Finance Government of India. (Various issues)

Regarding the agricultural exports in India, it is broadly observed that there has been significant changes in the commodity composition during the study period under consideration (see Table 1.3). At the outset, it may be noted that due to the paucity of data at the commodity level for the fifties, the present analysis has been restricted to the period 1960-1990.

**Table 1.3:**  
Changes in Commodity Composition of India's  
Agricultural Exports Vis-a-Vis Total Exports  
( in percent)

Sl. Commodity No. Composition	Relative Contribution of Commodities to Exports					
	(Average Percentage)					
	1960-70 AGRI. Total		1971-80 AGRI.Total		1981-90 AGRI. Total	
1. Coffee	3.8	1.4	7.0	2.3	7.5	1.8
2. Tea and Mate	39.0	14.3	21.1	7.0	18.0	4.4
3. Oilcakes	10.4	3.8	9.2	3.0	6.9	1.7
4. Tobacco	6.9	2.5	6.8	2.2	5.5	1.3
5. Cashew Kernels	9.7	3.6	7.4	2.5	7.1	1.7
6. Spices	6.3	2.3	6.4	2.1	6.1	1.5
7. Sugar and Molasses	5.0	1.8	10.8	3.6	1.4	0.3
8. Raw Cotton	4.1	1.5	2.1	0.7	3.3	0.8
9. Rice	0.2	0.1	2.0	0.7	8.0	2.0
10. Fish and Fish Preparations	3.5	1.3	9.9	3.3	13.7	3.4
11. Meat and meat Preparations	0.2	0.1	1.2	0.4	2.5	0.6
12. Fruits/Vegetables	1.5	0.5	1.5	0.5	3.7	0.9
	(90.5) (33.11)		(85.4) (28.3)		(83.8) (20.5)	

Note: Figures in parentheses are percentages of selected commodities to total agricultural exports and total exports respectively.

Source: Same As Table 1.2

The following points can be gleaned from Table 1.3 :

- 1) Items included in Table 1.3 constitute a major share of India's agricultural exports. Their share was 90.5 percent during the sixties. However, it declined to 85.4 per cent during 1971-80 and further to 83.8 in the eighties. As these commodities comprised more than 80 per cent of the share of agricultural exports, trends in the share of these items can be interpreted as an analysis of performance of India's agricultural exports as a whole.

- 2) Share of these items in India's total exports also show a declining trend. It decreased gradually from 33.11 per cent during the period 1960-70 to 28.3 per cent in 1971-80 and further down to 20.5 per cent during the eighties. As the share of these items constituted more than 80 per cent of India's agricultural exports, the fall in its share in the concluding year of study obviously can be interpreted to mean that non-agricultural exports have increased their share in India's total exports and agricultural exports are losing their prominent position.
- 3) Taking individual items into consideration, Tea, the most traditional item continues to occupy the most important place in India's agricultural exports. However, its share has declined sharply from 39 per cent during the sixties to 18 per cent in eighties. Its share in total exports has also declined from 14.3 per cent in the sixties to a marginal share of 4.4 per cent in the eighties.
- 4) Other items of importance include Cashew Kernels, coffee and oilcakes which show considerable amount of fluctuations in their share in agricultural exports. Share of oilcakes declined from 10 per cent during the sixties to 6.9 per cent in the eighties. Share of Coffee in agricultural exports doubled from 3.8 per cent during the sixties to 7.5 per cent during the eighties. Share of spices in agricultural exports has stagnated at 6 per cent for the period under consideration, while Rice has shown remarkable increase from 0.2 per cent during the sixties to 8 per cent in the eighties.
- 5) Interestingly, the share of fish and fish preparations in agricultural exports show a steady increase from 3.5 per cent in the sixties to 13.7 in eighties. And also, other non-traditional items like meat and meat preparations, fruits and vegetables have increased their share in recent years.

Regarding India's share in world market, Table 1.4 reveals that except for commodities like Tea and Spices, India has only a very marginal presence in the world market of agricultural products. Even in the case of Tea and spices there is a rapid decline in their share. India which was known for its influential position in the international market for these commodities has now only a subsidiary role to play. The share of rice shows an increasing trend from 0.6 per cent in 1970 to 6.0 per cent in 1990.

Table.1.4  
INDIA'S SHARE IN WORLD EXPORTS BY COMMODITY GROUPS

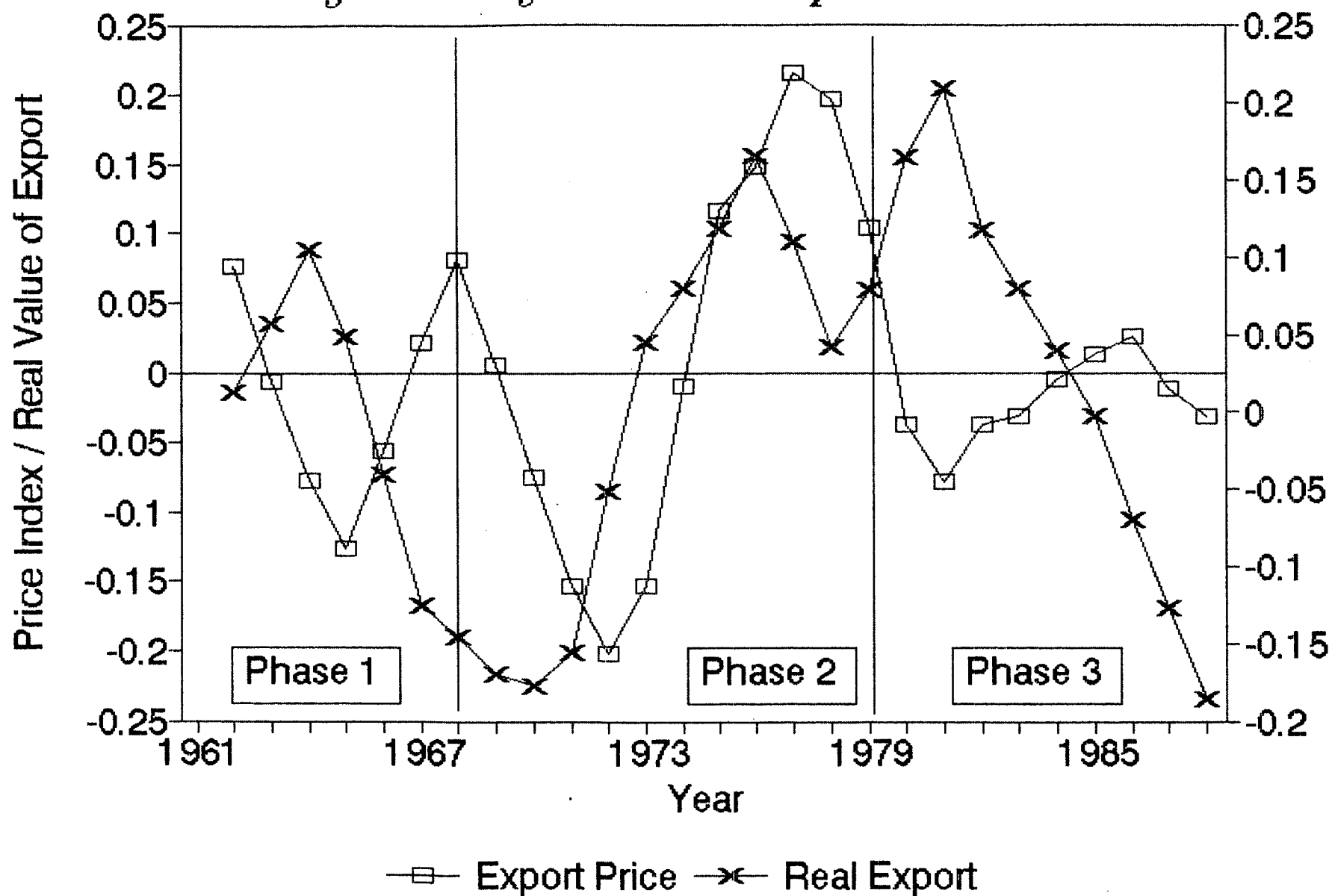
Sl. No.	Commodity	Relative Percentage Share				
		1970	1975	1980	1985	1990
1	Coffee -	1.0	1.6	2.1	1.9	1.2
2	Tea and Mate -	33.4	31.3	27.7	26.2	10.9
3	Tobacco -	2.5	3.2	4.4	1.8	0.4
4	Spices -	20.5	13.3	14.4	19.3	9.5
5	Sugar and Molasses -	1.0	4.8	0.3	0	0
6	Rice -	0.6	0.6	3.7	5.6	6.0
7	Fish and Fish preparations	-	-	2	2.4	1.7
8	Meat and Meat preparations	0.1	0.1	0.4	0.4	0.1
9	Fruits and Vegetables	1.2	1.5	1.1	1.4	0.7
10	Cereal & Preparations	0.1	0.1	0.5	0.2	0.5
11	Feeding stuff for animals	3.6	13.3	1.6	1.2	0.9
12	Total exports	0.6	0.5	0.4	0.5	0.5

Source: Economic Survey, Ministry of Finance, Government of India 1992-93.

Figure 1.2 shows the <sup>cyclical</sup> trends in export price (Unit value index) and real exports (value of agricultural exports deflated by unit value index) of agricultural exports in India. The trend can be divided into three phases. The first phase is between 1961 to 1967 where there exists an inverse relation between export price and real export. The graph reveals that during this period, when there is a rise in real export, the export price is falling. The second phase is between 1967 to 1979 wherein the export price moves in the same direction as real export. This means that India's agricultural exports were commanding a higher price in the international market during this period. However, during the last phase (1979 to 1989), both real exports and export price revert back to the trend observed in the first phase and real exports do not pick up inspite of the fact that export price is rising reflecting thereby a decline in the degree of control over the world price determination. Moreover, this periodical shift in the



Figure 1.2  
*Cycles in Agricultural Exports in India*



pattern of movements in export price and quantity of exports may be partly ~~be~~ attributed to the changing export performance of the dominant crops like tea. This is the issue to be taken up in the subsequent analysis chapters.

Moreover, a closer look at the data movements at the disaggregate level have shown that there is a shift in the trends of most of the selected commodities after 1974-75. Based on this, growth rates have been estimated and the study period has been divided into two sub-periods as sub-period I (1960-61 to 1974-75) and sub-period II (1975-76 to 1989-90). However, the estimated growth rates of agricultural exports as a whole and total exports are for the time period 1950-51 to 1989-90. Growth rates for the entire period as well as the sub-periods were estimated using semi-log function. At the outset, it may be noted that the statistically significant growth rates at 5 per cent level are only reported in Table 1.5.

It is seen from the Table 1.5 that total export earnings from India has registered 10.30 per cent growth rate during the study period. However, the sub-period analysis shows that sub-period II registered a phenomenal rate of 11.80 per cent which was almost double that of sub-period I. In the case of agricultural exports, Table 1.5 shows that growth rate of agricultural exports has been lower than that of total exports by nearly two per cent during the entire study period, but witnessed a similar pattern of growth rate of aggregate exports while comparing the sub-period growth rates. Thus, it reveals that agricultural exports has been losing its influence in determining the magnitude of the overall growth, except for setting the pattern of trend.

**Table 1.5**  
**GROWTH RATES OF EXPORT EARNINGS**  
**FOR VARIOUS AGRICULTURAL COMMODITIES**

( in per cent)

Total exports/ Selected agri. commodity exports	Study Period	Sub-period I	Sub-Period II
	(1960-61 to 1989-90)	(1960-61 to 1974-75)	(1975-76 to 1989-90)
1. Tot.Exports@	10.30	6.45	11.80
2. Tot.Agri.X@	8.55	4.90	7.52
3. Meat	10.95	20.99	13.34
4. Fish	24.28	24.40	26.99
5. Fruits	25.56	27.75	25.15
6. Cashew	9.91	12.73	9.55
7. Sugar	ns	13.48	-22.07
8. Coffee	14.80	13.42	8.09
9. Tea	7.21	2.73	6.85
10. Oilcakes	10.60	9.36	11.17
11. Tobacco (Unmanu)	9.07	11.98	7.36
12. Raw Cotton	7.76	3.18	10.07
13. Fixed Veg.oil	9.94	7.50	12.71

Note: ns - Not significant; @ refers to study period (1950/51 to 1989/90) and the sub-period I (1950/51 to 1974/75) respectively.

Source: 1. Chandok and The Policy Group.India Database.

2. Report on Currency and Finance, RBI Bombay (Various issues).

This disturbing trend has been further examined by extending the period-wise growth rate analysis to selected commodity exports. Considering the performance of individual commodities, it was found from Table 1.5 that except for meat, fruits and vegetables and coffee, all other agricultural commodities have experienced the rate of increase in exports below 11 per cent during the entire study period (1960-61 to 1989-90). Amongst these commodities, raw cotton and tea registered more or less the same rate of increase in export at the order of 7.21 to 7.74 per cent during the entire study period. Whereas, the other

commodities have evidenced more or less the same rate of increase in export earnings between the range 9.07 to 10.95 during the study period. Commodities like meat and fruits have shown a phenomenal rate of increase at the rates of 24.28 and 25.56 per cent during the entire period, while the export of coffee has increased at the rate of 14.80 per cent. However, sugar export is found to be insignificant and hence not reported.

In the sub-period analysis, it is seen that except cashew, sugar, coffee, tobacco and meat, all other agricultural commodity exports have set an accelerating trend in the sub-period II when compared to the sub-period I implying thereby improvements in export performance of these commodities. In the case of sugar, export earnings has been declining at the order of -22 per cent during the second sub-period, although it registered an increase of 13.5 per cent during the first sub-period. The export earnings of fruits and fish were found to have a steady growth during the sub-periods, but export earnings of meat has declined drastically from 21 per cent in sub-period I to 13.3 per cent in sub-period II. Moreover, tea which is the predominant agricultural commodity among others, is seen to have registered a higher growth rate of 6.85 per cent in the second sub-period II when compared to 2.73 per cent in the first period. Therefore it may be inferred that majority of the agricultural commodities have improved their export performance after the mid seventies of which food products like fruits and fish have shown a marked increase. Further it is worth mentioning that despite its declining share in agricultural exports, tea export earnings is observed to be accelerating since mid-seventies.

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To summarise, India's share of agricultural exports to total exports has been showing a declining trend since 1950 while net exports shows a surplus in later years. Tea has lost its prominent position in the world market, and its share in total as well as agricultural exports of India has also declined rapidly. However, it still accounts for a major share in India's agricultural exports. The growth rate of its export earnings shows accelerating trend.

#### SECTION IV

##### Scope and Objectives of the Study:

The existing literature on agricultural exports in developing countries have often tended to concentrate on export instability, its causes and supposed effects. Along this line, most of the Indian studies have attempted to examine the contribution of supply and demand factors to instability in exports<sup>10</sup>. While analysing this, especially in the case of agricultural exports, the earlier studies implicitly assume that the commodities under consideration are exportable. However, this assumption is difficult to hold in developing countries like India, where there exist imperfections in markets and institutional constraints like government intervention in commodity markets, slow pace of technology diffusion etc. These inherent distortions tend to reinforce the inefficiency, in allocation of resources. Hence commodity production in different regions tend to have different levels of efficiency in allocation of resources. And this has a

<sup>10</sup>. Pal.S (1992), Chand R., Tewari S.C (1991), Sen P (1989)

significant bearing on the determination of export price, apart from the demand side influences. This aspect has not been taken into consideration while analysing export performance in India. Instead, all the earlier studies have attempted to identify the sources of export earnings instability. In fact, as mentioned above, inefficiency in allocation of resources would influence the prices through cost. Thus it may be argued that increase in efficiency of resource use is more important than mere increase in output growth in making the commodity exportable, which can be captured through analysing potential price competitiveness.

Thus, the current topic of India's trade position focuses, not on the aspect of instability, but on the aspect of 'Competitiveness' of its exports. The central theme of the present study is 'Price Competitiveness' and the hypothesis is to test whether the decline in tea exports can be attributed to this factor. It is in this context that the present study differs from the earlier studies, both analytically and methodologically. Although several factors determine competitiveness, price is taken as the main determinant, as it is quantifiable. Also, it is generally taken as an index of the net effect of interaction of other factors affecting competitiveness. Besides, Potential competitiveness can also be interpreted in terms of the degree of protection that the farmers enjoy. Moreover, the aggregate level of analysis of India's exports provide sufficient justification for undertaking an indepth study of tea exports, and to ascertain whether the cause of its dwindling share is due to the loss in its price competitiveness.

**Objectives of the study:**

- 1) To examine the trends in production, consumption and export of Tea vis-a-vis competitors;
- 2) To analyse the potential competitiveness of Tea exports and to identify factors influencing competitiveness; and,
- 3) To assess the impact of product differentiation on export performance of tea at a regional level - South India and North India.

