Tea Industry in India: Problems and Prospects

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I

INTRODUCTION

India is the largest producer and consumer of tea in the world and accounts for around 27 per cent of world production and 13 per cent of world trade. Export of tea is around 20 per cent of domestic production. The bulk (75 to 80 per cent) of tea production comes from Northern India, Assam and West Bengal being the major contributors. In recent years, however, India's long-standing predominance in the world market as the largest producer and exporter of tea has taken a beating due to sluggish growth in production coupled with slow ascendancy in domestic consumption (Mitra, 1991). India's share in world exports of tea has also drastically declined indicating that India is unable to take advantage of the expanding world market. To add to the woes of the tea firms and farmers is the falling prices of tea both in the domestic and international markets. These changes would have an adverse impact on the economy. It is pertinent to assess the performance of tea sector and identify ways and means of overcoming the problems. Therefore, the present study was taken up with the following specific objectives; (a) to study the composition, nature and directions of tea trade, and, (b) to assess the competitiveness of tea and to suggest policies to ameliorate the depreciating situation of tea industry.

II

DATA AND METHODOLOGY

Directions of Trade

The data on export of tea and its products were collected for the period 1980 to 2004 from various publications of Director General of Commercial Intelligence and Statistics (DGCI&S), Ministry of Commerce. Tea, leaf in bulk, constitutes 57 per cent of total tea exports and therefore, an in-depth assessment of shift in destinations and its future demand was performed taking 10 major tea importing countries. The biannual averages at four yearly interval data for the period 1995-2004 were used to analyse the market shares for tea exports. The average export to a particular country

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was assumed to be a random variable that depends only on past exports to that country. Following a first order Markov model (Dent, 1967), it can be denoted as:

$$E_{jt} = \sum_{i=1}^{r} E_{it-1} \, P_{ij} + e_{jt} \qquad\qquad ....(1)$$

where, E_{jt}= exports from India during the year 't' to j-th country; E_{it-1} = exports to i-th country during the year t-1; P_{ij} = the probability that exports will shift from i-th country to j-th country; e_{jt} = the error term which is statistically independent of E_{it-1}; and r = the number of importing countries.

Transitional probabilities P_{ij}, which can be arranged in a (c×r) matrix, have the following properties:

$$0 \leq P_{ij} \leq 1, \text{ and } \sum_{i=1}^{r} P_{ij} = 1, \text{ for all i.}$$

Thus the expected shares of each country during period 't' can be obtained by multiplying the exports to those countries in the previous period (t-1) with the transitional probability matrix. Transitional probability matrix was estimated with the help of a Linear Programming (LP) method referred to as Minimisation of Mean Deviation (Kumar *et al.*, 2006) which is given below.

$$Min O.P^{*} + \frac{1}{r\,(n-1)} Ie \qquad\qquad ....(2)$$

Subject to
$$XP^{*} + e = Y$$
$$GP^{*} = 1$$
$$P^{*} \geq 0$$

Where, P^{*} is a vector of the probabilities Pij; 0 is a vector of zeros; I is an identity matrix; e is the vector of errors; Y is the vector of exports to each country; X is a block diagonal matrix of lagged values of y; G is a grouping matrix to add the row elements of P^{*} to unity; n is the number of time periods considered for the analysis; r is the number of importing countries.

Comparative Advantage

The study estimated the comparative advantage in tea trade with the help of Export Performance Ratio (EPR), using data from FAOSTAT for the period 1995-2004. The EPR of the tea during a period can be expressed as a ratio of share of exports for tea of the country to the world to the share of total exports of the country

to world for all the commodities. If EPR is greater than unity, the country has comparative advantage in the export of that commodity and vice versa (Balassa, 1965). The comparative advantage was also studied using the Net Protection Coefficient (NPC) which is given as the ratio of domestic price of tea to FOB (Free on Board) price of tea. The NPC less than 1 means the country is competitive in that commodity.

