

Tea Industry in India–Analysis of Import and Export of Tea

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ABSTRACT: *Tea is one of the important beverages in this world. India and China are the major tea producing countries of the world. India and China are also the major tea exporters in this world. Tea industry is playing very important role in tea producing countries because it gives major income for the country. Tea is one of the oldest industries in India and today it enjoys the status of one of the best organized industries in the country. Although tea has been known since 2737 B.C. and consumed as a beverage for 1250 years' its cultivation in India commenced very recently. The following are the important objectives of the study, to analyse the production and sales of tea in India, to analyse the average selling price of tea in India, to analyse the export of tea from India, to analyse the import of tea into India. The collected data are processed with the help of appropriate statistical tools like Index of Growth, correlation analysis and t test analysis in order to fulfill the objectives of the study.*

KEYWORDS: *Tea, Tea Cultivation, Tea Production, Tea Yield, Tea Industry, Import, Export.*

I. INTRODUCTION

Tea is one of the important beverages in this world. India and China are the major tea producing countries of the world. India and China are also the major tea exporters in this world. Tea industry is playing very important role in tea producing countries because it gives major income for the country. Tea is one of the oldest industries in India and today it enjoys the status of one of the best organized industries in the country. Although tea has been known since 2737 B.C. and consumed as a beverage for 1250 years' its cultivation in India commenced very recently. The discovery of indigenous tea in Assam in 1823 led to the origin of the tea industry in India. However, the Kolkata Agricultural Society differs from the above opinion. It has consistently held that in the early 1700's, the ships of the East India Company frequently brought the tea plants in the country by way of curiosity. Col. Kyol, a resident of Kolkata and a famous botanist, saw tea plants growing in his garden in 1780. This information was sent to Sir Joseph Bank and in 1782 his garden as handed over to Botanical Garden of Kolkata. In 1788, Sir Joseph Bank recorded the existence of indigenous tea growing wild in Coochbehar and Rangpur districts of Bengal and suggested the cultivation of this plant. The wild teas of Coochbehar confirmed the first discovery of indigenous tea in India.

II. BIRTH OF INDIAN TEA INDUSTRY

The birth of Indian tea industry was marked by the discovery of indigenous tea plant in Assam in 1823 by Robert Bush. This received momentum when the East India Company in 1833 lost the tea trading monopoly in China. In 1835, a scientific deputation was sent to Assam to report on prospects of the tea industry and the team saw tea plants in many parts in the hills between Assam and Burma. In 1836, C.A. Bruce was made the superintendent of Tea Forests. Among others, he formed the Bengal Tea Company at Kolkata with the objective of purchasing the produce from the East India Company's tea plantations in India. A similar company was also established in the same year in London with the same objectives.

In 1839 the first consignment of tea from India (eight chests) was shipped to London and it was auctioned at a price ranging from six to thirty four shillings per pound. In 1840, two thirds of experimental teas were handed over to new company. In 1852, the first tea company in India paid its final dividends. The second limited company in 1859 was formed in Assam called Jorhat Company. During 1862-67, tea cultivation started in Chittagong and Chotta Nagpur. Ultimately tea cultivation was commissioned in many districts in India wherever there was some hope of a success. Within a few months, India along with Sri Lanka dominated the world tea trade/ market.

III. CHEMICAL COMPONENTS OF TEA

A tea shoot consisting of two leaves and a terminal shot which constitutes the normal and best material for tea manufacture. It contains 74 to 77 per cent moisture (surface dry shoot) and 23 to 26 per cent matter. About half the solid matter is insoluble in water and it is made up of crude fibre, cellulose, proteins and fats. The soluble part includes about some 30 polyphenolic bodies, over 20 amino acids, caffeine, sugars and organic acids. There are traces of a number of substances which may be connected with what is known as the essential

oil, responsible for the aroma of tea. The following table which gives an idea of the fresh shoots of Assam Tea has been quoted from Harler by the F.A.O

Composition of Fresh Tea shoots (percent)	
Crude Fibre, Cellulose, Lignin etc.	22
Proteins	16
Fats	08
Chlorophyl and Pigments	1.5
Pectin	04
Starches	0.5
Insoluble in water, total	52
Fermentable polyphenols	20
Other polyphenols	10
Caffeins	04
Sugars and Gummy matter	03
Amino Acids	07
Minerals (ash)	04
Soluble in water, total	48

IV. OBJECTIVES OF THE STUDY

The following are the important objectives of the study

- To analyse the production and sales of tea in India.
- To analyse the average selling price of tea in India.
- To analyse the export of tea from India.
- To analyse the import of tea into India.