This study relies mainly on secondary data source like RBI Report on Currency and finance, Tea Statistics, Economic Survey, International Tea Committee - Annual Bulletin of Statistics (1992), ILO Yearbook, India Database, Annual Report of Cochin Chamber of Commerce. The time period chosen for the study is from 1950 to 1990. However, due to data constraint, at times the initial period of analysis varies.

The present study is organised in line with the aforesaid objectives as follows. The second chapter looks into the aspect of export competitiveness and the factors influencing it. Various methodologies used to measure export competitiveness and their limitations are discussed here. The third chapter examines the trends in tea production, consumption and exports of tea vis-a-vis the competing countries. The fourth chapter examines the potential competitiveness of India's tea exports. The fifth chapter summarizes the findings and makes concluding observations.

## CHAPTER II

### MEASURES OF EXPORT COMPETITIVENESS A Critical Exposition of Theoretical and Measurement Issues

Interest in the analysis of competitiveness with special reference to exports has grown considerably in recent years. Various methodologies have been developed in order to measure competitiveness but no single measure captures all the relevant elements due to the complexity, considering the large number of determinants which comprise it. Added to this diversity is that a number of determinants are not quantifiable and hence not amenable to a complete explanation. Nevertheless, each measure attempts to capture certain important aspects of competitiveness. In International trade, competitiveness is reflected in the relative performance of the competing countries, whether measured as shares of the world export markets, the degree of import penetration or as an index of the Revealed Comparative Advantage (RCA).

Keeping this complexity involved in view, an attempt has been made in this chapter to review critically, the various measures of export competitiveness. Besides, this chapter documents factors determining export performance and also the various determinants of Price competitiveness. Based on this, the measures are evaluated in the light of their limitations when applied to developing countries, in particular, agricultural exports. At the outset it may be noted that the measure of Nominal Protection Rate (NPR) is chosen as the second best method of measuring export competitiveness for the present study. NPR serves the purpose of examining the twin objectives of potential



competitiveness and also the degree of protection or disprotection accorded to a commodity. In other words, this measure captures the effect of policy distortions (tariff and commercial policy) on export performance and it also reveals the potential competitiveness of the commodity.

In this direction, this chapter is organised into four sections. The first section documents the factors underlying export performance. The second section reviews the popular measures of export competitiveness. The analytics of NPR as a potential competitiveness measure as well as a protection measure is presented in Section three. In this section, we also make an attempt to discuss methodological issues pertaining to NPR when applied to agricultural exports. The final section highlights the significance of NPR approach to competitiveness of agricultural exports from India.

## SECTION I

Commodity trade between countries is generally perceived as an issue subjected to the influence of numerous factors. It may be safely grouped into two categories - exogenous and endogenous. The exogenous variables are referred to as the demand factors, while the latter represents the supply side. These aspects of commodity trade is taken up here, in order to highlight the effects of major factors, among others, on trade performance.

Growth in demand for the products which is an exogenous

variable is in turn determined by factors like real per capita income of the importing country, trade policies, availability of substitutes for the product, the pattern of consumption in the importing country etc. The incidence of protectionism in industrial country in particular has an important bearing on agricultural trade.

The supply side (endogenous) factors which are also the factors that determine the ability of a country to compete, include a large number of determinants like the ability to generate exportable surplus, which depends on domestic demand pressure, level of production, cost of production, export price and also the domestic price. Other non-price factors like quality and design of the product, packaging, delivery schedules are also equally important in determining the export performance of a country.

Thus, considering the large number of its determinants, many of which are not quantifiable, the concept of competitiveness is a complex issue. Despite this, export competitiveness is an important indicator of trade flows across nations and is most often referred to in empirical work. Infact, the classical and neo-classical trade theories are based on the relative prices of commodities traded and their relationship with factor prices and factor productivities.

Among the various determinants of export competitiveness, price is taken as the major determinant as changes in price directly affect export performance. Also it is easily quantifiable. McGeehan (1968), in his survey of literature on competitiveness, found a close association between price and export

performance. He found that there existed an inverse relation between the relative share of individual countries in the volume of world export and their initial price level. Cohen (1964) in his study on India's exports, explained the relative value of exports in terms of the relative export unit values. He concluded that a fall in India's market share was due to increase in the price of her products relative to her competitors.

Differences in international prices of a product arise due to several factors like cost of production, factor productivity, transport costs, quality of the product, tariffs, supply bottlenecks etc. Some of the major determinants of price competitiveness are discussed below.

#### **Exchange Rates**

Exchange Rate variations have a direct influence on the returns of exporters, and as a consequence, influence competitiveness. For instance, devaluation reduces the foreign prices of export products and hence improves competitiveness. But the impact of exchange rate on external competitiveness depends on the response of competitors, elasticity of demand and also the supply response of the exporter. Depreciation also acts as an incentive to exporters as it makes exports more profitable.

However, exchange rate appreciation has a negative effect on price competitiveness. Most of the LDCs, with the aim of industrialising their economies, follow import restriction policy

which results in overvaluation of exchange rate. This overvaluation results in turning the terms of trade against agriculture.

### **Pressure of Domestic Demand**

In the case of a dual market where a commodity is exported as well as consumed at home, the price effect will have a decisive role to play, depending on which market is more profitable. This is especially true in the Indian context as the general view is that agricultural exports are 'residually determined' after the satisfaction of a protected domestic market<sup>1</sup>. The pressure of domestic demand in turn affects the rate of change of domestic prices and costs.

Two views have been expressed regarding the impact of pressure of domestic demand on export performance. One view establishes an inverse relationship between domestic demand pressure and export performance. (Ball et.al 1966, Jaques 1970) This theory suggests that with relatively high levels of internal demand, ceteris paribus, the quantity of resources allocated to exports is lower. This in turn leads to higher costs and higher prices of exportables which will have adverse impact on exports, rendering it noncompetitive in world market.

Nayyar (1987) opined that majority of agricultural exports of India enter into domestic consumption and with slow growth of output, the surplus available for exports is squeezed and adversely affects price competitiveness.

<sup>1</sup>. Rajaraman.I. (1993)

An alternative approach is that an increase in domestic demand leads to an increase in export performance through the inducement of productive technology, and domestic demand is considered to be a prerequisite to the development of an export industry (Hsu 1972, Basevi 1970, Jallal 1976). As a corollary to the above statement, at higher levels of economic development, an increase in domestic demand generates a higher level of local value added. This improvement in induced technology from within the system tends to enhance export competitiveness in terms of price and quality. Thus the hypothesis tentatively predicts that, *ceteris paribus*, higher the level of domestic demand, greater would be the export performance.

Paul and Mote (1970) examined the competitiveness of 16 Indian products taken mainly from cotton textile and engineering industries. They emphasized the use of Net Domestic Export Price Differential (NDEP) which is the difference between net domestic price of a product and the net export price as a measure of external competitiveness. This gap is essentially the measure which is to be filled in order to induce the exporter to sell abroad rather than in the domestic market.

## Trade Policy

Trade policies of exporting country as well as importing countries could provide an incentive or disincentive to export. In order to boost exports, a country can apply different kinds of export incentives, like cash incentives, export subsidies, import replenishment, concessional finance. All these measures have a positive impact on the competitiveness of the exportable commodity. Direct export subsidies and other forms of export incentives raise the domestic currency returns per unit of foreign exchange earned by exporters, thereby raising the relative profitability of exports and increasing competitiveness.

However the levy of export duties and imposition of export controls will adversely affect the incentive to export and has an adverse impact on competitiveness. As mentioned earlier, developing countries through their own policies, over value their exchange rates which is a disincentive for agricultural exports. Trade restrictions such as tariffs, exchange control, import restrictions, raise the price of imports above the world market prices and they affect price competitiveness directly through exports or through their effect on imported inputs or both.

In addition to these major determinants, there are other non-price factors which affect the competitiveness of exports. These are designing, quality, marketing efficiency, delivery dates which have a large influence on a country's ability to export. Nayyar (1976) is of the opinion that these non-price factors are

more important for non-traditional export of manufacturers whose competitive ability is largely determined by them. Whereas in the case of primary products, price competitiveness is considered to be relatively more important although he does not rule out the role of factors like packaging and quality in influencing competitiveness of exports of these products as well.

It is also important to mention technology development which has a significant influence on competitiveness. For instance, agriculture in developed countries is highly mechanised which has led to economies of scale in production. This has helped them to produce at substantially lower costs and hence they are able to compete effectively in world market.

Mention must be made about the role of processing and marketing in competitiveness. High marketing, transport and processing margins tend to squeeze domestic prices and as a result, the price of exports increase. It was found that edible oil and groundnuts in India which have a high marketing, processing and transport costs has made them less competitive internationally.<sup>2</sup>

Thus the above review clearly reveals that several factors - price as well as non price, affect competitiveness. All these factors have an important influence on agricultural exports operating either through demand or supply side. As mentioned earlier, price competitiveness is particularly important for agricultural exports and hence the importance of studying this aspect.

<sup>2</sup>. Gulati, Hanson, Pursell (1990)

## Section II

### Measures of Competitiveness : A Review

Commonly, price competitiveness is measured using relative method wherein the export performance of trading countries are tested using relative price as an explanatory variable. Here again, the use of trade prices (export and import unit value indices) has been criticized and instead, it is suggested that actual prices should be used.<sup>3</sup>

In an environment of trade restrictions where access to market is limited by the imposition of quotas, the rate of quota utilisation is sometimes used as a measure of competitiveness. However, there are limitations to this approach as well, because low quota utilisation need not reflect lower competitiveness as it could be due to low production or pressure of domestic demand.<sup>4</sup>

Another simplified model which has often been used to study export performance of individual countries is the constant market share model(CMSA). The effect of change in competitive position is the difference between the actual export of a country in a year and what the exports would have been had the country maintained its base period share in each of the market and commodity group.

<sup>3</sup>. Kravis.I, Lipsey.R (1971)

<sup>4</sup>. Sharma (1993)



According to the model, if  $S(t) = X(t) / W(t)$  represents a country's share of world exports in period  $t$ , changes in the share is given as -

$$\begin{aligned}
 [S(t) - s(0)] = & \sum_j L(j_0) \{ \Delta A(j_0) \} / A(j_0) \\
 & + \sum_j L(j_0) \{ \Delta B(j_0) \} / B(j_0) \\
 & + \sum_j L(j_0) \{ \Delta A(j_0) / A(j_0) \} \cdot \{ \Delta B(j_0) / B(j_0) \}
 \end{aligned}$$

where,

$X(t)$  = the country's exports in period  $t$   
 $W(t)$  = World exports in period  $t$   
 $A(j_0)$  = the country's share in exports to  $j^{\text{th}}$  market in base year  
 $B(j_0)$  = Share of exports to  $j^{\text{th}}$  market in total world exports in base period  
 $\Delta$  represents change in shares.

$L(j_0) = A(j_0) B(j_0) / \sum A(j_0) B(j_0)$  are the weights assigned to by relative share of the country's exports to the  $j^{\text{th}}$  market in world exports. The first term in the right hand side of the above equation represents market penetration which broadly represents changes in competitiveness.

The problem with this measure is that the results are sensitive to the choice of final year or the initial year of sample period. Also it is considered to be far too aggregative as it does not take into account the factors influencing each of the components comprising the model<sup>5</sup>.

<sup>5</sup> For details on constant market share model, see Leamer and Stern.

### Indexes of RCA

Early attempts at quantifying Comparative Advantage was undertaken by Liesner (1958) who was the first to use post-trade data in an effort to assess the relative export performance of Britain vis-a-vis any of the specified European community for a single commodity.

$$RCA_a^i = (X_a^i / X_a^e) / (X_a^d / X_a^e) = X_a^i / X_a^d$$

where X equals export value, subscript a refers to any specified (manufactured) commodity and superscript i, d & e refer to Britain, any of the specified European countries and to the 7 specified developed countries in Europe respectively. This index reflects the Comparative Advantage /Disadvantage of Britain vis-a-vis any one of the 7 countries in the European community. If this ratio is greater than one, then Britain would have a Comparative Advantage and vice-versa.

Kojima (1964) instead of identifying comparative advantage of a specific product, classified country's merchandise trade profile into labour intensive, capital intensive and natural resource intensive categories and tried to define a country's comparative advantage in terms of these categories.

Balassa (1965) was the first to coin the term 'Revealed Comparative Advantage'. His measure contained only export data and the relative export share measure of RCA is defined as:

$$RCA_{am}^{iw} = (XS_a^i / XS_m^i) / (XS_a^w / XS_m^w)$$

where XS refers to export supply, i to the home country, w to the world and a to any particular commodity and m to all commodities. This measure is based on the assumption that commodity pattern of exports reflect relative costs as well as differences in non-price factors and that Comparative Advantage can be expected to determine the structure of exports. An index value greater than unity indicates an economy's international competitiveness in that commodity while a lower value would place a country at a relatively disadvantageous position with respect to the export of a particular commodity. Balassa, however restricted his analysis to manufactured goods, on the ground that distortions in primary products trade meant that this trade would not reflect Comparative Advantage. The main criticism against this measure is that it relates to a static situation whereas, it has been argued that it would be more realistic to interpret RCA in a dynamic setting which takes into account changes in factors of production overtime, external economies, etc.

Kunimoto (1977) introduced into the analysis a relation between actual and expected country exports for different commodities. This geographical intensity index ( $G^{ij}$ )

$$G^{ij} = (X^{ij} / X^{iw}) / (M^{jw} / M^{ww})$$

where  $G^{ij}$  is considered to be an index of bilateral trade intensity relating one country's exports to another country's imports. Kunimoto then imagined a world where there was no geographical specialisation of international trade and formulated the index:

$$G^{ij} = X^{ij} / E(X^{ij}) \text{ where } E(X^{ij}) = X^{iw} (M^{jw}/M^{ww})$$

Thus  $G^{ij}$  was shown to be equal to the ratio of actual to expected trade, wherein expected trade is defined as the product of country  $i$ 's total exports multiplied by country  $j$ 's import share in world trade.

Similar to Kunimoto's index, Vollrath (1991) defined his RCA index wherein he also imagined a world with no geographical specialisation of international trade.

RCA is then expressed as a ratio of actual to expected trade.

$$RCA_a^i = X_a^i / E(X_a^i) \\ \text{where } E(X_a^i) = X_t^i (X_a^w / X_t^w)$$

Thus it is argued that when this index deviates from unity, it means that this country's exports are not distributed according to the relative importance of each commodity in world trade.  $RCA > 1$  indicates comparative advantage and  $RCA < 1$  is interpreted as comparative disadvantage. Neutral comparative advantage occurs when the ratio of actual to expected exports is equal to one. But this measure again rests on the delicate assumption of a constant total level of trade.

Bowen (1983) criticized the previously defined global RCA measures and opined that trade intensity above (below) unity cannot be used to infer a country's relative advantage (disadvantage) for any given commodity. He criticized Balassa's intensity index that it requires, a country does not import and export the same commodity. Whereas according to Bowen comparative advantage is actually a net trade concept. As a consequence he developed an alternative index of RCA using Net trade intensity index ( $T_{ik}$ ) and Production intensity index ( $I_{ik}^p$ ) These are based on the relationship between a country's production, consumption and trade in a commodity relative to what would occur in a hypothetical neutral Comparative Advantage world.<sup>6</sup>

$$T_{ik} = Q_{ik} - C_{ik} \quad \text{-----} \quad (1)$$

where  $Q_{ik}$  is country  $i$ 's production of commodity  $k$   
and  $C_{ik}$  is consumption of commodity  $k$

Assuming identical homothetic preferences,

$$C_{ik} = s_i Q_k, \quad k = 1, \dots, K; \quad i = 1, \dots, N \quad \text{----} \quad (2)$$

wherein,  $Q_k$  is the world production of commodity,  $k$ , and  $s_i$  is the factor proportionality which is the ratio of country  $i$ 's GNP ( $Y_i$ ) to world GNP ( $Y$ ). Substituting  $s_i$  in (2) and  $C_{ik}$  in (1),

$$T_{ik} = Q_{ik} - (Y_i / Y) \cdot Q_k$$

Rewriting this,

$$I_{ik}^t = (I_{ik}^p - 1)$$

where  $I_{ik}^t = [T_{ik} / (Y_i / Y) \cdot Q_k]$  and

$$I_{ik}^p = [Q_{ik} / (Y_i / Y) \cdot Q_k]$$

<sup>6</sup>. Ballance et.al.(1985) criticized Bowen's assumption of homothetic and identical preferences as a result of which trade would not take place.

The index  $It^{ik}$  could take both positive and negative values and is zero when there is no Comparative advantage. And  $Iq_k^i$  takes only positive values and equals one when there is no comparative advantage or disadvantage.

### Section III

A striking feature of all the measures reviewed in the above section reveals that they focus on manufactured goods alone. Agriculture is not included in these measures due to the distortion in agricultural trade which invalidates the concept of Comparative Advantage.