Determinants of Tea Export Demand

The log-linear form of export demand function has been estimated by the Ordinary Least Squares (OLS) method. The analysis was carried out for the period 1961 to 2004. The data on nominal exchange rates were collected from various issues of *Economic Survey*. The data on trade, both quantity and value, in tea are collected from FAOSTAT. The unit value of tea and coffee are estimated as the ratio of value to quantity of their exports.

$$D_{tea} = a + b_1 \ln Xpr + b_2 \ln T_{tea} + b_3 ERR + b_4 Coffee\_pr + b_5 Tea\_q \qquad ....(3)$$

Where, D_{tea} is demand for tea exports from the country ('000 tonnes); X_{pr} is Indian export prices of tea (unit value in \$/kg); T_{tea} is the amount of international trade in tea ('000 tonnes); ERR is exchange rate (Rs./\$); Coffee_pr is price of coffee in the international market (unit value in \$/kg); and Tea_q is tea production in the world other than that by India ('000 tonnes).

III

RESULTS AND DISCUSSION

India's Status in Global Tea Production

India is second in terms of both area (20 per cent) and production (25 per cent) of tea in the world (Table 1). Six countries, i.e., India, China, Kenya, Sri Lanka, Turkey and Indonesia together account for 80 per cent of the world's total tea production. The productivity of tea in India is less than that of Kenya (2.15 tonnes/ha), Japan (1.98 tonnes/ha), and Turkey (1.82 tonnes/ha). It is also observed that in the last decade and a half the country has not recorded any significant growth in yield (0.23 per cent). Though tea production has increased over the years due to expansion in its area, further increase in production is possible only by way of increasing yield.

TABLE 1. PRODUCTION OF TEA IN THE WORLD

Country (1)		TE 1990 (2)	TE 2005 (3)	Percentage to total (4)	CAGR (per cent) (5)	C.V. (per cent) (6)
China	A	8.44	9.46	(37)	0.65	3.24
	P	5.63	8.62	(26)	2.72	13.56
	Y	0.67	0.91		2.06	10.47
India	A	4.15	5.00	(20)	1.34	7.21
	P	6.88	8.42	(25)	1.56	7.59
	Y	1.66	1.69		0.23	4.43
Indonesia	A	0.91	1.16	(5)	1.72	8.67
	P	1.44	1.69	(5)	0.98	4.76
	Y	1.59	1.45		-0.72	5.19
Japan	A	0.59	0.49	(2)	-1.43	7.04
	P	0.90	0.98	(3)	0.03	3.55
	Y	1.53	1.98		1.49	7.68
Kenya	A	0.90	1.37	(5)	2.52	11.84
	P	1.81	2.95	(9)	3.38	15.72
	Y	1.99	2.15		0.84	4.90
Sri Lanka	A	2.22	2.03	(8)	0.72	6.24
	P	2.22	3.06	(9)	2.81	13.56
	Y	1.00	1.51		3.56	16.97
Turkey	A	0.89	0.92	(4)	0.62	7.41
	P	1.37	1.86	(6)	1.94	14.53
	Y	1.55	1.82		2.55	15.93
Vietnam	A	0.54	1.02	(4)	3.60	19.49
	P	0.31	1.06	(3)	9.14	43.49
	Y	0.57	1.04		5.31	25.62
World	A	22.40	25.29	(100)	0.69	3.67
	P	24.82	33.23	(100)	2.06	9.95
	Y	1.11	1.31		1.36	6.76

Source: FAOSTAT Database, www.FAO.ORG.
Note: A=Area (lakh hectares); P= Production (lakh tonnes); and Y= Yield (tonnes/ha).

Across the states Assam is the leading state with an area of 2.31 lakh hectares and production of 4.45 lakh tonnes followed by West Bengal, Tamil Nadu, Kerala and Tripura (Table 2). The productivity is higher in the Southern states compared to that of northern states of the country. Tea is produced in almost all the North Eastern states. Assam is the world's largest distinct tea growing area and produces the instantly recognisable, rich, malty, full-bodied, bright teas that have established themselves as favourites around the world. In West Bengal Darjeeling is known as the 'Champagne of teas'. Darjeeling tea, with its unique Muscatel flavour and exquisite bouquet, is the world's most exclusive tea, fetching the highest prices across the world.