V. PERIOD OF THE STUDY

The present study covers the periods ten years from 1998 to 2007.

VI. FRAME WORK OF ANALYSIS

The collected data are processed with the help of appropriate statistical tools like Index of Growth, correlation analysis and t test analysis in order to fulfill the objectives of the study.

VII. ANALYSIS OF THE STUDY

This part is analyses the analyze the import and export of tea. Assam, West Bengal, Tripura, Himachal Pradesh, Tamilnadu, Kerala and Karnataka are the important states of tea cultivation in India.

Production and Sales of Tea in India

Production and sales of tea leaf is done through auctions around India. The following Table 1 shows the production and sale of tea in India

Table 1 Production and Sales of Tea

Year	Production (m.kgs)	Index of Growth	Sold through auctions (m.kgs)	Index of Growth	Percentage of sold in auctions
1970	418.517	100.00	241.32	100.00	57.66
1975	487.137	116.40	287.17	118.99	58.95
1980	569.172	135.99	306.95	127.19	53.93
1985	656.162	156.78	505.24	209.36	77.00
1990	720.338	172.12	473.98	196.41	65.80
1995	756.016	180.65	485.02	200.98	56.66
1998	874.108	208.85	456.63	189.22	52.24
1999	825.935	197.34	436.02	180.68	52.79
2000	846.922	202.36	477.94	198.05	52.89
2001	853.923	204.03	459.84	190.55	53.85
2002	826.165	197.40	446.21	184.90	54.01
2003	857.055	204.78	467.44	193.70	54.54
2004	892.970	213.36	474.44	196.60	53.13
2005	945.970	226.02	582.25	241.27	61.55
2006	981.800	234.59	584.96	242.40	59.58
2007	986.430	235.69	687.63	284.94	69.85
2008	980.800	234.35	530.02	219.63	54.04
2009	979.000	233.92	501.47	207.80	51.22
2010	966.400	230.91	506.00	209.68	52.36

Source: Statistical Report of Tea Board

It is clear from Table 1 that in 1970 the total production of tea in India was 418.517 m.kgs and sold through Indian auctions was 241.32 m.kgs (57.66 percent of the total production). In 1975 the total production was 487.137 m.kgs and at the same time the sale of tea through Indian Auctions was 287.17 m.kgs (58.95 percent of the total production). Tea production assumes an increasing trend and reached to 966.4 m.kgs and the sale of tea through Indian auctions reached to 506 m.kgs (52.36 percent of the total production). It is also clear that the growth index is 230.91 percent for the production and 209.68 percent for the sales through auction.

It is clear that more than 50 percent of tea was marketed through Indian auctions and the remaining tea was marketed through open market.

Average Selling Price of Tea in India

Selling price is playing very important role in tea marketing in India. The following Table 2 shows the average sale price of tea in India.

Table 2 Average Selling Price of Tea in India

YEAR	PRICE (Kg/Rs.)	Index of Growth
1998	69.50	100.00
1999	65.55	094.31
2000	61.71	088.79
2001	61.66	088.71
2002	55.96	080.51
2003	56.27	080.96
2004	64.54	092.86
2005	58.05	083.52
2006	66.01	094.97
2007	67.40	096.46
2008	86.99	125.16
2009	105.60	151.94
2010	103.55	148.99

Source: Statistical Report of Tea Board

It is clear from Table 2 that average selling price of tea in India in 1998 the was Rs.69.50 per kg, it decreased to Rs.65.55 per kg, in 1999, it again decreased to Rs.61.71 per kg in 2000. In 2006 the average selling price was Rs.66.01 per kg, and in 2007 it marginally increased to Rs.67.40 per k.g. In 2008 the average price of tea in India was Rs.86.99 per kg, and in 2009 it considerably increased to Rs.105.60 per kg. It slightly decreased to Rs.103.55 per kg in 2010.

It was clear that the average price of Indian tea was normally increasing every year.

Consumption and Per Capita Consumption of Tea in India

The following Table 3 shows the consumption and per capita consumption of tea in India.