However, Vollrath (1989) has attempted to fill this lacunae by specifically examining the trends in international competitiveness of agriculture. He bases his analysis upon the concept called 'Revealed Competitive Advantage' and 3 global trade intensity measures - (a) Relative Trade Advantage (b) Relative Export Advantage (c) Revealed Competitiveness.

The first measure of Relative trade advantage is of the form:

$$RCA_a^i = RXA_a^i - RM_a^i$$

where  $RXA_a^i = (X_a^i / X_n^i) / (X_a^r / X_n^r)$  and

$$RMA_a^i = (M_a^i / M_n^i) / (M_a^r / M_n^r)$$

RXA and RMA refer to relative export advantage and relative import advantage respectively and superscript r refers to the world minus

country i while subscript n refers to all traded commodities minus commodity a.

The second measure of relative export advantage is defined as:

$$RXA_{a,n}^{i,r} = \text{Ln} \left[ \frac{XS_a^i / XS_n^r}{XS_n^i / XS_n^r} \right]$$

where superscript r refers to the rest of the world and subscript n to a commodity composite aggregate, excluding a.

This measure is based on an intermediate comparison of market shares of world trade. It compares a country's market share of one specific exported item with the country's market share of all exported items. Relative export advantage makes a clear distinction between a specific commodity and all other commodities and between a specific country and the rest of the world. This refinement eliminates country and commodity double counting in world trade.

The third measure revealed competitiveness summarises how well a country's economic sector, such as agriculture, can compete with other economic activity in the domestic and international markets. RC is defined as :

$$RC_{a,n}^{i,r} = \text{Ln} \left[ \frac{XS_a^i / XS_n^r}{XS_n^i / XS_n^r} / \frac{MD_a^i / MD_n^r}{MD_n^i / MD_n^r} \right]$$

where MD refers to imports.

RC can be arrived at by subtracting the relative import advantage of the sector from its relative export advantage. This index incorporates imports as well as exports and includes intra-industry trade. The inclusion of intra-industry trade improves the relevance of the RCA approach by simultaneously ensuring that an important component of trade is included. Also, the unrealistic assumption that all countries have to export all commodities is not relevant here.

Just as Balassa's measure of relative export share definition of RCA, all the three Revealed Competitiveness indexes also indicate the relative advantage or disadvantage in a particular commodity. A positive Revealed Competitive index indicates Comparative Advantage, while a negative value indicates Comparative disadvantage.

Relative Export Advantage is considered to be superior in some respects when compared to Relative Trade advantage and Revealed Competitiveness as it excludes imports which are influenced considerably by Government policy induced market distortions. But Vollrath is of the view that excluding imports ignores half of the trade linkages affecting growth. Any Competitive Advantage measure should incorporate both relative demand and relative supply dimensions, which is consistent with the real world phenomenon of two way trade.

The major limitations of these RCA indexes are that these measures reveal 'Revealed' Competitive Advantage and not 'Real' Comparative Advantage. The theoretical concept of Comparative Advantage relates to pre-trade relative prices and it is assumed



that there are no distortations in the real world trade. But RCA measures use ex-post trade data in measuring Competitiveness in a distortion-ridden world. To that extent these measures do not give a clear picture of the actual Comparative advantage of a commodity.

Moreover, the ability to compete will not be clearly revealed by comparison of market share. Large government subsidies can help a country gain market share and not through resource advantage. It is therefore necessary to identify a methodology which takes into account the distortations in agricultural trade and gives a true picture of the competitive position in the distorted agricultural trade scenerio. We therefore turn to the protection measures Nominal Protection Rate (NPR), and Effective Protection Rate (EPR) which gives an explanation for the potential Competitiveness of a commodity. These protection measures most often have been used as indicators of the extent of agricultural price distortion due to government intervention. They take into account tariffs, quotas and non-tariff barriers that protect farmers as well as the impact of export taxes or restrictions that penalize farmers.

#### **NPR : Analytical Issues**

Nominal protection rate (NPR) is essentially the relative measure, derived from the nominal protection coefficient (NPC). Theoretically, the NPC which is interpreted as a marginal concept, refers to the ratio of the value in domestic production to the value in trade of an additional unit of output<sup>7</sup>. In applied price

<sup>7</sup>. Byerlee D, Morris M. (1993)

policy analysis, NPR is the relative difference between domestic and world reference price and is expressed as a relative proportion of border price. The implicit assumption here is that the commodity in question is freely traded and by comparing the prices the producer actually receives to the price he would have received under free trade conditions, indicate the measure of protection or disprotection accorded to the commodity. This particular measure is used for both import and export competing commodities. Thus NPR for a tradeable commodity is conventionally calculated as:

$$\text{NPR} = \left( P_d / P_w^8 \right) - 1$$

wherein,

$P_d$  refers to the domestic price of the commodity

$P_w$  is the world reference price.<sup>9</sup>

( The choice of an import price or an export price to represent world price is based on current trading status, ie, whether the country is a net importer or exporter of the commodity.)

Tea which is the commodity selected for the present study is an export commodity. Hence NPR is computed on the exportable hypothesis and the main contention of the study is that in the absence of government intervention, the domestic price of an export commodity would be equal to FOB price less the total marketing and handling costs from the auction centre to the port.

<sup>8</sup> See Appendix 1.

<sup>9</sup> Byerlee and Morris (1993) have cautioned the use of world reference prices as an indicator of the degree and direction of protection when there could be a possibility of change in the trading status of the commodity. But this is not applicable to the present study as the commodity Tea selected has always been exported.

### Method of Analysis:

In order to measure and evaluate the effects of government intervention through pricing mechanism, it is necessary to have a reference point. Most often, the reference point is the price regime that would prevail in the absence of government intervention. Thus in the absence of government intervention, the prices of traded or tradeable goods in the economy would equal the price of the same goods in international market which is adjusted for locational and quality differences. This is referred to as border price of the commodity and it represents the opportunity cost to the country of the commodity, whether it is a potential import or export. (In the case of non-traded goods, the opportunity cost would be to produce traded goods.)

With the help of border price and domestic price of the selected commodities, it is possible to construct three measures of the degree to which domestic and border price diverge. NPRs may be positive (when the domestic / auction price is higher than the border price) indicating that the commodity is protected but is potentially non-competitive; or they may be negative (when domestic/auction price is lower than the border price ) in which case the commodity is 'taxed' or negatively protected but is potentially competitive. When NPR is equal or close to zero, it indicates that the commodity is neither directly protected nor disprotected. Calculating NPRs over a period of time for a particular commodity will demonstrate the competitive status and also how agricultural protection has changed over time.

NPR is the simplest way of demonstrating protection or disprotection accorded to a commodity. But the major limitation of this measure is that it takes into account the protection /disprotection accorded to the 'final output' while ignoring the inputs used in production of the selected commodity. To that extent EPR is a better measure as it provides more accurate assessment of the degree of protection.

**Effective Protection rate:**

EPR takes into account the impact of all the protective interventions on value added in a particular production process. This measure recognises that intermediate inputs in the production process may be overvalued or undervalued by government intervention and thus may distort the level of protection calculated using NPRs. Thus it attempts to measure the impact of incentives on the value adding process of production.

$$EPR = \{ ( V_d - V_b ) / V_b \} . 100$$

where,

V<sub>d</sub> = Value added evaluated at domestic prices  
V<sub>b</sub> = Value added evaluated at border prices.

Value added is defined as the value of output at any point in the production process, less the value of the traded inputs. Thus EPR takes the analysis a step further by taking into account the fact that the domestic price of inputs may differ from their border prices and therefore affect the margin (value added) of the production process. It states that a tariff on imports competing with final output operates like a subsidy, while a tariff on inputs act as a tax on value added.

Like NPRs, EPRs can be positive, negative or zero. A high positive level of effective protection encourages production of the commodity, while a negative one discourages production. An EPR of approximately zero has a neutral effect on output. By comparing EPRs of different commodities, it is possible to know the direction of resource flows both within the agricultural sector and between agricultural sector and other sectors of the economy.

However, EPR in agriculture has not been studied as much as in the case of industry as EPRs are generally not available and data on input uses in agriculture are more elusive. Since data required for computing NPRs are more widely available and since developing country agriculture use purchased inputs in smaller proportion of total value added, NPRs appear to be by and large satisfactory indicators of the degree of protection (World Development Report (1982)). For our analysis of Tea also, only NPR has been computed.

In addition to the above protection measures, mention may be made about Effective Subsidy Coefficient (ESC), and Domestic Resource Cost (DRC). While EPR takes into account the protection accorded to traded inputs, ESC measures both the protection and disprotection accorded to non-traded inputs such as credit, electricity. Thus if these inputs are subsidized, there is greater incentive to apply them. Hence ESC is considered to be a better measure than EPR.

The existing empirical studies [Krueger et.al (1981), World Bank (1982)] have observed that most of the LDCs are "all highly protected economies which have followed import substitution strategies, and as result generated high levels of effective protection".<sup>10</sup> As a consequence, they argued that this induces misallocation of resource flows from industries with relatively low (and negative) protection rates to industries with relatively high protection rates. This presence of structure of protection in LDCs give rise to distortions in markets (product and factor). Therefore, the EP is subject to domestic market distortions.

Yet another measure of the DRC which is closely related to the EP has gone one step ahead in correcting the possible effects of product/factor market distortions on the EPR. Thus, DRC seems to be relatively a better measure of revealing the true comparative cost as compared to EP. In the case of little market imperfections, the DRC becomes EP. Then it means that DRC would be different from EPR due to the presence of market distortions. If DRC is less than one, it implies that the commodity under consideration has comparative advantage/potential competitiveness of export and vice-versa.

<sup>10</sup>. Gemmel.N (1987)

## SECTION IV

### Relevance of NPR as a measure of Agricultural Export competitiveness:

The paucity of data required for computing DRC (in particular, the imported input and repatriation, royalty, social opportunity cost) restricts the application of DRC in investigating the potential competitiveness of exports/import substitution. Hence the available data allows us to choose the second best measure of potential competitiveness.

Moreover, it may be recalled from the earlier chapter that agricultural exports have comparatively less tradeable input in relation to manufactured exports. This allows the possibility of choosing NPR as a measure of competitiveness rather than EPR. Besides, it is argued that NPR is still subject to the influence of subsidy. But it is seen that the rate of subsidy differs across agricultural crops. Tea being a plantation crop has been found to have less subsidy. Moreover, a recent study reveals that irrigation subsidy for major crops like wheat and rice accounts for 75 to 90 per cent of total agricultural subsidy<sup>11</sup>. Based on this, since tea being a rainfed crop could not have enjoyed the benefit of subsidy to the extent that other crops would have<sup>12</sup>. All this amounts to suggest that the choice of Tea would make the NPR to reveal true potential competitiveness as comparable to the likely estimates of EP and DRC. Therefore, the present study chooses Tea export as a case study for understanding the potential competitiveness considering the methodological issues posed by ex-post data.

<sup>11</sup>. Gulati A, Hanson J, and Pursell G (1990)

<sup>12</sup>. Subsidies on fertilizers are not included separately in the estimation of ESCs because fertilizer being a tradeable input, it is included in the calculation of EPRs.

## CHAPTER III

### TRENDS IN EXPORT PERFORMANCE OF TEA

As observed in the earlier chapter, tea is a major agricultural commodity that accounts for a sizeable proportion of export earnings in India. However, a cursory look at the tea export data reveals that quantity of tea exports has remained stagnant at the growth rate of 0.08 per cent per annum over the last four decades while export price, usually measured in terms of unit value index, has registered a phenomenal growth of 6.66 per cent per annum during the same period. It, thus, lends support for our contention that tea export performance possibly hinges upon price competitiveness rather than increasing quantum of tea export. In other words, increase in value of tea exports depends on what price Indian tea gets in the international market. It is, therefore, evident that an assessment of tea export competitiveness would necessarily imply price competitiveness rather than export competitiveness per se. Along this line, the present study makes an attempt to examine the different facets of price competitiveness of tea export from India.

However, prior to the evaluation of competitiveness of any export commodity, it is necessary to characterise the production conditions and the nature of market that underlie it. Besides, the innate characteristics of production conditions under which a commodity is produced is a decisive factor in determining the exportable surplus. Moreover, the commodity under consideration being an exportable, it is essential to take into



account the global trade scenario wherein the relative trade performance of the competing countries is assessed. Keeping these issues in mind, an attempt has been made here to document the production and the nature of market which determine the conditions under which tea is being exported.

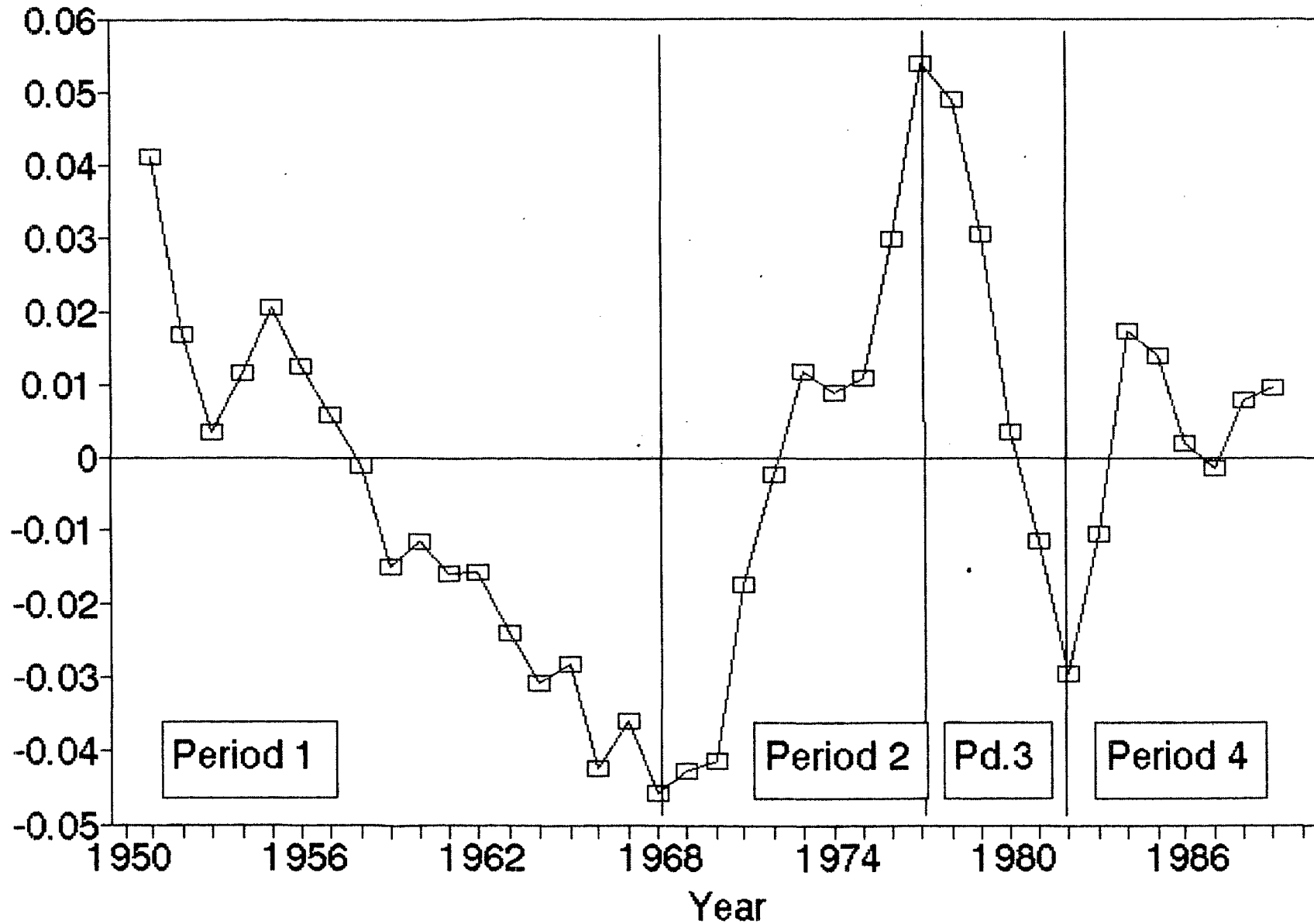
Along this line, this chapter is divided into three sections. The first section sets out the production condition that underlie tea export in India. The second section maps out the nature of market that Indian tea faces in the international market. Here, the trends in production, consumption and export of tea among the competing countries is examined. The third section summarizes the major findings in the chapter.

