



Indian Tea Production, Marketing and Export: An Empirical Investigation

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ABSTRACT

By building on a proud legacy of enterprise that spanned nearly two and a half centuries, India has acquired an exalted status on the global tea map. The country is the second largest tea producer in the world with production of 1208.78 million kg in 2013-14. Interestingly, India is also the world's largest consumer of tea with the domestic market consuming 890 million kg of tea during 2012-13. This paper tries to study the overall scenario of Indian tea industry. Export of tea being a major contribution to the Economy require adequate assessment in present context. Being the second largest producer of tea, export earnings are not yet satisfactory. This paper tries to observe the trend of export in relation to the production and domestic consumption. And also proper marketing channel is required for its disposal. Auction being the most important of the three available mode of marketing is discussed in this paper.

KEYWORDS : Tea, Auction, Marketing, Export, Consumer, Economy.

0.0 Introduction:

The Indian tea industry in India is about 180 years old. The credit for creating India's vast tea empire goes to the British, who discovered tea in India. India is the world's second largest producer (after China) and fourth largest exporter of tea (after Kenya, China and Sri Lanka). Production reached 1208.78 million kg in 2013-14. Around 965.07 million kg was produced in North India and 243.71 million kg was produced in South India (TBI). Exports for FY 2013-14 stood at 225.76 million kg for a total value of US\$ 746 million. Top export markets in terms of value were Russian Federation (38.62 million kg for a value of US\$ 105.93 million), Iran (22.9 million kg for a total value of US\$ 99.97 million) and UAE (23.33 million kg for a total value of US\$ 78.31 million). India is the largest producer of black tea and also the largest consumer of tea globally. Almost 85% of the total households in the country consume about 81% of the total tea produced. Domestic consumption reached 911 million kgs in 2013-14. India has around 579.35 thousand hectares of area under tea production. Tea production is led by Assam (322.21 thousand hectares), West Bengal (115.10 thousand hectares), Tamil Nadu (80.46 thousand hectares) and Kerala (37.14 thousand hectares). According to estimates, the tea industry is India's second largest employer. It employs over 3.5 million people across some 1,686 estates and 157,504 small holdings; most of them women. The tea industry sees fluctuating trends due to agricultural nature of the operations, long gestation periods and unstable prices of tea, which are not likely to undergo any changes in the future. In the past, tea prices had shown brief periods of boom followed by longer periods of depression. Tea industry in India is facing a numeral problems like ageing tea bushes, high cost of production, price fluctuation etc. This situation can cause danger to the prospects of tea plantation in the region. Tea is grown in 16 Indian States, of which Assam, West Bengal, Tamil Nadu and Kerala account for about 96 per cent of the total tea production. About 78% of the country's total area under plantation is located in North East India. The teas originating from Darjeeling, Assam and Nilgiris are well known for their distinctive quality worldwide over and tea exports contribute significant amount of foreign exchange into the country.

0.1 Objectives of the Study:

- To study the Marketing process of tea in India.
- To analyse if there is any significant relation between tea production and export in India.
- To study in brief about the auction process of Guwahati Tea Auction Centre (GTAC).

0.2 Review of relevant Literature:

Mishra (1987) observed that fluctuations in the prices of tea in world markets and complaints about quality deterioration associated with sluggishness in investment in the plantation of Darjeeling and other tea producing areas has become matters of public concern.

Reddy (1991) examines the global demand for and the supply of tea by estimating semi-log trends separately using data of 1974-1988 on

the area under cultivation of tea, production, exports and the retention of tea for domestic consumption. From the semi-log trend fits, the supply of tea and demand for tea have been estimated for the future years, 1933, 1996, and 2001.

Kakaty (2004) studied the growth and instability that prevail in the production, export and consumption of Indian tea. Instability indices had been constructed for the three major tea exporting countries (India, Kenya and Sri-Lanka). Time series modelling of production, export and consumption of tea has been performed to examine the growth and instability of tea. The annual growth rates in production and export has been found to be lesser than those of Sri Lanka and Kenya. From the figures of share (in percentage) of tea to total export (India) that the share decreases drastically from the period of 1990-91 and thereby it contributed little to the economic growth of the country. The study also revealed that there seems no long run relationship between "export and production" and "export and domestic consumption" so far as Indian tea is in concern.

Samantaray and Ashutosh (2012) studied the trend of tea industry using various statistical tools like regression analysis and cluster analysis. The study showed that India could not be able to export more tea that it produced. They observed weak correlation between production and export of tea. Only 5.4 % of the variation in export is explained by production. They also observed that auction prices is somewhat dependent on amount of production.

Sarkar (2013) observed that, auction buying is much more fragmented in India compared to the two other major tea producing countries namely Sri Lanka and Kenya. There exists a sizeable gap between wholesale and retail prices and they exhibit diverging trends in certain years. Regarding the wholesale tea market, auction provides the most popular channel for primary marketing of tea. Data on prices from tea auctions for the period of 1960-61 to 2007-08 show two distinct phases. In the first phase from 1960-61 to 1974-75 the nominal prices of tea were stagnant and the real price declined. In the second phase from 1974-75 onwards the nominal prices fluctuated around a rising trend and the real prices shows fluctuations around a relatively stagnant trend. There is also a clear seasonality in prices of tea within a year. The arrival of the first flush tea in April normally raises the prices, which then decline during July with the arrival of the monsoon and again rises in October, with autumn flush fetching better prices and fall in January again.