TABLE 2. STATEWISE TEA PRODUCTION IN INDIA

States	Area ('000 ha)		Production ('000 tonnes)		Yield (kg/ha)
	2004 TE	Percentage to total	2004 TE	Percentage to total	2004 TE
(1)	(2)	(3)	(4)	(5)	(6)
Assam	231.00	(44.54)	445.25	(53.09)	1928
West Bengal	104.20	(20.09)	194.45	(23.19)	1866
Tamil Nadu	49.10	(9.47)	131.22	(15.65)	2672
Kerala	36.80	(7.09)	53.15	(6.34)	1444
Tripura	6.10	(1.18)	7.35	(0.88)	1205
Himachal Pradesh	2.10	(0.40)	1.60	(0.19)	-
Karnataka	2.10	(0.40)	5.24	(0.62)	2495
Arunachal Pradesh	2.00	(0.39)	0.90	(0.11)	-
Nagaland	0.50	(0.09)	0.25	(0.03)	-
Manipur	0.90	(0.08)	0.25	(0.03)	-
Orissa	0.05	(0.01)	0.10	(0.01)	-
Sikkim	0.05	(0.01)	0.10	(0.01)	-
North India	403.91	(77.87)	649.04	(77.39)	1607
South India	114.78	(22.13)	189.60	(22.61)	1652
Northeast region	240.05	(46.28)	454.09	(54.15)	1892
India	518.68	(100.00)	838.64	(100.00)	1617

Source: *Horticulture Production Yearbook*, National Horticultural Board, Ministry of Agriculture, Government of India, New Delhi (various issues).

Tripura is categorised as a traditional tea-growing state producing about 7.5 million kg of tea. There is considerable scope to increase the area under tea plantation as well as productivity. The tea currently produced in Tripura is recognised for its good blending qualities. In Nagaland most of the farmers have shifted towards exclusive tea cultivation instead of mixed crops, which was the tradition. The price received by the farmers, however, is not as satisfactory. People are actually new to this crop and do not know about the market dynamics or quality differences. There is an urgent need for extension support at every level of cultivation and processing.

Declining Global Prices Affecting Sustainability of Tea Industry

The fall in price of tea was observed both in India as well as world over. The tea prices recorded in Mombasa (Kenya) in 2005 were same as that recorded about a decade ago. Tea prices in India and all over the world have not shown an increasing trend. Nevertheless immense variability in prices was observed in the past decade. Moreover the Indian prices have always remained lower than (Mombasa) Kenya prices. This phenomenon has affected the profitability of the industry.

Efforts have been made to arrest fall in prices by way of setting up of price stabilisation fund, creating a separate fund for long term development and modernisation of plantation sector, increasing the allowance under Sec 33 AB of income tax Act from 20 per cent to 40 per cent; introduction of price sharing formula for equitable sharing of the sale proceeds between the bought leaf factories and small

tea growers; implementation of a credit relief package; and development of IT based Information dissemination plan for the tea industry (Government of India, 2004). These efforts have had a positive impact on the health of Indian tea sector. However, to make Indian tea sector more competitive, the long term strategy should be to give emphasis on quality of the product; tea product and process diversification; and also on the market diversification.

Issues with Small Tea Growers

Attempts to expand tea in non-traditional areas have not been met with much success since large plantations do not seem interested in increasing their area (Bhowmick, 1991). Under such a situation promoting small scale tea cultivation appears to be most practical business proposition in the potential areas. These small tea estates could be located in the periphery of the existing big tea plantation that enables the growers to have a tie-up arrangement with the large estates for technical know how and sale of green leaf. This would increase tea production on one hand and also alleviate the ever swelling unemployment problem on the other. However, the small scale tea sector faces a number of problems too: lack of capital, improper knowledge about the agro-techniques of tea cultivation, inadequate input availability and problem of marketing (Das, 1998). There is a need to strengthen the technical services in order to disseminate the technical know-how of tea cultivation. A new type of production organisation and ownership structure may be promoted to look after the multi-pronged problems of production, marketing and supporting services for the small holder tea production. Such an organisation would be able to take care of the interest of the tea growers by making the inputs available in right quantity at right price; can make arrangements for processing of green leaves and eventually, can undertake marketing of products to enhance profits. Such a body could be drawn on the lines of Kenyan Tea Development Agency (KTDA) of Kenya or the "Tea Small Holdings Development Authority, of Sri Lanka" to cater to the needs of small tea growers.

Tea Exports and Its Composition

In the year 2004-05 a total of 162 million kg of tea was exported, earning a foreign exchange of $ 336 million (Table 3). Tea exports could be classified into three categories based on nature of processing as black, green and other varieties of tea.