## SECTION I

### Production conditions of Tea in India: An analysis

India is one of the largest producer, consumer and exporter of tea in the world. Production of tea is found to have increased at the annual average growth rate of 2.45 per cent per annum during the period 1950 to 1990. In order to identify the phases of growth in tea production, which is associated with the changing production conditions, the cyclicity method has been used. Based on figure 3.1, four phases have been identified. It is observed that between 1950 and 1968 there is a decreasing trend and from 1969 there is a steady increase upto 1977. From 1978 to 1982 there is a sharp decline and then the recovery period starts from 1982 to 1990. Based on this, the present study has been divided into four periods in order to capture the trends in

*Figure 3.1*  
*Trends in Tea Production in India*



production. The time period between 1983 and 1987 has again been sub-divided into two periods, 1983-1987 and 1988-1990 in order to gain understanding about the recent trends in tea performance. At the outset, it may be noted that the same periodisation has been maintained for the analysis that follows hereafter.

Consequently, annual average growth rates has been calculated for the different time periods after smoothening the output series through three year moving averages for controlling irregular movements. It is seen from the Table 3.1 that between 1951 to 1968, the annual average rate of growth of production increased at 2.01 per cent and from 1969 to 1977, the rate of growth of production increased to 3.68 per cent. Then there was a decline to 0.82 per cent between 1978 to 1982. From 1983 to 1990 there was a steady increase of 3.11 per cent.

Table 3.1

Trends in India's Production of tea and its sources

( in Per cent)

Year	Prodn. of Tea	Area effect	Yield effect	Interactive effect
1950-90	2.45	47.83	52.48	0.39
1950-68	2.01	86.75	14.41	0.07
1968-77	3.68	16.32	83.19	0.44
1977-82	0.82	-10.98	111.09	1.27
1982-87	3.14	43.54	55.70	0.51
1987-90	3.04	27.01	73.07	0.41
1983-90	3.11	35.84	63.60	0.48

Source : Estimated from data available from Tea Statistics. Tea Board India.

Since export of any commodity depends to a large extent on the capacity to produce, in the case of an agricultural good, it is determined by the area and yield per hectare. If the yield per

hectare is increased, it is possible to reduce the cost of production and hence increase price competitiveness. Any increase/decrease in production can be attributed to an extension/fall in the area under the particular crop or to an increase/decrease in yield per hectare. And also, there can be an interaction of both these factors which is known as 'interactive effect'.

It can be observed from Table 3.1 that the contribution of area effect and yield effect to production has been almost equal, although yield effect has been slightly higher than the area effect for the entire period of study. Between 1966 and 1977, the contribution of area effect declined, but this has been largely offset by substantial increase in yield effect which is evident in the increase in rate of growth of production during that period. Again, between 1978 and 1982, the fall in the rate of growth of production can be attributed to the negative area effect, inspite of the increase in yield effect. For the rest of the period, from 1983 to 1990, the contribution of yield effect has been higher, and the area effect has been comparatively less. Interactive effect has been found to be negligible for the entire period of study.

However, the simple decomposition of output into area and yield effect, depicts an interesting pattern that there is a discernable negative association between the contribution of area and yield, indicating the persistence of crop cycle through gestation lags. Thus it corroborates the earlier contention that cyclical movements in tea output in terms of sub-periodisation would probably initiate the changing production conditions.

Therefore, it may be safely inferred that cyclical movements in growth of tea production is possibly the outcome of crop cycle, implying thereby that tea production trends seem to be influenced by supply conditions.

#### **Trends in Relative Shares of Consumption and Export of Tea in Production in India:**

As mentioned earlier, the nature of market that Indian tea faces is necessary for an understanding of the competitiveness of tea export. Tea was cultivated in India primarily for the export market. It was thus perceived as an export crop catering mainly to the London market. However, it is found that the increase in domestic consumption has resulted in a fall in the share of exports.

Table 3.2 reveals that domestic consumption of tea was one-third of the total output during the fifties, but has been steadily increasing at the expense of export. During the eighties, the trend reverted and a major share (66 per cent) of Indian production was accounted for, by consumption while 34 per cent was exported. While production increased at a rate of 2.45 per cent, consumption increased at a rate of 4.54 per cent for the four decades. Exports increased at a slower rate (0.25 per cent). It is evident that rate of increase in consumption was double that of production. As a result, export of tea from India has been increasingly facing the threat of ever expanding domestic market. Thus the emergence of a dual market of domestic versus export, is the natural consequence of increasing growth in population and per capita income, over time.

Table 3.2

Trends in relative Share of Consumption<sup>1</sup>  
And Export in Production in India

(In per cent)

YEAR	% share of	
	Conspn.in Prodn.	Exports in Prodn.
Avg 1950/60	32.06	67.94
Avg 1960/70	46.01	53.99
1971	55.18	44.82
1972	56.19	43.81
1973	60.05	39.95
1974	56.98	43.02
1975	55.22	44.78
1976	54.36	45.64
1977	58.90	41.10
1978	68.78	31.22
1979	63.29	36.71
1980	60.67	39.33
1981	56.95	43.05
1982	66.12	33.88
1983	64.15	35.85
1984	66.08	33.92
1985	67.38	32.62
1986	67.28	32.72
1987	69.65	30.35
1988	71.29	28.71
1989	69.25	30.75
1990	70.97	29.03

Source: Tea Statistics (Tea Board India)  
Tea Statistics (J.Thomas and Company  
private limited). Various issues.

### Trends in and Direction of India's Tea exports:

The principle trends in India's exports of tea reveals that quantity of tea exported grew at an annual average rate of 0.08 per cent for the four decades while the value increased at 6.72 per cent. Unit value of exports increased at a rate of 6.66 per cent. The Coefficient of Variation was 0.08 for quantity while it was 0.82 for value.

It is seen from Table 3.3 that a significant change in the direction of exports is the sharp fall in quantity exported to Western Europe from 73 per cent on an average during the fifties to 20.59 during the eighties. Of the West European market, U.K market which was once a major market constituting 67 per cent of

**Table 3.3**

Direction of Tea exports from India:

Country Group	Average Percentage Share			
	1950/51 1959/60	1960/61 1969/70	1970/71 1979/80	1980/81 1989/90
1. Western Europe	73.18	61.33	39.41	20.59
2. East Europe	1.78	9.21	26.16	45.86
3. Middle East	7.88	12.09	15.61	23.11
4. American Zone	10.45	7.04	4.69	1.84
5. Africa	1.58	3.27	5.19	2.34
6. Asia	0.74	2.30	5.59	3.31
7. Others	4.39	4.76	3.35	2.95
Total	100.00	100.00	100.00	100.00

Source : Calculated from Tea statistics  
Tea board India. (Various issues)

the total export share during the fifties accounted for about one-fourth of the fifties export share (16.24 per cent) during the eighties. Other traditional import markets include Canada, Australia, Ireland and USA, had only a negligible role in India's exports constituting less than 2 per cent each in the eighties. However, the loss of export share in traditional markets has been offset by a substantial increase in exports to East European countries under bilateral trade agreements from 1.78 per cent during fifties to 45.86 per cent during the eighties. The USSR has emerged as the major market for India from Eastern Europe during the eighties and it comprised 40 per cent of the total share. Besides, India's exports to Middle east has also registered an increase from 7.88 per cent to 23 per cent. Among the Middle Eastern countries, U.A.E, Iran, Saudi Arabia and Egypt are the major markets for India, constituting 18 per cent of India's share of exports. In spite of its geographical proximity to Pakistan, India's share of exports in Pakistan's total imports was less than 1 per cent during the eighties. Whereas, East African countries constituted around 40 per cent of Pakistan's imports during the same period.

From the table 3.3, it may be broadly inferred that over the past four decades, India's exports of tea was concentrated in few markets. In order to discern the shifts in direction of tea exports in India, the Gini-Hirschman concentration coefficient<sup>2</sup> has been used, which reflects the changing trends in market concentration for the period 1950-51 to 1989-90, using the formula:

$$G_{ix} = 100 \sqrt{\sum_s \left(\frac{X_{sj}}{X_j}\right)^2}$$

wherein, 'X<sub>s j</sub>' refers to exports from country 'J' to various markets symbolised as 's' and X<sub>j</sub> refers to total exports of country 'j'. Table 3.4 gives the concentration coefficients over the years.



The table 3.4 shows a gradual decline in concentration from 1950-51 to 1979-80. During the latter part of eighties, concentration reveals an increasing trend. It is comparatively high during the fifties and lower during the seventies ranging between 73.18 in 1953-54 to 35.70 in 1979-80. As seen in Table 3.3, India's exports in the fifties was mainly directed to Western Europe market which explains the high concentration during that period. But during the seventies there was greater diversity in India's exports. India was able to increase its share in Middle East and East European markets and the importance of the traditional West European market registered a decline. In the eighties again, it can be observed that concentration is increasing due the emergence of USSR as a major market.

Table 3.4  
Geographical Concentration Coefficients  
( in per cent)

Year	Coeff.	Year	Coeff.	Year	Coeff.	Year	Coeff.
1950/51	66.06	1960/61	63.66	1970/71	51.34	1980/81	36.99
1951/52	68.58	1961/62	60.60	1971/72	42.28	1981/82	40.86
1952/53	66.68	1962/63	59.69	1972/73	36.11	1982/83	41.78
1953/54	73.18	1963/64	57.87	1973/74	36.30	1983/84	38.94
1954/55	72.52	1964/65	59.77	1974/75	39.48	1984/85	44.49
1955/56	70.40	1965/66	55.23	1975/76	39.95	1985/86	50.41
1956/57	69.79	1966/67	52.93	1976/77	40.76	1986/87	49.24
1957/58	66.50	1967/68	54.64	1977/78	40.79	1987/88	49.57
1958/59	65.32	1968/69	49.82	1978/79	40.71	1988/89	47.75
1959/60	61.69	1969/70	43.37	1979/80	35.70	1989/90	59.69

Source : Calculated from tea statistics  
Tea Board India. (Various issues)

Thus the trends in and direction of India's tea exports show that significant changes have taken place during the past four decades to the extent that geographical location has been completely altered.

## SECTION - II

### Comparative Performance of Indian Tea vis-a-vis Competing Countries

In this section, an attempt has been made to evaluate the performance of Indian tea export in the light of the export performance of competing countries. By doing so, it is possible to assess the impact of global trade environment on India's tea export. Moreover, it is important in understanding the changing world market for tea.

On the production front, India has been the major producer of tea for the entire period under consideration (Table 3.5). The other major producing countries include Sri Lanka, Kenya, China<sup>3</sup> and Indonesia. Table 3.5 shows that the total production of these countries has been gradually declining from 80 per cent of the world production during the fifties and sixties to 70 per cent during the eighties. It can also be observed that there is a declining trend in India's share from around 40 per cent during the fifties to 28 per cent in the eighties. The same trend is observed in the case of Sri Lanka as well. Only China has been able to increase its share considerably from 13 per cent during the fifties to 20.27 in the eighties.

As noted earlier and also seen from Table 3.6, India which is the largest producer of tea in the world has been observed to retain a sizeable share of production with only around 30 per cent of the share being exported in the eighties. In contrast, Sri Lanka and Kenya's exports constituted over 80 per cent of the production share in the same period. A major share of China's production is also retained as seen in the following Table 3.6.

Table 3.5

SHARE OF MAJOR PRODUCING COUNTRIES  
IN WORLD PRODUCTION

(In Per cent)

YEAR	INDIA	SRILANKA	INDONESIA	CHINA	KENYA	ARGENTINA
Avg 1950/60	39.52	21.93	5.67	13.59	2.67	0.25
Avg 1960/70	34.24	20.07	4.00	14.97	5.59	1.39
1971	32.30	16.15	3.58	13.35	7.41	2.04
1972	31.14	14.58	3.40	12.63	8.79	1.84
1973	31.09	13.92	3.59	12.45	8.79	1.94
1974	33.39	13.92	4.47	13.50	8.80	2.36
1975	31.89	13.99	4.64	13.81	8.40	1.83
1976	32.24	12.39	4.68	14.68	3.90	2.22
1977	31.53	11.78	3.65	17.22	9.19	1.69
1978	31.62	11.16	5.00	15.03	5.24	1.47
1979	30.11	11.43	5.03	15.34	5.50	1.78
1980	31.02	10.42	5.38	16.54	4.90	1.12
1981	29.74	11.15	5.77	18.18	4.83	1.58
1982	28.80	9.69	4.63	20.40	4.93	1.89
1983	28.31	8.76	5.43	19.50	5.83	1.82
1984	29.18	9.54	5.75	18.89	5.30	1.92
1985	28.67	9.41	5.78	18.89	6.43	1.27
1986	27.23	9.33	5.68	20.20	6.29	1.79
1987	28.37	9.15	5.38	21.66	6.64	1.49
1988	28.33	9.23	5.23	22.07	6.64	1.42
1989	27.54	8.32	5.66	21.41	7.23	1.60
1990	28.02	9.11	5.85	21.50	7.66	1.32

Source : Tea statistics  
Tea Board India. (Various issues)

Table 3.6

Share of Exports in Production in Producing Countries

( in per cent)

YEAR	India	Srilanka	Kenya	China	Indonesia
Avg 1950/60	67.94	95.49	75.53	23.12	81.00
Avg 1961/70	53.99	94.78	90.95	19.86	76.22
1971	44.82	92.21	93.74	22.78	83.39
1972	43.81	89.09	89.61	22.70	77.40
1973	39.95	97.28	89.99	19.58	65.21
1974	43.02	90.70	90.60	32.10	76.63
1975	44.78	99.42	90.71	29.06	64.80
1976	45.64	97.59	95.89	26.26	63.86
1977	41.10	95.76	93.45	20.33	73.52
1978	31.22	96.77	91.01	32.41	62.98
1979	36.71	90.81	94.73	38.57	66.19
1980	39.33	96.40	83.21	35.54	68.56
1981	43.05	86.99	83.16	26.85	65.53
1982	33.88	58.92	83.09	26.65	70.61
1983	35.85	87.68	84.05	31.23	61.51
1984	33.92	97.61	78.50	35.10	67.89
1985	32.62	91.77	85.72	31.66	68.17
1986	32.72	97.58	81.26	37.36	60.98
1987	30.35	93.56	86.50	34.31	71.71
1988	28.71	96.28	84.25	36.36	71.69
1989	30.75	97.99	90.36	38.25	81.14
1990	29.03	91.96	86.08	36.19	73.79

Source : Same as in Table 3.5

With the increase in retention for domestic consumption in producing countries, their share in world consumption has also shown an increasing trend.

In order to evaluate the comparative performance of tea export, an attempt is made to examine the trends in comparative performance by calculating the growth rates for production, consumption and exports of producing countries. Figure 3.2 shows the trend in India's tea production and the world production. It can be observed that except for the four years between 1972 and