Table 3 Consumption and per capita consumption of Tea in India

YEAR	Domestic Consumption (m.kgs)	Index of Growth	Average per capita Consumption (Grammes Per Head)	Index of Growth
1975	221	100.00	403	100.00
1980	320	144.79	527	130.76
1985	452	204.52	574	142.43
1990	511	231.22	600	148.88
1995	585	264.70	615	152.60
1998	615	278.28	633	157.07
1999	633	286.42	642	159.30
2000	653	295.47	652	161.78
2001	673	304.52	654	162.28
2002	693	313.57	663	164.51
2003	714	323.07	672	166.75
2004	735	332.57	681	168.98
2005	757	342.53	691	171.46
2006	771	348.86	693	171.96
2007	786	355.656	696	172.70
2008	802	362.89	701	173.95

Source: Statistical Report of Tea Board

It is clear from Table 3 that domestic consumption of tea and per capita consumption in India are increasing every year. In 1975 the domestic consumption of tea was 221 million kgs and the average per capita consumption was 403 gm. per head. It increased to 653 million kgs in 2000 for domestic consumption and to 652 gm. per head for the average per capita consumption. The increasing trend continued every year after that and reached to 802 million kgs in 2008 for domestic consumption and to 701 gm. per head for the average per capita consumption. The growth index for domestic consumption was 362. percent and for the average per capita consumption was 173.95 percent.

It is clear that the average domestic consumption and average per capita consumption was increasing every year.

Export of Tea from India

Export is the important factor for the development of tea industry in India. India is the major tea exporter compared to other tea producing countries. The Table 4 shows the export of tea for India from 1980 to 2007.

Table 4 Export of Non-Instant and Instant tea from India

YEAR	Non-Instant tea (Excluding Instant Tea)		Instant Tea		Total Tea	
	Qty. (M.Kgs)	Value (Th.Rs.)	Qty. (M.Kgs)	Value (Th.Rs)	Qty. (M.Kgs)	Value (Th.Rs)
1980	224.064	4290277	0.754	35184	224.780	4325461
1985	214.021	6952996	0.916	82908	214.937	7035904
1990	209.085	11041507	0.939	92003	210.024	11133510
1995	167.143	11908077	0.853	172079	167.996	12080156
1998	207.639	22383087	2.699	711273	210.338	23094360
1999	189.092	19024360	2.627	634315	191.719	19658684
2000	204.353	18270324	2.463	715795	206.816	18986119
2001	189.857	16022060	2.731	799055	182.588	16821115
2002	198.087	16697757	2.915	836147	201.002	17533898
2003	170.277	14939096	3.407	963032	173.684	15902128
2004	193.908	17281350	3.760	1130066	197.668	18411416
2005	195.228	17305107	3.822	1004679	199.050	18309786
2006	215.672	19031168	3.062	1034092	218.734	20065260
2007	175.841	17186408	2.913	914687	178.754	18101095
2008	200.070	22963978	3.047	965158	203.117	23929136

Source: Statistical Report of Tea Board

It is clear from Table 4 that both non instant and instant tea are exported from India. In 1980 the total tea exported from India was 224.78 million kgs with the value of Rs.4325461 thousand. It represents non instant tea of 224.064 million kgs with the value of Rs.4325461 thousand and instant tea of 224.78 million kgs with the value of Rs.4325461 thousand. In 1985 total tea exported decreased to 214.937 m.kgs of tea with value of Rs.11133510 thousand. In 1990 it further decreased to 210.024 m.kgs and in 1995 it still decreased to 167.996 m.kgs with value of Rs.12080156 thousand. In 2000 it increased to 206.816 m.kgs with value of Rs.18986119 thousand. In 2005 it then decreased to 199.050 m.kgs with value of Rs.18309786 thousand. In 2008 it marginally increased to 203.117 m.kgs with value of Rs.23929136 thousand.

It is clear from Export of Non-Instant and Instant tea from India was differing from year to year.

Export value of Non-Instant and Instant are analysed through correlation analysis and the result of it is stated in Table 4.1 as follows:

Table 4.1 Export Value of Non-Instant and Instant tea from India (Correlation Analysis)

Export Value	Correlations Marked correlations are significant at $p < .05000$ (N=15)			
	Means	S. D.	Non-Instant Tea	Instant Tea
Non-Instant tea	15686503	5195587	1.000000	0.794258
Instant tea	672698	384335	0.794258	1.000000

It is clear from Table 4.1 that there exists high positive correlation between export value of non-instant tea and instant tea as for as tea export in different periods.