In volume terms black tea accounts for 97 per cent of total tea exports and is followed by others (2 per cent) and green tea (1 per cent). The unit value realisation was found to be higher in case of others group of tea ($5/kg) followed by green tea ($3/kg) and black tea ($2/kg). The export of black tea in volume terms declined from 199 million kg in TE 1990 to 157 million kg in the year TE 2004. Exports in value terms also revealed similar pattern, with export earnings falling from $ 519 million to

$ 316 million. The major cause of concern, however, is fall in unit value realisation of tea exports from $ 3/kg in TE 1990 to $ 2/kg in TE 2004. Out of the various grades of black tea exported from the country the largest share in total tea exports is of "tea black leaf in bulk" (57 per cent) followed by "Black tea in packets >25 gm but < 1 kg" (18 per cent) and Tea black dust in bulk (11 per cent).

TABLE 3. CHANGING COMPOSITION OF TEA EXPORTS FROM INDIA

Sl No. (1)	Commodity (2)		TE 1990 (3)	TE 2004 (4)	CAGR 1989-2004 TE (5)
A.	Black tea aggregate	Q	199.06 (97.58)	157.32 (97.32)	-0.97
		V	519.11 (97.61)	315.94 (94.09)	-2.31
		UV	2.61	2.01	-1.35
i)	Black tea in packets >25 gm but < 1 kg	Q	46.80 (22.94)	28.79 (17.81)	-0.32
		V	131.85 (24.79)	58.22 (17.34)	-2.22
		UV	2.82	2.02	-1.92
ii)	Tea black leaf in bulk	Q	123.89 (60.73)	91.33 (56.50)	-3.78
		V	318.28 (59.85)	189.06 (56.30)	-4.52
		UV	2.57	2.07	-0.78
iii)	Tea black dust in bulk	Q	21.32 (10.45)	17.43 (10.78)	-0.99
		V	48.67 (9.15)	29.29 (8.72)	-0.98
		UV	2.28	1.68	0.01
B.	Green aggregate	Q	3.99 (1.96)	1.08 (0.67)	-7.11
		V	7.51 (1.41)	2.79 (0.83)	-4.71
		UV	1.88	2.58	2.61
C.	Others tea aggregate	Q	0.94 (0.46)	3.25 (2.01)	9.78
		V	5.23 (0.98)	17.07 (5.08)	8.58
		UV	5.54	5.26	-1.10
	Total tea	Q	203.99	161.65	-0.99
		V	531.85	335.80	-2.32
		UV	2.61	2.08	-1.35

Source: *Monthly Statistics of Foreign Trade of India*, Vol.1, DGCI&S, Ministry of Commerce and Industry, Government of India (various issues).
Note: 1) Q is quantity in million kg, V is value in million $, UV is unit value in $/kg.
2) Figures in parentheses are percentage to the total.

Market Loyalties of Indian Tea

The structural changes in the direction of trade were quantified using Markov Chain Analysis and the results are presented in Table 4. The diagonal element of the transitional probability matrix measures the probability that the export share of a country will be retained. The elements (e.g., Pij of i-th row and j-th column) of the transitional probability matrix show the probability "P" that the share would shift from i-th country to j-th country. Pakistan (1.00) and others group (0.70) of countries emerged to be highly stable markets, whereas Kazakhstan (0.43) and Russia (0.33) emerged as moderately stable markets. The other major importing countries, i.e., Iraq, U.A.E., U.S.A., U.K., Iran and Japan proved to be unstable markets for Indian tea. UK reinforces the market shares of Kazakhstan, Russia and U.A.E. Similarly, the other group of countries also reinforces the market share of Kazakhstan and Russia. The markets of U.S.A., U.K. and Iran became unstable leading to loss of market share. This could be attributed to two reasons; firstly, the production in Kenya, Sri Lanka, China and Vietnam moved to a higher plane from the mid-1990s, prompting these countries to step up their export promotion on a substantial scale.