Figure 32  
Trends in Tea Production

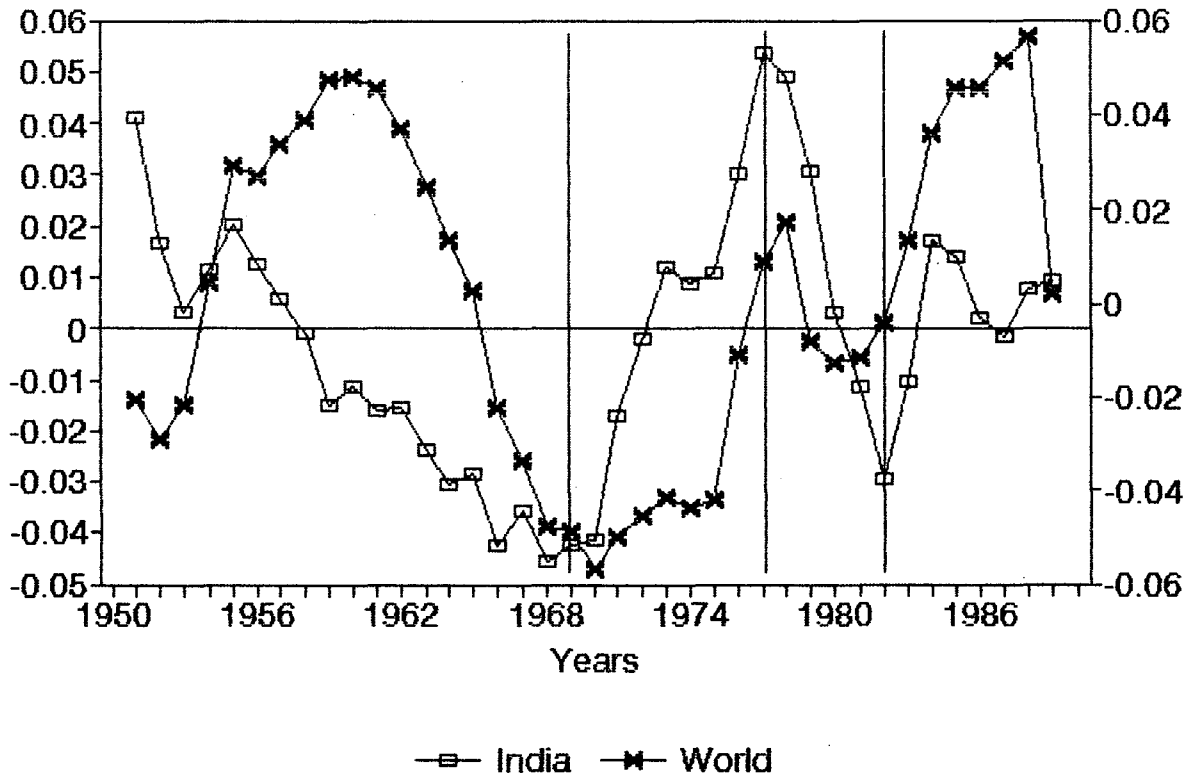
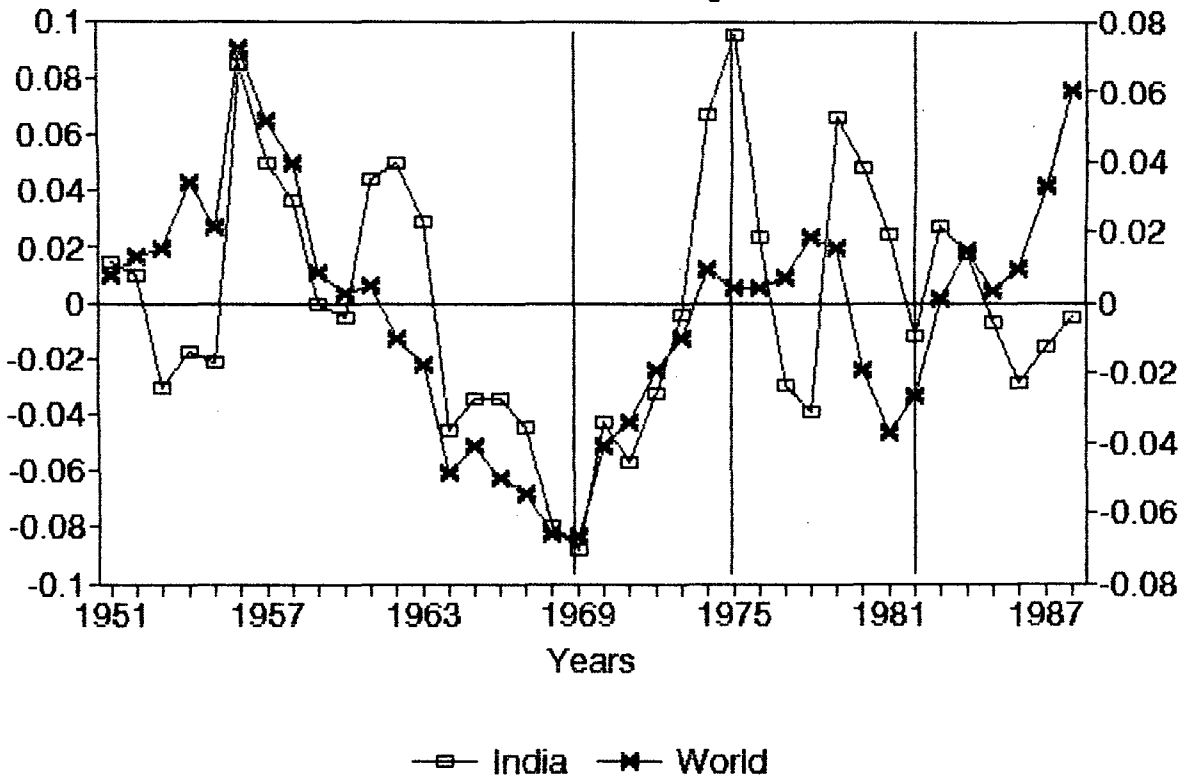


Figure 33  
Trends in Tea Exports



1975, trends in tea production is more or less the same in the case of India and the world. The same trend can be observed in the case of exports as well ( see figure 3.3). Following the earlier periodisation for India's production of tea, average annual growth rates for the competing countries has been calculated in order to capture the relative growth performance. Table 3.7 gives the growth rates for the aforesaid periods for the major tea producing countries.

Table 3.7

Comparative Performance of Growth in Tea Production  
Of Competing Countries.

( in per cent)

Years	India	Srilanka	Kenya	China	Indon - esia	Tot.of Prod.C	World
1950-1990	2.45	1.17	9.16	5.61	3.51	3.24	3.70
1950-1968	2.01	2.54	9.14	5.28	-0.07	2.81	3.79
1969-1977	3.68	-1.06	11.98	5.66	7.82	3.67	4.12
1978-1982	0.82	-0.83	5.10	7.27	6.46	2.82	2.74
1983-1987	3.14	2.54	8.66	5.85	4.51	4.30	3.82
1988-1990	3.04	1.13	8.14	3.47	4.60	3.42	3.08
1983-1990	3.11	2.14	8.15	5.17	4.53	4.05	3.61

Source: Same as in table 3.5.

It can be observed from the table 3.7 that the highest rate of growth in production has been registered in the case of Kenya (9.16) followed by China (5.61) for the entire period of study. India's rate of growth of production has been less than that of world production. However, there has been a positive rate of growth for all the sub-periods. Whereas, Srilanka's production has shown a negative trend during the period 1969 to 1982.

### Trends in World Tea Exports:

As far as exports of these countries are concerned, it is seen from Table 3.8 that they accounted for 90 per cent of the world export share during 1950's and the 60's. Over the years, there has been a steady decline and in the eighties, they constituted around 78 per cent of the world export share. This declining trend can be attributed to the fall in export exports from India and Sri lanka.

A closer look at the table 3.8 reveals that during fifties and sixties India and Srilanka were controlling the world market of tea with more than 70 percent of world export share. But there was a gradual decline over the years and in the eighties, their share came down to 42 per cent. The share of both the countries has witnessed a declining trend over the years. On the other hand, Kenya has increased its share from a mere 3.30 per cent during the 50's, to 11 per cent in the eighties. In 1950/51, major share of exports from Srilanka was directed to Western Europe market which constituted around 40 per cent of its total export share. But over the years, there was a declining trend and in 1989/90 it came down to 11 per cent. U.K was the major market in Western Europe for Sri lankan exports and it constituted 93 per cent of the Western Europe market and 37 per cent of the total exports. But in 1989/90, UK accounted for only around 6 per cent of the total exports from Srilanka and 47 per cent of Western Europe market share. Whereas, Kenya has continued to maintain its export share of 42 per cent to the UK market. But Srilanka has increased its exports to the Middle East which in the eighties accounted for almost 50 per cent of its total export share.

**Table 3.8**  
Share of major exporting countries in world exports  
( in per cent)

YEAR	INDIA	SRILANKA	INDONESIA	KENYA	CHINA
Avg 1950/60	42.08	33.00	7.23	3.30	5.37
Avg 1961/70	34.80	35.44	5.66	10.06	5.50
1971	29.68	30.54	6.11	14.24	6.24
1972	29.33	27.92	5.66	16.94	6.17
1973	27.20	29.64	5.13	17.33	5.34
1974	28.62	25.15	6.83	15.89	8.64
1975	29.08	28.32	6.13	7.02	8.18
1976	29.66	25.36	6.03	7.55	7.77
1977	29.62	25.77	6.13	16.19	8.00
1978	21.90	23.96	6.99	10.57	10.81
1979	23.47	22.04	7.07	11.05	12.56
1980	26.08	21.48	7.88	8.71	12.57
1981	28.31	21.45	8.36	8.88	10.79
1982	23.16	13.55	7.76	9.80	12.91
1983	23.88	18.08	7.86	11.53	14.33
1984	23.06	21.69	9.10	9.69	15.44
1985	22.45	20.73	9.46	13.23	14.36
1986	20.86	21.32	8.11	11.96	17.67
1987	20.68	20.57	9.26	13.81	17.85
1988	19.39	21.20	8.94	13.33	19.13
1989	18.92	18.21	10.25	14.59	18.29
1990	18.43	18.98	9.78	14.95	17.23

Source : Same as in Table 3.5

The decline in world export share of Sri Lanka has been attributed to excessive taxation policy followed by the Sri Lankan government and Kenya's moderate taxation has been cited as the reason for the increase in its share (World Development Report 1986). Among the other East African tea growing regions such as Uganda, Tanzania and Malawi, Kenya is generally regarded as producing the finest teas. East Africa also enjoys the agro-climate which allows cultivation throughout the year. It is due to the low seasonal variations in quality and continuous flow of supply when compared to Indian and Sri Lankan teas that East African teas, especially Kenyan tea have gained popularity in the UK market.



Whereas, in India's case, the pressure of domestic demand appears to have played a major role in constraining exportable surplus. However, despite the decline in its world export share, India continues to dominate the world market for tea. Table 3.9 shows the growth rates in exports of competing countries.

Table 3.9  
Comparative Analysis of Growth of <sup>Tea</sup> Exports in  
Major producing countries  
( in per cent)

Year	India	Srilanka	Kenya	China	Indonesia	World
1950-1990	0.28	1.24	10.08	8.95	3.20	2.55
1950-1968	0.24	2.46	16.89	8.57	-0.27	2.14
1969-1977	0.94	-0.61	3.74	9.18	5.34	2.98
1978-1982	0.16	-5.15	-0.42	9.33	6.23	1.48
1983-1987	-1.04	7.00	8.87	11.08	5.26	3.26
1988-1990	1.28	0.86	9.99	4.83	10.27	4.95
1983-1990	-0.38	5.24	9.19	9.29	6.69	3.74

Source: Same as in Table 3.5

It appears that just as in the case of production, Kenya leads in the rate of growth of exports as well. China's exports also show a positive trend and comparatively high rate of growth from 1950 to 1990. In fact, it is interesting to note from the table 3.10 that excluding India, other producing countries have registered a remarkable increase in exports of tea. The lowest rate of growth has been registered in the case of India for the four decades, and for almost all the sub-periods it has been observed to be stagnating. During the first seven years of the eighties, exports of tea from India declined sharply by 1.04 per cent per annum. However, during the last three years after 1987, it appears that India's export has registered an increasing trend, changing the rate of growth from negative to positive.

### Trends in World Consumption:

On analysing the trends in world consumption of tea, it is found that there has been a steady increase in the share of producing countries in the world consumption (see table 3.10).

Table 3.10

#### Trends in Share of Producing and Importing Countries in World Consumption

( in per cent)

YEAR	Producing countries	Importing countries
Avg 1950/60	26.94	73.06
Avg 1960/70	32.23	67.77
1971	36.88	63.12
1972	35.54	64.46
1973	39.23	60.77
1974	35.77	64.23
1975	37.37	62.63
1976	37.06	62.94
1977	37.05	62.95
1978	40.15	59.85
1979	37.88	62.12
1980	38.70	61.30
1981	40.20	59.80
1982	39.73	60.27
1983	40.68	59.32
1984	38.40	61.60
1985	39.88	60.12
1986	39.68	60.32
1987	40.23	59.77
1988	39.85	60.15
1989	40.00	60.00
1990	40.66	59.34

Source: (1) Tea statistics (Tea Board India).  
(2) Tea statistics (J. Thomas and Company Pvt. Ltd).

This trend of increasing retention amongst tea producing countries gives rise to an issue of examining the nature and direction of demand for tea. Besides, tea being an agricultural commodity, the general consensus that the demand for agricultural

commodities face the problem of inelasticity of demand, can be tested indirectly by examining the changing trends in world consumption of tea.

It is seen from Table 3.11 that the rate of growth in consumption in the importing countries has been positive for the period of study but it appeared to be declining from 1950 to 1982. It was only in the latter part of eighties that there was an increase in growth of tea consumption among these countries. It also appears from the table 3.11 that demand for tea in the importing countries has been more or less stagnant at 3 per cent growth per annum. Among the importing countries, UK which used to be a major market for tea showed a negative rate of growth for the entire period and also for the sub periods.

Table 3.11

Growth Rates of World Consumption of Tea

( in per cent)

Years	India (1)	E.Africa (2)	U.K (3)	Tot.of Prod.C (4)	Tot.of Imp.C (5)	World (6)
1950-1990	4.54	4.29	0.39	3.85	2.29	2.80
1950-1968	4.56	3.25	1.09	4.11	2.23	2.79
1969-1977	5.27	6.76	1.96	4.27	2.20	2.93
1978-1982	4.69	6.89	-3.12	3.46	1.64	2.35
1983-1987	3.33	1.32	0.31	2.73	2.97	2.87
1988-1990	3.74	3.00	-0.93	3.61	3.06	3.28
1983-1990	3.45	1.80	-0.05	2.98	3.00	2.99

Note: Columns (4) and (5) indicate total of producing and importing countries respectively.

Source: Same as in Table 3.5.

Another important observation is from the table 3.11 that the rate of growth of producing countries is higher than that of importing countries. Amongst the producing countries, India recorded the highest rate of growth in consumption for the four decades.

It can be observed from the table 3.12 that there has been a geographical shift in the destination of tea exports from the producing countries. Major traditional importing country groups of western Europe and American zone have been gradually reducing their rate of consumption of tea. There has been a sharp decline in the share of imports from Western Europe from 34 per cent in the fifties to 13 per cent in the eighties. This can be attributed to the fall in UK's demand which was 35 per cent during the fifties to 11 per cent in the eighties. The share of Eastern Europe has registered an increase from 2.52 per cent in the fifties to 10 per cent in the eighties. The USSR is the major market in Eastern Europe whose share increased from a negligible 1.61 per cent in the fifties to 7.60 per cent in the eighties. India had

**Table 3.12**

**Share of Imports by Major Country  
Groups in World Consumption**

(Average percentage share)

Country Groups	1950-60	1961-70	1971-80	1981-90
1. Western Europe	34.00	30.72	20.82	13.63
2. E. Europe	2.52	3.54	5.71	10.20
3. America Zone	12.25	10.15	9.90	7.71
4. Middle East	8.01	8.39	8.93	13.54
5. Africa	7.28	7.01	6.79	4.50
6. Asia	3.68	3.99	6.78	7.72
7. Oceania	5.35	3.99	3.50	2.78
Total	73.09	67.79	62.44	60.07

Source : (1) Calculated from Tea statistics.  
Tea Board India.  
(2) Tea statistics.  
J.Thomas and Company Pvt. Ltd.

the lions share in consumption with almost 28 per cent of the market share of world consumption in the eighties. The loss of share of India's exports to U.K was gained by East African countries. All these factors clearly indicate that poor export performance of Indian tea cannot be explained in terms of changes in demand and must therefore be analysed in terms of the factors that might have affected its competitiveness.

### SECTION III

To sum up, it was observed from the foregone analysis that Indian tea exports are facing the emergence of dual market of domestic as well exports. Further, analyses of the comparative performance of Indian tea vis-a-vis that of competing countries have revealed that it is the internal factor of increasing domestic demand that has been a major cause for the decline in export share. Slow increase in demand from importing countries coupled with increasing production from producing countries is one of the salient features of trends in world tea trade. Thus, apart from the threat of competition from other producing countries, internal pressure is observed to be the prime cause for the decline in export share, which has been set so evidently in the eighties. It therefore becomes indispensable to study the price competitiveness that Indian tea faces from the domestic market. Thus, the above analysis lends support for testing the exportable hypothesis of potential competitiveness, and warrants a case for investigating the nature and direction of Nominal Protection Rate under the present world tea trade scenario.

1. In the absence of correct and up-to-date information about domestic consumption in India, export figures have been deducted from production figures.
2. According to Gini-Hirschman co-efficient of geographical concentration, there exists an inverse relation between the coefficient and the number of countries to which the commodity is exported. Thus, lower the coefficient, larger is the number of countries to which the commodity is exported and vice-versa. The highest possible coefficient is 100, wherein all exports are directed to a single market. (Michael Michaely, Concentration in International Trade (1962) North Holland Publishing Company. pp 8.
3. Tea in the present study refers mainly to Black tea. Although China produces black tea, a major part of its output and consumption is the unfermented green tea which is a completely different market from black tea. Japan is also a producer of green tea. But majority of all green tea is consumed domestically, i.e. in China and Japan.

CHAPTER IV  
POTENTIAL COMPETITIVENESS OF INDIAN TEA

This chapter attempts to examine the potential competitiveness of Indian tea. It is evident from the previous chapter that world demand for tea has been on the decline, exerting an adverse pressure on tea export of the developing countries to go in for geographical diversity. Moreover, the analysis of India's export showed that it has been increasingly facing domestic demand pressure which has led exporters to cater to the lucrative domestic market. This leads one to examine whether India's tea has continued to maintain its 'exportable status' in the light of its declining share in world market. Such an analysis becomes more important and relevant in the context of the recent drive towards liberalisation and emphasis on export promotion. It thus necessitates an examination of the whole question of potential competitiveness.