It is further analysed related to t test of independent variable to know the comparative consistency in the growth over a period of time. The result of the analysis is stated in Table 4.2 as follows:

Table 4.2 Export Value of Non-Instant and Instant tea from India (t test Analysis)

Export Value	Test of means against reference constant (value)							
	Mean	S. D.	N	S. E.	Reference	t-value	df	p
Non-Instant Tea	15686503	5195587	15	1341495	0.00	11.69330	14	0.000000
Instant Tea	672698	384335	15	99235	0.00	6.77884	14	0.000009

It is clear from the table that t value is low for export of instant tea than the export value of non-instant tea from India which shows that there is comparatively high consistency for export of instant tea for different periods of the study.

Export of Value-Added Tea from India

The following table shows the export of value added tea from India from 1990 to 2007

Table 5 Export of Value-added tea from India

YEAR	PACKET TEA		TEA BAGS		INSTANT TEA		TOTAL VALUE-ADDED TEA	
	Qty. (M.Kgs)	Value (Th.Rs.)	Qty. (M.Kgs)	Value (Th.Rs.)	Qty. (M.Kgs)	Value (Th.Rs.)	Qty. (M.Kgs)	Value (Th.Rs.)
1990	71.139	3836831	0.564	53194	0.940	92003	72.643	3982028
1995	81.699	5725354	0.723	108031	0.853	172079	83.275	6005464
1998	81.423	9008811	2.066	433523	2.698	711273	86.187	10153607
1999	74.087	7612962	2.756	614091	2.627	634315	79.470	8861368
2000	70.774	7194474	1.808	363930	2.463	715795	75.045	8274199
2001	45.866	5606397	2.516	566238	2.731	799055	51.113	6971690
2002	32.790	3991579	2.642	591087	2.915	836141	38.347	5418807
2003	35.352	4268509	4.277	826767	3.407	963032	43.036	6058308
2004	27.506	3156194	7.010	1388996	3.760	1130066	38.276	5675256
2005	37.091	3352079	8.578	1792816	3.822	1004679	49.491	6149574
2006	20.902	2185764	6.952	1543179	3.062	1034092	30.916	4763035
2007	09.377	1197836	8.303	1901099	2.913	914687	20.593	4013622
2008	11.798	1714483	8.878	2302280	3.047	965158	23.632	4981921

Source: Statistical Report of Tea Board

It is clear from Table 5 that exports of value added tea from India are classified as packet tea, tea bags and instant tea. In 1990 the total export of value added tea from India was 72.643 m.kgs with value of Rs.3982028. It includes, 71.139 m.kgs (Rs.3836831) of Packet tea, 0.564 m.kgs (Rs.53194) of Tea bags and 0.940 m.kgs (Rs.92003) of Instant tea. In 1995 the total export of value added tea from India was 83.275 m.kgs (Rs.6005464) which includes, 81.699 m.kgs (Rs.5725354) of Packet tea, 0.723 m.kgs (Rs.108031) of Tea Bags and 0.853 m.kgs (Rs.172079) of Instant Tea. In 2000 the total export of value added tea from India was 75.045 m.kgs (Rs.8274199) which includes, 70.774 m.kgs (Rs.7194474) of Packet Tea, 1.808 m.kgs (Rs.363930) of Tea Bags and 2.463 m.kgs (Rs.715795) of Instant Tea. In 2005 the total export of value added tea from India decreased to 49.491 m.kgs (Rs.6149574) which includes, 37.091 m.kgs (Rs.3352079) of Packet Tea, 8.578 m.kgs (Rs.1792816) of Tea Bags and 3.822 m.kgs (Rs.1004679) of Instant Tea. In 2008 the total export of value added tea from India decreased significantly to 23.632 m.kgs (Rs.4981921) which includes, 11.798 m.kgs (Rs.1714483) of Packet tea, 8.878 m.kgs (Rs.2302280) of Tea Bags and 3.047 m.kgs (Rs.965158) of Instant Tea.

It is clear that export of value added tea from India was decreasing every year but the value of tea was increasing every year due to increase in price of tea.

Export value of value added tea from India is analysed through correlation analysis and the result of it is stated in Table 5.1 as follows:

Table 5.1 Export of Value-added tea from India (Correlation Analysis)

Types	Correlations Marked correlations are significant at $p < .05000$ (N=13)				
	Means	S. D.	Packet Tea	Tea Bag	Instant Tea
Packet Tea	4527021	2378562	1.000000	-0.734447	-0.393354
Tea Bag	960402	736788	-0.734447	1.000000	0.742781
Instant Tea	767106	315944	-0.393354	0.742781	1.000000

It is clear from Table 5.1 that there exists high positive correlation between export of Tea Bag and Instant tea as for as tea export in different periods.