TABLE 4. TRANSITIONAL PROBABILITY MATRIX OF INDIAN TEA EXPORTS

(1)	Kazakhstan (2)	Russia (3)	U.K. (4)	Iraq (5)	U.A.E. (6)	U.S.A. (7)	Iran (8)	Pakistan (9)	Japan (10)	Others (11)
Kazakhstan	0.431	0	0.021	0	0.411	0	1	0	0	0.048
Russia	0	0.327	0.556	1	0	0	0	0	0	0.040
UK	0	0.673	0	0	0	0	0	0	0	0.151
Iraq	0	0	0.115	0	0	0	0	0	0	0
UAE	0	0	0.307	0	0	0	0	0	0	0
USA	0.286	0	0	0	0.274	0	0	0	0	0
Iran	0.283	0	0	0	0.033	0	0	0	0	0
Pakistan	0	0	0	0	0	0	0	1	0	0.004
Japan	0	0	0	0	0	0	0	0	0	0.056
Others	0	0	0	0	0	1	0	0	1	0.701

Secondly, the Indian tea exports, faced complacency, created by the steady surge in domestic demand which, unfortunately, started sagging from around 1997. A number of measures have been taken by Iran and India to normalise the tea trade. Earlier Iran had banned the import of Indian tea, due to huge domestic stocks, which has been lifted. It had reduced the tariff barriers and there was no restriction on the quantity of imports. India on the other hand is promoting the orthodox tea production in Assam, which is preferred in the Iran market (Mandal, 2004). The U.K. has one of the highest per capita consumption of tea at 2.7 kg against 660 gm in India. The consumption of tea in U.K. was estimated to grow at one per cent per annum. An equally significant aspect of the U.K. tea trade is its interest to re-export tea with value-addition. Thus, the UK market offers immense scope for the Indian tea industry

(Sunder, 2002). To regain the market share in U.K., efforts need to be made for product and logo promotion and also for developing market intelligence. The promotional efforts have helped Kenya to gain a larger share (43 per cent) of U.K. tea market as compared to 19 per cent by India. The Indian Tea Board has identified Saudi Arabia, Syria and the U.A.E. as three key markets in the West Asia and North Africa (WANA) region to register its logos and carry out major promotional campaigns with the aim to boost India's share of the WANA tea export market (Vasan, 2003).

In Russia, there is a considerable shift noted in the consumption and buying pattern favouring orthodox tea. Sri Lanka has taken advantage of this changed scenario by increasingly establishing its foothold in that market. On the other hand, the Russian market is also price driven in the CTC segment, where cheaper teas from rivals like China and Vietnam are edging out Indian teas. The logistical advantages also favour these countries vis-à-vis India (Nair, 2004).

Tea Export Projection to Major Destinations

The transitional probabilities of major importing countries were used to project the market shares of Indian "black tea leaf in bulk" for 2007 and 2009. The actual and estimated values of exports to major importing countries are presented in Table 5. The share of U.A.E., U.S.A., Kazhakastan, Iran, Pakistan and Iraq show an increasing trend and is projected to increase further in the year 2007. The exports to U.K. and Russia is estimated to increase however, their share in total tea exports from India is projected to fall and would be 44 per cent in 2007. The other group of countries is projected to account for a major share (22 per cent) of total tea export from India in 2007. Thus the diversification of export market of Indian tea would boost the trade. The projected export of total tea from India follows an increasing trend over the period and hence greater efforts are called for to increase the production of tea in the country so as to be able to meet the growing export market demand. India should also focus on the quality of tea produced, so as to get premium price in the world market. Further, more convenient ways of drinking tea need to be developed through product and process development, for instance, instant tea or tea bags, which also change the style of drinking tea and thus the nature of demand.

Comparative Advantage

The export competitiveness of tea was ascertained using the Export Performance Ratio (EPR) for the selected years and shown in Figure 1. During the early 1990s, the EPR recorded an increasing trend. However, during the late 1990s the EPR fell sharply, revealing erosion of comparative advantage of Indian tea. The trend was reversed through corrective measures in the form promotional efforts of the government, which needs to be sustained on a long term basis.