Based on these aspects, this chapter is divided in three sections. The first section examines the underlying movements in auction (producer) prices and reference (FOB adjusted for transport costs and handling charges) prices of tea in India. While doing so, it highlights the possible influence of exchange rate movements on producer prices vis-a-vis export prices. The second section explores the trends in, and direction of potential competitiveness of tea exports from India by testing the exportable hypothesis. The third section summarizes the main findings of the analyses.

## SECTION 1

### Trends in Auction and Reference Prices of Indian Tea: Evidence on Converging Trends

In this section, an attempt is made to examine whether the producers are getting the 'right' price in line with export (reference) price for tea. Alternatively, it is also necessary to examine whether the exporters are continuing to have the necessary incentive to export in light of the emerging remunerative domestic market. A cursory look at the movements in series of both auction (producer) and reference (export) prices for tea would possibly reveal the extent to which these prices are diverging. Moreover, there is a view expressed in recent studies on competitiveness that both prices are in one way or other affected by policy distortions<sup>1</sup>, apart from the influence of structural constraints (supply and demand deficiencies). However, it may be recalled from the foregone chapter that the growing domestic demand for tea has bifurcated the market into domestic and export, indicating thereby the changing nature of tea market in India.

For brevity, the selected fiscal policies pertaining to tea has been highlighted here. It is found that Indian tea has been subjected to export duty, central excise duty and state taxes. A closer look at the tea statistics reveals that the revenue from central excise duty accounted for about 16 per cent of the total value of tea exports during the late seventies, which was in fact, around four per cent of the total value of tea exports in the early.

<sup>1</sup>. Gulati, Hanson, Pursell (1990), Mani (1991), Hamid, Nabi and Nasim (1990).



fifties. On the contrary, revenue from the imposition of export duty on tea has remained more or less at 12 per cent to 14 per cent since 1951. The highest rate of export duty was imposed in 1966-67 which was almost 23 per cent of the total value of tea exports. Moreover, it is also noted that export duties were abolished during the period 1970 to 1977 and then reintroduced in 1977-78. However, this was discontinued after two years. Central excise duty continued to account for around 11 per cent of the total value of tea exports during the eighties.

On the other hand, India has changed its trade policy of import substitution to one of export led import in the late seventies, along with a shift in exchange rate from fixed to flexible exchange rate<sup>2</sup> in 1971-72. Consequently, it is seen that government has been gradually removing its policy distortions especially during the period after 1985. The recent structural adjustment policy which encompasses the development policies of fiscal, monetary and trade reforms was initiated in June 1991 with two successive devaluations. In fact, it may be recalled that Indian currency was once devalued while practicing the fixed exchange rate in June 1966.

Nevertheless, the changing nature of fiscal policy pertaining to tea reveals that there has been a systematic shift in the nature of taxing from export duty to central excise duty so as to ensure the government revenue from tea market, because two-thirds of tea production in India is being sold in domestic market

<sup>2</sup>. Flexible exchange rate is expressed against a weighted basket of currencies of India's major trading partners with the pound sterling as the intervention currency.

due to the growing demand. In the case of tea export, it is observed that the government has been withdrawing the export duty whenever Indian currency appreciates. Therefore, it is discernable that the government has been taxing the exporters during the phase of rupee depreciation along with the constant increase in central excise duty which in fact affects domestic consumers as well. For instance, it is observed that the average proceeds from the levy of export duty on tea has sharply increased to Rs 269.6 million in the triennium ending 1968-69 from Rs 106.2 million in 1952-53. The triennium ending 1968-69 is the beginning of the phase of first devaluation in June 1966. However, it may be noted that the government had abolished export duty since 1970, except for the two years, 1977 to 1979.

These observations need to be validated to see whether both the prices of auction and export (reference) exhibit a converging trend. If so, it emphasises that government has intervened in the tea market through price distortions of both fiscal and trade policies. To examine this contention, an exercise to discern the trends in the prices of auction and reference has been undertaken. In the case of exchange rate series, only the period after 1971 has been examined for the plausible reason that prior to that year, the exchange rate was fixed, though it was once devalued in 1966.

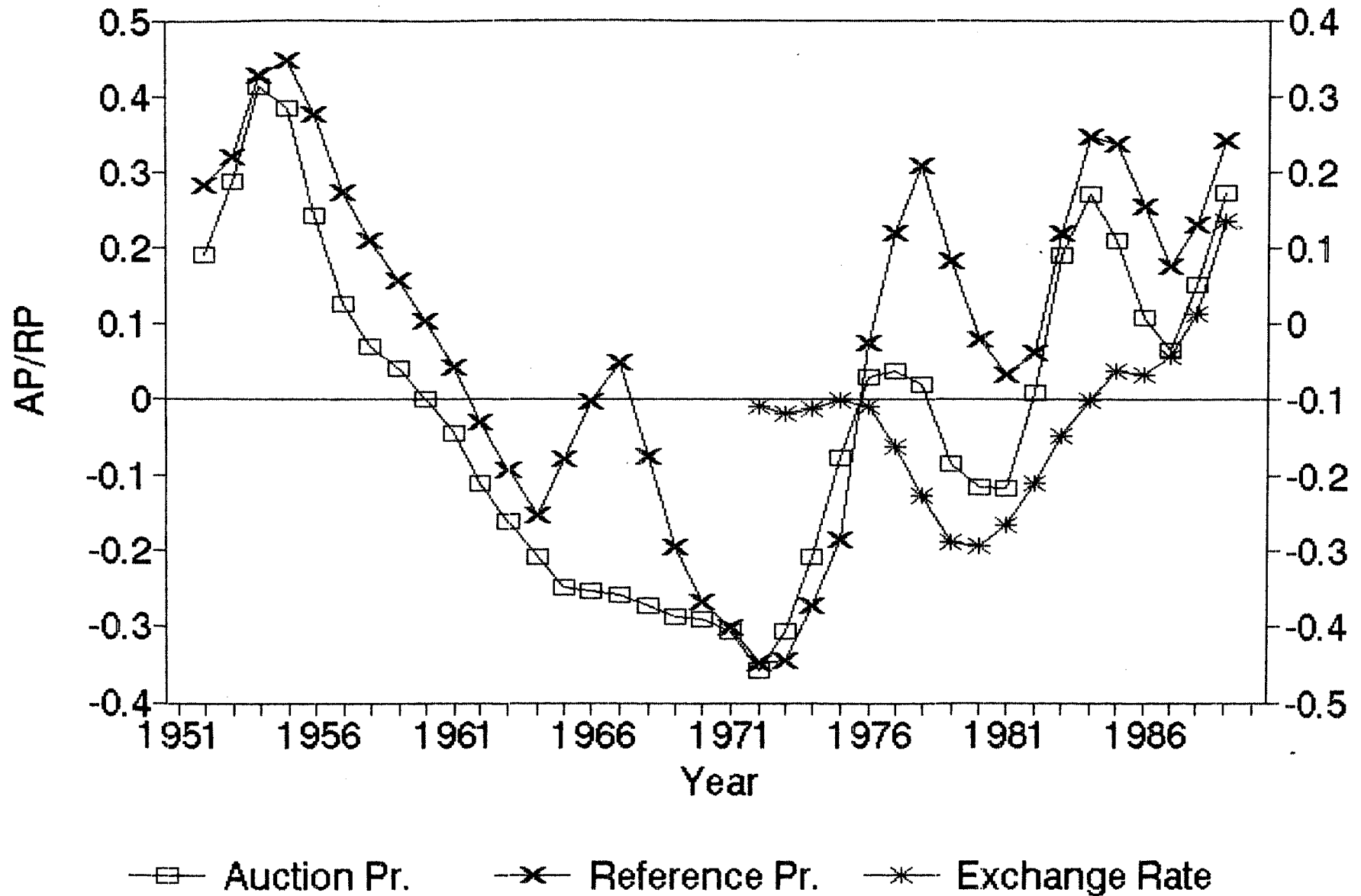
It is seen from the Figure 4.1 that auction prices and reference prices have shown a declining trend upto 1971-72 (except for the period 1964 to 1968) and thereafter registered cyclical trends. Interestingly, it is observed that the fixed exchange rate

has in fact stabilised the auction prices vis-a-vis the export prices, and hence possibly the income accruing to the planters. This is important in the sense that they get the signal of less risk in order to go in for further investment. Instead it is found that the flexible exchange rate that was followed after 1971 has failed to stabilise the producers price and their income. However, it is found that the producers received higher prices during the flexible exchange rate policy regime. It is also seen from the same graph that the cyclical trends in auction and reference prices have possibly been generated by the cyclical movements in exchange rate during the period after 1971. Accordingly, it may be inferred that both prices could have been influenced by the flexible exchange rate.

In fact, the effect of flexible exchange rate has been well discussed in the recent literature on protectionism. Besides, the literature has suggested that it is necessary to adjust the NPR for exchange rate bias by estimating equilibrium exchange rate as well<sup>3</sup>. However, this estimation for India's exchange rate is fraught with difficulties due to the inaccessibility of data on tariff structure of the commodities traded and other estimation problems. Further, the fiscal policy of withdrawing export duty for tea during the period after 1977-78 might have possibly negated the influence of flexible exchange rate on export price to some extent. It is also evident from the same graph that both the

<sup>3</sup>. Hamid, Nabi and Nasim (1990), Dorosh, Valdes (1990), Bautista (1987)

Figure 4.1  
Trends in Auc.Pr, Ref.Pr.& Exchange Rate



export and auction prices are not diverging. Therefore, it is felt that the flexible exchange rate may not affect the estimates of potential competitiveness due to the mitigating role of fiscal policy in accordance with the flexible exchange rate.

## SECTION II

### Potential Competitiveness of India's Tea Export: Nature and Trends

Having noted the increasing significance of domestic market in India's tea trade, it is necessary to ascertain whether Indian tea continues to be potentially competitive. Potential competitiveness indicates whether the commodity in question is exportable or not on the basis of estimation of Nominal Rates of protection. A rationale for the choice of this measure has been discussed in the earlier chapters.

To recapitulate, NPR may be defined as the relative price competitiveness of home market to export market. In other words, in the absence of intervention, it captures the relative price margin between domestic price and export price. Prior to computation of NPR, it is necessary to mention that there are essentially two varieties of tea - (a) Leaf tea and (b) Dust tea. Moreover, it must be borne in mind that although there are several grades of tea, the disaggregated data on each of these varieties are not available. Hence the analysis is restricted to these two varieties. It is noted that at the all India level, the relative share of leaf tea is higher than the dust (Table 4.1). Thus it is seen from Table 4.1 that leaf tea accounts for about 65 per cent of total tea auctioned in the domestic market, during the period after

1960, although its share has declined from 74.3 per cent in the fifties to 66 per cent during the eighties. It may be noted that the relative composition of tea auctioned has remained unchanged thereafter. Hence it may be inferred that two-thirds of tea auctioned in the domestic market are of leaf variety while one-third is dust tea.

**Table 4.1**

Relative Share of Leaf and Dust in Total Production  
Of Tea at All India Level.

(In Per cent)

Subperiods	Relative share of Leaf	Relative share of Dust
1950-60	74.30	25.70
1960-70	65.99	34.01
1970-80	64.61	35.59
1980-90	65.80	34.20

Source : Tea Statistics. (Various issues)

At the regional level, it is interesting to see from the table 4.2 that nearly 75 per cent of leaf tea is accounted for by North India while South India contributes around 20 to 25 per cent of leaf tea auctioned.

**Table 4.2**

Relative Shares of South and North India In  
Leaf and Dust auctioned

(In per cent)

Subperiods	(Leaf)		(Dust)	
	North	South	North	South
1950-60	88.10	11.90	87.28	12.72
1960-70	74.86	25.14	74.75	25.25
1970-80	74.72	25.28	62.65	37.35
1980-90	82.60	17.40	63.20	36.80

Source: Same as Table 4.1

Likewise, it is seen that North India accounts for around 62 per cent of total dust tea auctioned. However, it should be noted that South India has been gradually increasing its share only in the case of dust tea. It thus suggests that North India has a tendency to increasingly specialize in leaf tea production, whereas South India has been concentrating on dust tea.

Following the regional specialisation of tea trade, the present study examines the regional differentiation in patterns of production and exports in India. Table 4.3 shows that North India accounts for about three-fourths of the total production of tea while the share of South India continues to be roughly around 25 per cent.

Table 4.3

Relative shares of North India and South India  
In India's Production and Exports by sub-period averages

( in per cent)

Subperiods	Production		Exports		Export Intensity	
	North	South	North	South	North	South
1950-60	79.93	20.07	NA	NA	NA	NA
1960-70	75.78	24.22	79.34	20.66	41.2	46.4
1970-80	77.17	22.83	77.38	22.62	41.2	40.4
1980-90	77.41	22.59	77.76	22.24	33.6	33.7

Note: NA indicates not available.

Source : Same as Table 4.1

This regional pattern of production trends is evident in the case of exports as well. Thus, it maintains little difference in the export intensities (total export as a percentage of total production of tea), between South India and North India during the period after 1970. Consequently, it may be inferred that given the

same export intensity between the two regions and the regional specialisation/concentration in tea auctioned, Indian tea exports are by and large of the leaf variety, and that too from North India. Moreover, a careful scrutiny of relative price ratios of leaf and dust reveals that the leaf variety is qualitatively superior to the dust variety in view of the higher price commanded by it in the auctions, both at the regional as well as at the all India level ( see Table 4.4).

It is seen from the table 4.4 that leaf tea price has always been higher than that of dust tea by about 10 to 15 per cent, indicating thereby the effect of product differentiation at the all India level.

**Table 4.4**

Movements in Relative Auction Price of Leaf Tea to Dust Tea for South India and North India

(Ratio of auction prices of leaf tea to dust tea.)

Year	All India (1)	North India (2)	South India (3)
1950-60	1.17	1.12	1.23
1960-70	1.09	1.10	1.08
1970-80	1.12	1.19	1.04
1980-90	1.10	1.13	1.06

Note: Column (2) indicates the Calcutta auction in which most of North Indian tea is auctioned. Column (3) refers to Cochin auction in which majority of South India tea is auctioned.

Source : Same as in Table 4.1

Keeping in mind the above issues, NPR for tea at the all India level has been computed. At the outset it is necessary to mention that the domestic price for tea has been calculated by taking the weighted average price from the six major auction



centres, of which Calcutta, Guwahati and Siliguri are from the North and Cochin, Coonor and Coimbatore are from South. Due to paucity of data at the all India level, the rate of transport and handling charges is assumed to be 11 per cent of the FOB. This percentage has been arrived at from the information given by major tea exporters of Cochin port.

It can be observed from Table 4.5 that, on an average, reference price for tea at Rs. 12.78 per Kg over the period 1951 to 1990 was (8.67 per cent) higher than the corresponding auction price. Column (5) shows the export margin, which on an average works out to be 7.86 per cent. However, for certain years, producer price was higher than the reference price and hence the export margin was negative. The highest margin received by the exporter was 32.75 per cent in 1966. On the whole, it is observed that for most of the years under consideration, NPR was negative, that is the producers were taxed, which also implies that the commodity has been potentially competitive. The NPR (adjusted for transport and handling charges), (column 4), also reveals that on an average, the producers have been disprotected.

Following the earlier argument that India's tea exports essentially reflect the exports from North India, it is imperative to examine the exportable hypotheses for South India, given the difference in quality. Hence an attempt has been made to cull out the data on unit value of exports for South India tea from the annual reports of Cochin Chamber of Commerce, over the period 1963-1980. This data is available on July to June basis. Thereafter, it was collected on the calender year basis. As reference price is

Table 4.5

## Trends in Nominal Protection Rate for Tea In India

Year (1)	Domestic Price for India (2)	Reference Price (3)	NPR (2)/(3)-1 (4)	Export Margin (3-2)/(3)*100 (5)
1951	3.77	4.29	-0.12	12.22
1952	3.12	3.71	-0.16	15.97
1953	4.26	4.25	0.00	-0.13
1954	6.00	5.73	0.05	-4.77
1955	5.42	6.07	-0.11	10.64
1956	4.66	5.35	-0.13	12.94
1957	4.66	5.47	-0.15	14.80
1958	4.56	5.30	-0.14	13.91
1959	4.67	5.25	-0.11	11.02
1960	5.08	5.53	-0.08	8.16
1961	4.81	5.36	-0.10	10.27
1962	4.85	5.19	-0.07	6.56
1963	4.97	5.27	-0.06	5.70
1964	4.92	5.28	-0.07	6.82
1965	5.03	5.13	-0.02	1.90
1966	5.23	7.78	-0.33	32.75
1967	5.76	7.87	-0.27	26.85
1968	5.92	7.11	-0.17	16.72
1969	5.92	6.36	-0.07	6.90
1970	6.60	6.55	0.01	-0.71
1971	6.97	6.77	0.03	-2.97
1972	6.71	6.79	-0.01	1.14
1973	6.69	6.75	-0.01	0.87
1974	9.71	8.15	0.19	-19.17
1975	10.74	9.98	0.08	-7.59
1976	11.74	10.41	0.13	-12.82
1977	15.95	20.99	-0.24	24.02
1978	13.06	18.35	-0.29	28.81
1979	13.28	16.13	-0.18	17.67
1980	13.88	17.04	-0.19	18.56
1981	14.14	16.02	-0.12	11.74
1982	15.70	16.66	-0.06	5.77
1983	24.09	22.06	0.09	-9.19
1984	29.01	30.36	-0.04	4.46
1985	23.78	28.91	-0.18	17.76
1986	23.91	25.45	-0.06	6.04
1987	25.52	28.18	-0.09	9.44
1988	24.77	27.13	-0.09	8.71
1989	36.82	35.33	0.04	-4.21
1990	43.71	47.00	-0.07	7.00
Mean	11.76	12.78	-0.08	7.86
S.D	9.75	10.34	0.11	
C.V	82.87	80.89	137.99	

Source : Same as in Table 4.1

the FOB adjusted for transport and handling charges, the data on the latter were estimated from the information given by major tea exporters of Cochin port. Based on this information, the transport and handling charges were estimated to be 11 per cent of the FOB price.