It is further analysed related to t test of independent variable to know the comparative consistency in the growth over a period of time. The result of the analysis is stated in Table 5.2 as follows:

Table 5.19.2 Export of Value-added tea from India (t test Analysis)

Types	Test of means against reference constant (value)							
	Mean	S. D.	N	S. E.	Reference	t-value	df	p
Packet Tea	4527021	2378562	13	659694.5	0.00	6.862299	12	0.000017
Tea Bag	960402	736788	13	204348.1	0.00	4.699834	12	0.000514
Instant Tea	767106	315944	13	87627.0	0.00	8.754214	12	0.000001

It is clear from the table that t value is low for export of packet tea than the export of tea bag and instant tea from India which shows that there is comparatively high consistency with respect to export of packet tea for different periods of the study.

Import of Tea into India

Import is the important factor to tea industry in India. The following Table 6 shows the import of tea into India from 1998 to 2007.

Table 6 Import of Tea into India

YEAR	Quantity (M.Kgs)	CIF Value (Rs.Crores)	Unit Price (Rs/Kg)
1998	10.55	57.90	58.55
1999	09.99	57.40	57.49
2000	13.43	084.56	62.96
2001	17.18	095.40	55.50
2002	24.80	114.83	46.30
2003	09.86	057.51	58.33
2004	30.80	141.32	45.88
2005	16.76	098.51	58.79
2006	23.81	119.41	50.15
2007	15.99	104.60	65.43

Source: Statistical Report of Tea Board

It is clear from Table 6 that India is importing very low quantity of tea. In 1998 the tea imported from various countries was 10.55 m.kgs with value of Rs.57.90 crores for an import price of Rs.58.55 per kg. In 1999 the tea imported from various countries was 09.99 m.kgs, its CIF value was Rs.57.40 crores and the import price of tea was Rs.57.49 per kg. In 2000 the tea imported from various countries was 13.43 m.kgs, its CIF value was Rs.84.56 crores and the import price of tea was Rs.62.96 per kg. In 2005 the tea imported from various countries was 16.76 m.kgs, its CIF value was Rs.98.51 crores and the import price of tea was Rs.58.79 per kg. In 2007 the tea imported from various countries was 15.99 m.kgs, its CIF value was Rs.104.60 crores and the import price was Rs.65.43 per kg.

It is clear that the import quantity of tea was remaining almost same for all the years.

VIII. FINDINGS OF THE STUDY

The following are the important findings of the present study

It is clear that more than 50 percent of tea was marketed through Indian auctions and the remaining tea was marketed through open market. It was clear that the average price of Indian tea was normally increasing every year. It is clear that the average domestic consumption and average per capita consumption was

increasing every year. It is clear from Export of Non-Instant and Instant tea from India was differing from year to year. There exists high positive correlation between export value of non-instant tea and instant tea as for as tea export in different periods. The table value of t is low for export of instant tea than the export value of non-instant tea from India which shows that there is comparatively high consistency for export of instant tea for different periods of the study. It is clear that export of value added tea from India was decreasing every year but the value of tea was increasing every year due to increase in price of tea. There exists high positive correlation between export of Tea Bag and Instant tea as for as tea export in different periods. The table value of t is low for export of packet tea than the export of tea bag and instant tea from India which shows that there is comparatively high consistency with respect to export of packet tea for different periods of the study. It is clear that the import quantity of tea was remaining almost same for all the years.

IX. SUGGESTIONS OF THE STUDY

The following are the important suggestions of the study.

Export of value added tea from India was decreasing every year but the value of tea was increasing every year due to increase in price of tea. So Indian Government may take necessary steps to regulate the price of tea. Export of Non-Instant and Instant tea from India was differing from year to year, so Tea Board may take necessary steps to increase the quality of non-instant and instant tea. Average domestic consumption and average per capita consumption was increasing every year, so Tea Board may take necessary steps to increase the production of tea in India.

X. CONCLUSION

Export of tea from India is significantly an increasing trend. It is due to the effort of the Government of India through the Tea Board. It also explained about the different varieties of tea produced and marketed in India and Foreign countries. India and China are the major tea producing countries of the world. India and China are also the major tea exporters in this world. Tea industry is playing very important role in tea producing countries because it gives major income for the country. Tea is one of the oldest industries in India and today it enjoys the status of one of the best organized industries in the country.

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