TABLE 5. INDIAN TEA EXPORTS TO MAJOR IMPORTING NATIONS

('000 tonnes)

	United Kingdom		Russia		U.A.E.		U.S.A.		Japan		Kazakhstan		Iran		Pakistan		Iraq		Others		Total	
	A	P	A	P	A	P	A	P	A	P	A	P	A	P	A	P	A	P	A	P	A	P
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)
1995	1633 (38.3)	1633* (38.3)	1495* (35.1)	1495* (35.1)	183 (4.3)	183* (4.3)	180 (4.2)	180* (4.2)	151 (3.5)	151* (3.5)	35 (0.8)	35* (0.8)	11 (0.3)	11* (0.3)	5 (0.1)	5* (0.1)	0 (0.0)	0* (0.0)	571 (13.4)	571* (13.4)	4263	4263*
1998	1897 (25.0)	1092 (25.6)	1421 (18.7)	1421 (33.3)	696 (9.2)	502 (11.8)	219 (2.9)	60 (1.4)	197 (2.6)	32 (0.8)	163 (2.1)	163 (3.8)	178 (2.3)	68 (1.6)	134 (1.8)	7 (0.2)	188 (2.5)	188 (4.4)	2512 (33.0)	731 (17.2)	7603	4264
2001	1334 (16.0)	13.34 (17.5)	1810 (21.8)	1810 (23.8)	583 (7.0)	583 (7.7)	237 (2.8)	237 (3.1)	141 (1.7)	141 (1.9)	694 (8.3)	694 (9.1)	266 (3.2)	266 (3.5)	144 (1.7)	144 (1.9)	733 (8.8)	218 (2.9)	2376 (28.6)	2178 (28.6)	8318	7605
2004	1710 (16.8)	1575 (18.9)	2269 (27.2)	2164 (26.0)	757 (7.4)	410 (4.9)	358 (3.5)	358 (4.3)	254 (2.5)	133 (1.6)	946 (9.3)	946 (11.4)	439 (4.3)	381 (4.6)	367 (3.6)	153 (1.8)	795 (7.8)	154 (1.8)	2303 (22.6)	2044 (24.6)	10198	8318
2007		1873 (18.4)		2582 (25.3)		526 (5.2)		478 (4.7)		129 (1.3)		1304 (12.8)		507 (5.0)		376 (3.7)		197 (1.9)		2227 (21.8)		10198
2009		2072 (20.3)		2174 (21.3)		576 (5.6)		517 (5.1)		125 (1.2)		1430 (14.0)		535 (5.2)		385 (3.8)		216 (2.1)		2169 (21.3)		10198

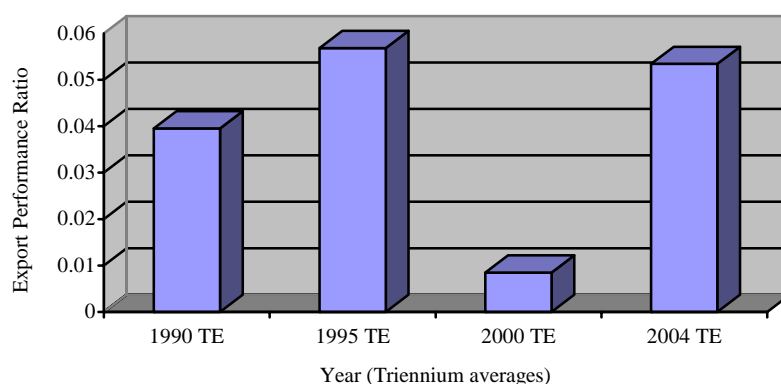*Note*: A and * are actual values; P is projected value.