It may be mentioned that domestic price of tea from South India is calculated by taking the weighted averages of tea auctioned in three auction centres - Cochin, Coonoor and Coimbatore from this region (Cochin is the main port and auction centre for tea from South India). It is seen from Table 4.6 that NPR is positive (near zero) for almost all years which also means that the commodity has been potentially non-competitive /protected for those years. Those periods for which NPR is negative could be due to the effect of devaluation policy of 1966 and trade liberalisation of 1978-79. Moreover, it is observed that due to the relatively lower price commanded by dust tea which has a larger share in South India, the export margin is also low and negative for certain years. Thus the results reveal that South Indian tea has lost its potential competitiveness. However, in order to have a better understanding of the nature and trends in potential competitiveness, sub-period analysis of trends in export, production and NPR has been undertaken.

**a) Relationship between NPR and production:**

Theoretically, it is expected that NPR and production have a positive relation (as higher the NPR, higher the production). It means that when producers receive a higher price for their produce, they have the necessary incentive to increase output.

Table 4.6

Trends in Nominal Protection Rate for Tea  
In South India

YEAR (1)	Domestic Price (2)	Ref. Price (3)	NPR (2)/(3)-1 (4)	Export Margin (3-2)/(3)*100 (5)
1962-63	4.70	4.80	-0.02	1.99
1963-64	4.88	4.69	0.04	-4.03
1964-65	4.95	4.66	0.06	-6.28
1965-66	4.96	5.63	-0.12	11.96
1966-67	5.44	6.61	-0.18	17.69
1967-68	5.63	6.35	-0.11	11.27
1968-69	5.53	6.00	-0.08	7.86
1969-70	5.57	5.59	-0.00	0.29
1970-71	6.37	6.19	0.03	-2.95
1971-72	6.46	6.11	0.06	-5.79
1972-73	6.08	5.99	0.02	-1.58
1973-74	6.72	6.32	0.06	-6.33
1974-75	9.57	8.75	0.09	-9.32
1975-76	10.15	9.51	0.07	-6.70
1976-77	15.51	15.18	0.02	-2.16
1977-78	13.34	18.32	-0.27	27.20
1978-79	11.50	13.65	-0.16	15.74
1979-80	13.41	13.78	-0.03	2.68
1982	15.75	15.62	0.01	-0.83
1983	23.34	21.33	0.09	-9.43
1984	27.43	28.84	-0.05	4.89
1985	22.80	24.70	-0.08	7.70
1986	19.77	18.72	0.06	-5.61
1987	22.68	21.48	0.06	-5.59
1988	21.00	20.27	0.04	-3.60
1989	34.16	25.31	0.35	-34.98
1990	40.10	39.76	0.01	-0.87
Mean	13.62	13.49	-0.00	0.12
S.D	9.59	8.99	0.11	
C.V	0.70	0.67	-93.53	

Source : (1) Tea Board India, Tea Statistics  
(2) Annual reports of Cochin Chamber of Commerce.

It is seen from figure 4.2 that empirically also, the relationship between production and NPR fall broadly in line with the theoretical expectation. Due to the increasing importance of domestic market for tea, there has been a continuous rise in

Figure 42  
*Cyclical Trends in Production & NPR for Tea*

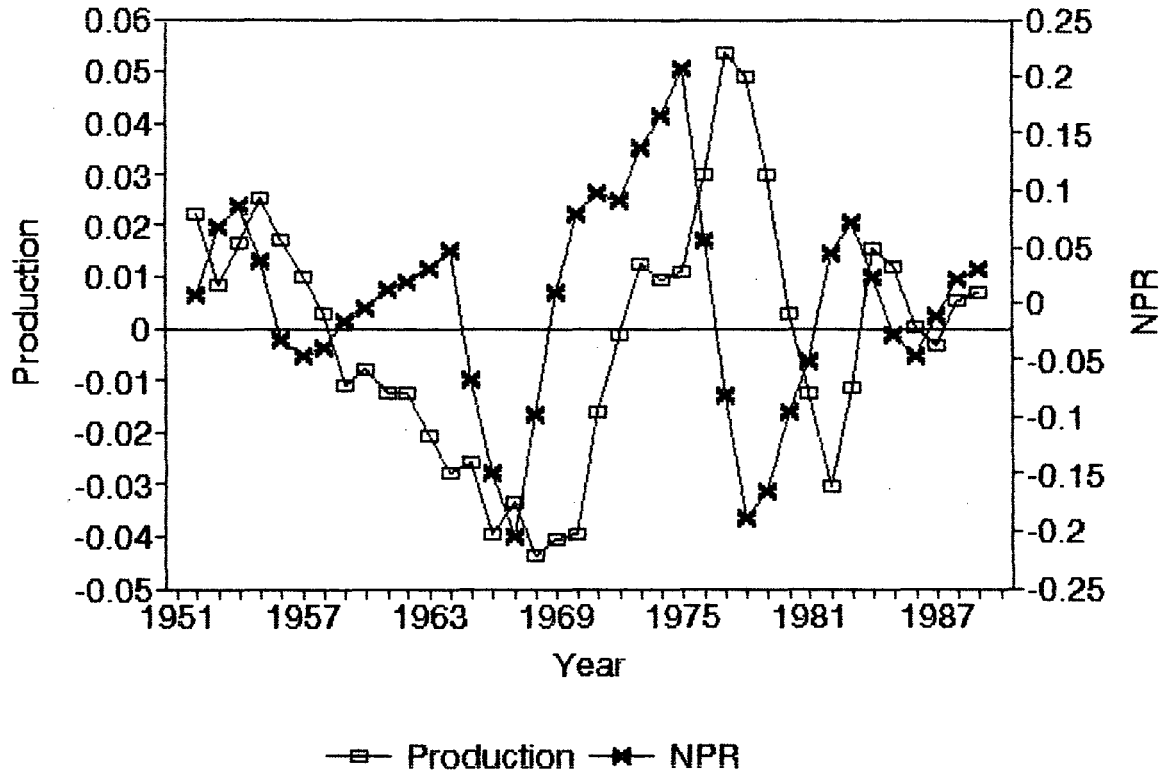
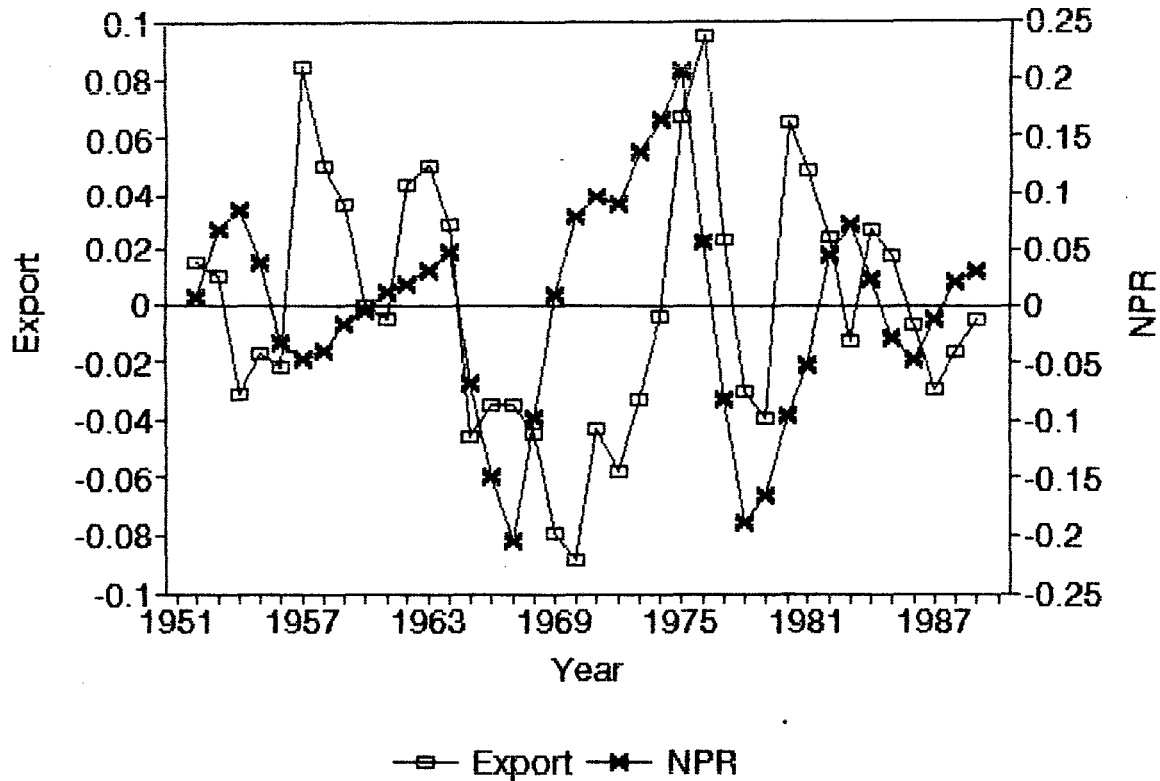


Figure 43  
*Cyclical Trends in Export and NPR for Tea*



domestic price which has provided the producers with the necessary incentive. Production and NPR follow similar cyclical pattern during the study period, except for the period 1978-1982. During those years, the cyclical movements in NPR appear to be counter-cyclical.

**b) Relationship between NPR and export:**

It is expected that there exists a negative relation between export and NPR, as with a wider margin (which also implies that reference price is higher than the auction price), the exporters will have the necessary incentive to export.

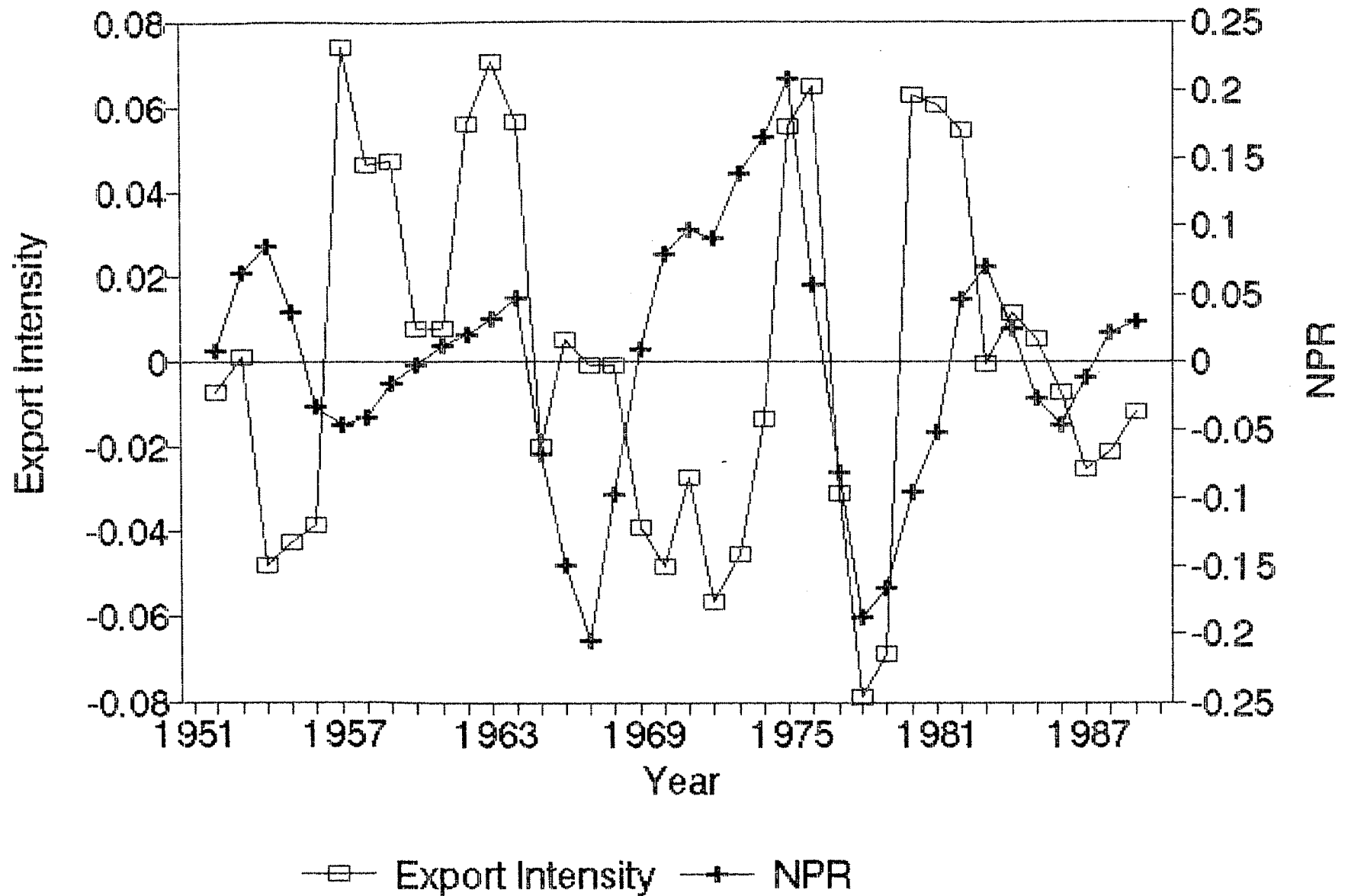
However, Figure 4.3 reveals that, apart from the presence of the effect of exchange rate movements, both export and NPR are procyclical, contrary to the exportable hypothesis. In other words, it is found that export increases whenever the domestic and export prices approach price equalisation. It then leads to a decline in export margin, (relative price differential between the two markets). This could be interpreted to mean that the degree of disprotection for Indian tea is coming down in the presence of a continuously growing domestic demand. Moreover, it must be borne in mind that tea was essentially an export oriented commodity until mid 1970's. This means that with less domestic pressure, whatever was produced was exported. However, since the latter part of seventies, with increasing domestic demand pressure, there was greater retention and hence the producers were able to have some degree of hold over the market. Thus, it is seen that the degree of disprotection for Indian tea is coming down.

Further this also makes it clear that disprotection (declining NPR) would not always bring about an increase in export where there exists a large domestic market. Disprotectionism can only make the commodity potentially competitive (exportable). It however does not ensure that the exports would pick up.

To make this argument clear, an attempt is made to study the relationship between export intensity and NPR. Figure 4.4 reveals that export intensity (total export as a percentage of total production) of Indian tea depends on the declining potential competitiveness. It means that the export of tea from India would improve at the cost of export margin. On the other hand, it has serious policy implications for price determination as the producers' can pass on either cost escalation or a fair amount of mark-up to both domestic consumers and exporters. Therefore it emphasises the need to reduce unit cost of production through increased allocative efficiency in resource use and technology diffusion. While doing so it would not only contain the inflationary effects of rise in auction price on domestic economy, but would also provide incentive to encourage exports of tea from India.

This point has been examined empirically by analysing the nature and trends in export of tea vis-a-vis potential competitiveness, following the same periodisation as the one employed in the earlier chapter. A two-stage analysis of the nature and trends in the potential competitiveness of tea exports from India has been undertaken here.

Figure 4.4  
*Cyclical Trends in export Intensity and NPR*





The first stage examines the nature of competitiveness to look for an upsurge in tea exports from India especially in the coming years, while the second part of the analysis studies the trends in potential competitiveness.

#### Nature of Potential Competitiveness:

Regarding the nature of potential competitiveness that Indian tea export faces, it is seen from Table 4.7 that tea continues to be potentially competitive during the entire study period (1951-1990). At the same time it may be noted that the export intensity (total export as a percentage of total production of tea) has registered a steady decline from 62.25 per cent during the period 1951-1968 to 29.98 during the late eighties (1987-1990). It is found that the NPR has been found to increase gradually from -0.11 to -0.04 during the period except for the intervening period of 1977-1982. The intervening period shows a declining trend in

Table 4.7

Nature of Potential Competitiveness of  
Tea in India by Sub-period Averages:

YEAR	Export Intensity (%)	Xchange Rate	Domestic Price	Reference Price	NPR	Export Margin (%)
1951-1990	48.54	8.09	11.94	12.96	-0.08	7.83
1951-1968	62.25	5.25	4.95	5.62	-0.11	11.98
1968-1977	44.30	7.95	8.59	8.92	-0.01	3.70
1977-1982	37.91	8.61	14.57	17.24	-0.17	15.52
1982-1987	33.64	11.68	23.54	25.18	-0.06	6.51
1987-1990	29.28	16.03	32.28	33.70	-0.04	4.20
1982-1990	32.35	13.42	27.29	28.77	-0.05	5.14

Source : Tea statistics (Various issues) and RBI Report on Currency and Finance. Vol II for data on official exchange rate.

NPR implying thereby that tea has been potentially competitive. However, on the whole, it is seen the NPR has been increasing. It thus reveals that Indian tea is getting less and less disprotected over time thereby making it costlier in the world market. By definition this upward movement in NPR has a tendency to bring down the export margin. The same table shows that export margin realised out of tea export from India has indeed declined from 11.98 per cent during the period 1951-1968 to 4.40 per cent of the export price during the late eighties (1987-1990). As a result the incentive to export has been disappearing over time, except for the intervening period of 1978 to 1982. During this period it is found that the export margin was 15.52 per cent of the reference (export) price due to the higher degree of disprotection.

In spite of the steady rise in exchange rate, this disturbing trend in NPR and export margin cannot be fully attributed to flexible exchange rate during the study period. What is striking is that domestic price appears to have soared, thereby outweighing the export price. It thus amounts to suggesting that the growing domestic demand for tea exerts pressure on the producers to demand higher prices for their produce.

It is seen from Table 4.8 that auction price is growing at a faster rate than the reference price during the entire study period, except the intervening period (1982-87) indicating thereby the decline in potential competitiveness. And this is further corroborated by the declining export margin. However, it is <sup>seen</sup> from Table 4.8 that increase in export and export margin (potential competitiveness) are inversely related, despite the continuous rise exchange rate.

Table 4.8

Trends in degree of Potential competitiveness

(Growth Rates in Per cent)

YEAR	Export	Export Intensity	Exchange Rate	Domestic Price	Reference Price	Export Margin
1951-90	0.04	-2.38	3.60	6.27	6.08	-4.90
1951-68	-0.27	-2.42	Nil	2.78	4.12	6.94
1968-77	0.69	-2.66	1.94	8.80	7.82	-7.92
1977-82	0.01	-0.90	2.32	5.60	1.92	-49.96
1982-87	-1.08	-4.12	6.64	6.38	7.78	33.96
1987-90	1.35	-0.77	11.10	16.24	14.16	-43.67
1982-90	-0.17	-2.87	8.31	10.08	10.17	4.85

source: Same as in Table 4.7

Having thus observed the nature and trends in NPR and related variables like export margin and so on, it is seen that tea in India has been increasingly losing its exportable status and hence less potentially competitive in the world market over time. A careful look at the trend in NPR rejects the exportable hypothesis evidencing thereby a positive association between export and NPR in the case of tea.

Based on these observations, it may therefore be safely argued that potential competitiveness of India's tea export has been on the decline due to the domestic demand and rise in auction price. Thus, considering the low export margin and also the risk involved in exporting relative to the domestic market, the exporters would probably, prefer the domestic market which is increasingly gaining importance.

### SECTION III

#### Concluding Observations

This section summarizes the broad findings of the analysis of potential competitiveness of tea in India, with a view to highlight the underlying export potentiality. It is observed that the flexible exchange rate has destabilized the producers price and hence their income, despite the fact that they received higher price during the period. Based on the analysis of NPR, it may be inferred that Indian tea is potentially competitive, although there is some evidence of reduction in the degree of disprotection during the latter half of the 1980s. However, we find that the relative share of India in world exports of tea has been coming down over time. In accordance with the theoretical expectation, it is found that both production and NPR have registered the same pattern of movements during the study period (except for the period 1978-82). However, contrary to the theoretical expectation, NPR and export moved in the same direction. On the whole, trends in NPR, production and export have shown the same trend. More specifically, trends in NPR has shown that Indian tea is getting less and less disprotected due to the presence of a growing domestic market.

CHAPTER V  
SUMMING UP

This study has analysed the potential competitiveness of India's tea exports and hence identified the possible factors influencing competitiveness. Tea being a dominant agricultural export from India, facilitates us to perceive the possible responses of agricultural exports in light of the new trade policy reforms. Further, the trends in production, consumption and export of tea in India vis-a-vis competitors has been explored so as to examine the changing production and market conditions that the tea export faces over time, spanning 1950-51 to 1989-90. Finally, the possible impact of product differentiation on export performance of tea at regional level, South India and North India, has been evaluated.

Firstly a critical review of the various measures of export competitiveness was made in the second chapter to choose the appropriate measure of export competitiveness. Based on their limitations when applied to developing countries, in particular agricultural exports, the measure of nominal protection rate (NPR) was chosen as the second best measure for evaluating the potential competitiveness of tea.

Secondly an attempt was made to characterise the comparative performance of tea exporting countries in terms of trends in production, consumption and exports in third chapter. Following the cyclical method, growth phases of tea production in India was identified to seek a better understanding of the

changing production conditions and hence the market conditions of tea exportability. The study period was divided into four phases: The first phase (1950-68) of decreasing trend, the second phase (1969-77) of increasing trend, third phase (1978-82) of declining trend and the fourth phase (1982-90) of recovery trend. The last phase was again divided into two sub periods (1983-87 and 1988-90) in order to gain understanding about the recent trends in tea performance.

The analysis of changing production conditions that underlie the Indian tea has shown that cyclical movements in tea production is largely influenced by the crop cycle implying thereby that the tea production trends seem to have been influenced by supply conditions. Regarding the nature of market that Indian tea faces, the analysis reveals that export of tea from India has been increasingly facing the threat of ever expanding domestic market, indicating thereby the emergence of dual market of domestic vs export.

Moreover, the analysis of direction of tea exports from India has shown that India's tea exports has shifted towards East European and Middle East countries from the traditional West European countries since 1970. Further it was seen that India's tea exports which was initially directed towards the London market till 1960s, shifted to the USSR market. And this was further validated by the assessing the geographical concentration to examine the impact of global trade environment on India's tea export.

Among the major producing countries it was observed that India retained the largest share of production (70%) during the eighties, when compared to other major producers. It was observed that the steady increase in the share of producing countries in world consumption and also the rate of growth of producing countries is higher than that of importing countries. Not surprisingly, India recorded the highest rate of growth in consumption for the four decades. Among the competing countries, Kenya registered the highest rate of growth in production as well as in exports. Thus, India's tea exports is seen to be increasingly facing the threat of competition from the growing domestic market as well as the competing countries. This competitive trend in India's tea export was increasingly seen in the rising domestic prices. Hence it necessitated the study of potential competitiveness.

It is was observed in the fourth chapter that auction price and reference price showed a declining trend upto 1971 and then registered cyclical trends. At the same time, it was noted that India changed its exchange rate policy from fixed to flexible exchange rate during this period. Hence it was hypothesised that both the prices could possibly have been influenced by the change in exchange rate policy. The analysis of trends in both the prices and exchange rate has shown that the flexible exchange rate has destabilised the producers' price and hence their income, despite the fact that they received higher price during the study period.

Based on the analysis of nominal protection rate (NPR), it was found that Indian tea is potentially competitive, although

there is some evidence of reduction in the degree of disprotection during the latter half of the 1980s. However it was observed that the relative share of Indian tea in world exports of tea has been coming down over time.

Contrary to the theoretical expectation NPR and export moved in the same direction. On the whole, trends in NPR production and export have exhibited the same trend indicating that increase in export price would boost India's tea export. Therefore the present study makes a concluding observation on the potential competition of tea exports that Indian tea is getting less and less disprotected, due to the presence of a growing domestic market, resulting in declining potential competitiveness of tea export.



## APPENDIX 1

### Computational Methods for Domestic and World Reference Prices:

#### Domestic Prices:

Domestic price is taken as the price which the producers actually receive for their produce. Hence farmgate / procurement / auction prices are generally selected as domestic prices depending upon the commodity selected for study. In this study, auction price of Tea has been taken to reflect domestic price.

#### World Reference Price:

The world reference prices are based on the current trading status which are either border prices (CIF, import or FOB export prices) or parity prices. Parity prices are border prices adjusted for domestic transport and marketing costs to the point of production or consumption. In this context, it is necessary to make a distinction between importables and exportables for the purpose of adjustment of transport costs. In the case of an exportable, the price a producer receives in the absence of government intervention would be equal to FOB price minus the cost of transport from auction centre to the border. Thus

$P_d$  = Auction price / Domestic price  
 $P_w$  = FOB price of the exportable commodity  
 $C$  = Cost of transport and handling charges from the auction centre to the border.

in the case of an exportable, the producer would receive the following price for his commodity :

$$P_d = P_w - C \quad \text{-----} \quad (1)$$

But if the commodity in question is an importable, then the domestically produced and imported commodity would receive the same price at any point in the marketing chain. Thus, in this case :

$$P_d + C_1 = P_m + C_2 \quad \text{-----} \quad (2)$$

$P_d$  = Auction price / Domestic price  
 $P_m$  = CIF price of importable in rupees  
 $C_1$  = Handling and transportation costs from the auction centre to the point 'A' in the marketing chain.  
 $C_2$  = Handling and transportation costs from the port to the point in the marketing chain.

As a corollary to the above, in the absence of government intervention, the producer receives the following price for an importable crop :

$$P_d = P_m + C_2 - C_1 \quad \text{-----} \quad (3)$$

## APPENDIX II

### A BRIEF NOTE ON TEA

#### Origin of Tea:

Tea whose botanical name is 'Camellia Sinensis' is believed to have originated from China and was initially used for medicinal purposes in the third or fourth century B.C. Originally it was available as Green Tea. By the end of sixth century, the Chinese began to regard tea as a beverage and not just as a medicinal drink. It became a popular beverage in England in the 17th century.

In India, the tea plant was discovered in North-East Assam during the early 1820's. It was the East India Company which initiated the possibility of growing Tea. In the early 1840's, most of the East India Company's tea lands were taken over by the newly formed Assam Company which produced tea from this region.

Although the practice is to put all tea plants under the name of 'Camellia Sinensis', they are classified into three varieties based on the leaf feature and growth habitat. The China plant is small leaved and referred to as C.sinensis and the Assam variety is horizontal and broad leaved and known as C.assamica. Generally, green tea made in Japan and China is produced from variety sinensis while black tea is made from variety assamica. The intermediate category is of the semi-erect leaf grouping which is the Indo-China or Cambod variety. Thus, the bulk of commercially grown tea today is assigned to these three categories. India's tea plantations can be largely grouped into two regions with the regional specificities.

#### North India:

North-east India produces a wider variety of tea than any other area under cultivation in the world. Although a small quantity of green tea is produced in this region, it primarily produces black tea.

#### Assam :

The origin of Tea in India is associated with the discovery of indigenous Tea in Assam and almost half the quantity of tea production comes from this source. Hence, generally Indian tea and Assam tea are considered synonymous. Assam teas are popularly known for their attractive appearance and strong liquors. Darrang, Goalpara, Kamrup, Lakhimpur, Dibrugarh, Nowgong, Sibsagar and Cachar are the major districts in Assam where tea is grown. Area under tea in Assam accounts for more than half the area under tea in India (55.29 per cent) .It accounted for 62.62 per cent of total area under tea from North India in 1951 and increased to 67.55 per cent in eighties.

Production of tea from this region accounted for 66.41 per cent of North Indian region during the fifties and it increased to 69.67 per cent in eighties. More than half the production of tea from India (53.88 per cent) was contributed by this state in the

eighties. The average yield per hectare in Assam was 966 Kgs per hectare in 1951. It increased to 1685 Kg/hectare in 1990. Dibrugarh district has the yield per hectare (2059 Kg per hectare) in 1990. A large number of estates in Assam are above 400 hectares. Majority of the bushes (32.84 per cent) in this region are above fifty years old. Thus, the importance of this area is evident from the fact that it contributes more than half the production of Indian Tea. Guwahati is the main auction centre for Assam tea and also for Cachar.

#### West Bengal :

The districts in West Bengal include Darjeeling, Terai, and Dooars. Between 1951 to 1989, the area under tea in West Bengal increased from 79580 hectares to 101000 hectares in 1989. This constituted 29.68 per cent of the total area under tea in North India and 24.34 per cent of India's total. 67 per cent of West Bengal area and 19.87 per cent of the total North Indian area under tea is accounted for by Dooars.

Production of Tea in West Bengal which constituted 31.69 per cent of total North Indian production in fifties decreased to 29.18 per cent in 1980's. It constituted 22.61 per cent of all India production in eighties. Dooars district contributed around 86 per cent of total West Bengal production in 1951. Since then it has declined to 76.20 per cent, a fall of more than 10 per cent in 1990. It constituted 20.93 per cent of total North Indian production in 1990. The average yield rate was 982 Kg per hectare in 1951 in West Bengal. It increased to 1480 Kg per hectare in 1990. The yield rate is high in Dooars (1684 Kg/hectare in 1990) which is above the average yield of total West Bengal region and nearing the national average. Most of Dooars tea is sold in Siliguri auction which started in 1976.

Darjeeling tea in West Bengal is the most popular tea in the world, known for its unique flavour and aroma. Infact, this variety commands the highest price in the international market. The area under Darjeeling tea constituted 19.85 per cent of total West Bengal area in 1989 and 5.89 per cent of North India. The production of tea in Darjeeling constituted only 8.93 per cent of total West bengal production, and 2.02 per cent of India's production in the eighties. The average yield per hectare is also very low (723 Kg/hectare) in 1990 and more than 80 per cent of the bushes in this region are over 50 years of age. Dooars and Terai tea from West Bengal are generally used for blending purposes.

Other than the main Assam and West Bengal regions, there are other pockets of production in Central and North west India. The Kangra valley in Himachal Pradesh constitutes a more important area in the North west region predominating in the production of green tea. Other states include Tripura and Uttar pradesh producing mainly green or orthodox black leaf.

#### South India -

South Indian region predominates in the production of Black tea. But tea is not a monoculture in South India as in the case of parts of Assam, as these regions also predominate in other plantation

crops like coffee and rubber. As mentioned earlier, Tea is grown in the states of Tamil Nadu, Kerala and parts of Karnataka.

In Tamil Nadu, the important tea growing districts include Nilgiris, Kanyakumari, Tirunelveli, Madurai and Coimbatore. The area under Nilgiris was 67.67 per cent of the total area under tea in Tamil Nadu in 1990. The production here is also high with 65.11 per cent of the total Tamil Nadu production and 8.86 per cent of all India during the eighties. The total Tamil Nadu area under tea was more than 50 per cent of the South Indian area in 1990. Production of tea from this state accounted for 60.13 per cent of South India production and 13.57 per cent of India during the eighties. The average yield per hectare in Tamil Nadu was 2844 Kg/hectare which was well above the national average (1729 Kg/hectare) in 1990. It is even higher in the Nilgiris (2844 Kg/hectare). Majority of the estates here are mainly small holders, predominantly below 8.09 hectares and 46 per cent of the bushes are above 50 years.

Kerala is the next important state in the production of Tea from South India, contributing 37.17 per cent of the total tea and 8.37 per cent of the total of India production during the eighties. Idukki has the major share in the production in Kerala state, contributing 75.56 per cent of the total Kerala production during the eighties. The average yield rate was 1753 Kg per hectare in 1990, in Kerala and this is above the national average. Majority of the bushes in Kerala are above 50 years (74 per cent). In contrast to high range area of the Kannan Devan hills, Kerala also has its low grown tea in the Central and Southern regions of the state. Area under Tea in Kerala is about the same as in Tamil Nadu, but the production is much lower - 60665 tonnes in Kerala as against 110576 tonnes in Tamil Nadu in 1990. Infact the area under Tea in Kerala has been almost stagnant during the past four decades.

Contribution of Karnataka to total South India production has been marginal with 2.70 per cent during the eighties. Chikmagalur is the major district for Tea production from this state, contributing 68.48 per cent of Karnataka's tea production.

Taking the whole of North India and South India into consideration, the area under Tea in North India was around 82 per cent of the total area under tea in India in 1990. The remaining 18 per cent is to be found in the Southern region. Interestingly, the average yield rate in South India has been consistently higher than the national average and in 1990, the average yield rate from this region (2319 Kg/hectare) was higher than the national average which is 1729 Kg per hectare in 1990. It can be concluded from this that expansion in area has contributed more to the output of tea in North India than the average yield.

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