Figure 1. Revealed Comparative Advantage of Tea in India

The Nominal Protection Coefficient (NPC) for Indian tea has been less than one for all reference years (Figure 2), indicating that the Indian tea is price efficient. In the mid-1990s NPC showed an increasing trend revealing the erosion of export competitiveness. However, of late the NPC has started declining, revealing the gain in competitiveness. This turnaround in the export performance could partly be attributed to improvement in exports to UAE, the UK and Iraq, and to some extent to CIS. Another important factor for improvement in export performance has been increase in exports to newer markets such as Pakistan, Australia, etc. Such a trend shows diversification of our export market portfolio leading to improvement in our global competitiveness in the long run. The future strategy for the tea sector should be to augment our competitive strengths in the supply chain management, value addition and marketing. The country needs to reorient product mix, which is skewed in favour of CTC teas whereas the global demand is for orthodox tea (Nair, 2004).
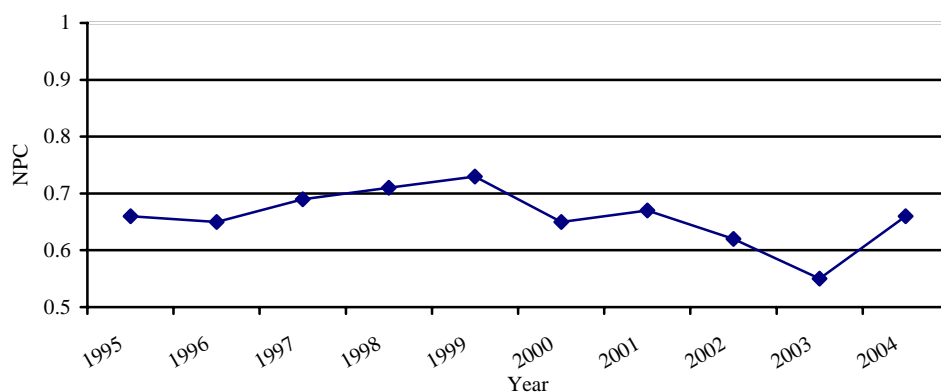

Figure 2. Nominal Protection Coefficient (NPC) of Tea in India

Determinants of Export Demand for Tea

It appears that despite the price competitiveness of Indian tea, its export has declined over the years. Therefore, to ascertain the factors responsible for decline in India's tea exports, export demand function has been estimated. The five determinants of export demand, namely, export prices (X_{pr}), market size (T_{tea}), exchange rate (ERR), coffee price in the international market (Coffee_PRI), and production of tea in the world other than that in India (TEA_q) together explain 59 per cent of the total variation in the exports of tea from India (Table 6). The exchange rate and market size (world) and coffee price in international market have emerged as significant and strong determinants for tea exports. The estimates for world tea market shows that for one per cent increase in the world tea trade, exports demand for Indian tea would increase by around 1.4 per cent. The coffee price, in terms of unit value of export, has a positive and significant bearing on the export demand of tea. This establishes the substitutability nature of the two products. The recent fall in demand for tea both in the domestic and international markets is attributed to consumer preference for soft drinks, which means that the whole of beverages could be viewed as one, with each of the commodities vying for their share. Massive campaign about the health and fitness benefits of tea has to be undertaken on a continuous basis so as to improve its demand.

TABLE 6. DETERMINANTS OF DEMAND FOR INDIAN TEA IN INTERNATIONAL MARKET

(1)	Coefficients (2)	Std. Errors (3)	t value (4)
Constant	-0.398	4.003	-0.100
X_{pr}	0.026	0.077	0.335
T_{tea}	1.409***	0.301	4.681
ERR	-0.264***	0.067	-3.935
Coffee_PRI	0.908*	1.189	1.797
TEA_q	-1.431	0.314	-1.526
R^2	0.59		

Note: *** and * denotes, significance at 1 and 10 per cent level.

The increase in the production of tea in other parts of the world would have negative impact on the export of tea from India. The country can avert the effect, of increase in production in other parts of the world, by way of product diversification, emphasising on the quality, and widespread development of logo and brand name of Indian tea. International export price of Indian tea has positive but insignificant impact on export demand of tea. This is because tea is a popular drink whose demand is relatively insensitive to price.

Suggestions and Policy Implications

To make the Indian tea sector more robust and resilient the following steps need to be taken up:

❖ Concerted efforts have to be made by different stakeholders to increase the productivity of tea plantations. The extension services should be strengthened to disseminate the technical know-how to the small tea growers located in remote areas.

❖ A new type of production organisation and ownership structure may be promoted to look after the multi-pronged problems of production, marketing and supporting services for the small holder tea production. Such an organisation would be able to take care of the interests of the tea growers by making the inputs available in right time at right price.

❖ The country can get back its place among our traditional tea markets of Russia and other CIS nations by diversification of tea products, quality upgradation and aggressive brand and logo campaign. These efforts would also help in realisation of better prices thus improving our competitiveness and profitability of tea industry.

❖ In the short term, aggressive generic promotion for tea in the domestic market is very much needed. A slight change in the promotion theme, from health to fitness would be more appealing. The focus at first should be on those states where per capita tea consumption is very low.

❖ Market diversification away from traditional markets offers great scope to boost Indian tea exports.

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