0.4 Research Questions:

How does production and domestic consumption affect the export of Indian tea?

How Guwahati tea auction centre operates and what does its position regarding disposal of bulk tea?

0.5 Data and Methodology:

The data required for the study are collected from secondary sources

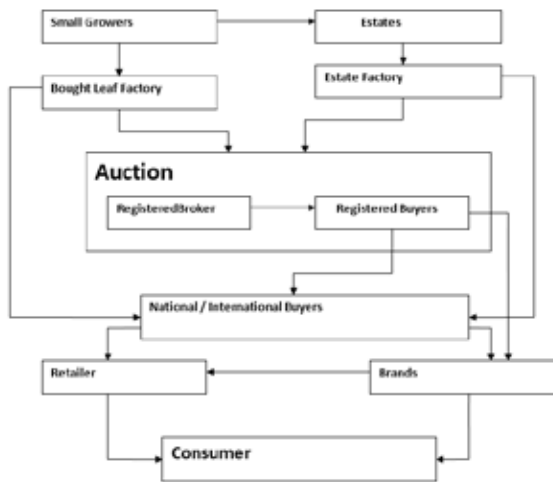
such as, published paper (journals), and mostly from website of Tea Board of India. Data on production, export and domestic consumption are used for the period of 1990-2010.

The results are presented in form of table, diagrams and trend line whichever felt necessary. Simple linear regression technique is used to determine the relationship among production, export and domestic consumption. To process the data Statistical package SPSS is used. Coefficient of variation being the simplest measure to calculate historical volatility is used to show the volatility of average prices of Guwahati tea auction centre for the period of 1984-85 to 2007-08. Though empirical volatility measurement require use of model such as ARCH, GARCH, or may be T- GARCH it is not possible for now due to lack of data.

1.0 Tea marketing chain in India:

Tea is one of the most important agricultural as well as manufacturing product, like other products it also needs a proper marketing channel for disposal. The three main modes preferred for the disposal of tea are: (a) through auction (b) ex-factory or ex-garden sale and (c) forward contract. In India, marketing process of tea can be divided into two parts, i.e., primary and secondary markets. Primary marketing channels help in moving made-tea from the grower (tea estates) to the bulk tea buyers. It also explains the movement of tea directly from producers to national or international buyers. This channel used to carry tea from producer to auction centres where it changes hands from the producers to the large buyers through brokers. Secondary marketing channel includes the movement of bulk tea (which is purchased in bulk in primary market) through auction trading to ultimate consumers. In this chain tea passes through wholesalers, commission agents, blenders, packers and retailers. Of the three processes, Auction being the most preferred and most convenient one it will be discussed.

Fig.1 Flow chart of tea marketing in India.



In India marketing of tea is controlled by the Tea Marketing Control Order (TMCO), MINISTRY OF COMMERCE & INDUSTRY DEPARTMENT OF COMMERCE. The auction system received strong regulatory support in the early 1980s when the Tea Marketing Control Order (TMCO) 1984 was enacted. Amongst other things, Clause 17 of TMCO 1984 stipulated that at least 75 per cent of a producer's made tea with the exception of (plantation-packed) tea and bulk exports should be sold through auctions. Consequently, auction sales again became the primary means of marketing Indian tea with between 55-60 per cent of tea output being sold through auction (Tea Board, 2002). The difference between this and the 75 per cent TMCO stipulation was primarily due to two notable exemptions allowed by clause 17 of TMCO in the case of packaged tea and bulk tea exports. However, after market liberalisation, the stipulation of statutory minimum sale through auctions was relaxed in 2001 giving producers' full flexibility in the primary marketing of tea. As a result, during the period from 2001-02 to 2005-06, auction volumes as a per cent of total production got reduced in both north-eastern and southern India. In north-eastern India, the reduction has been fairly significant from 49 per cent to 42

per cent whereas in southern India this impact was less severe (from 83 per cent to 80 per cent) (Tea Board, 2007).

Table 1: The Auction Centres in India

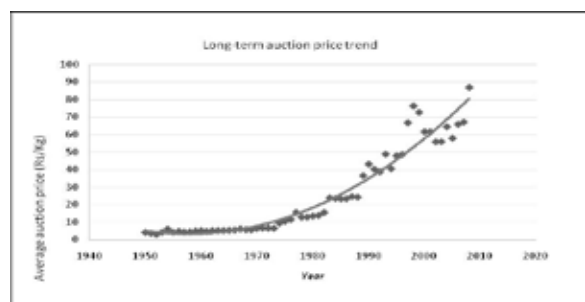
Serial No.	Auction Centre	Auction Organizer	Year of starting	Auction held on
1	Kolkata	Kolkata Tea Traders Association	1861	Monday & Tuesday
2	Guwahati	Guwahati Tea Auction Committee	1970	Tuesday & Wednesday
3	Siliguri	Siliguri Tea Auction Committee	1976	Thursday & Friday
4	Jalpaiguri	North Bengal Tea Auction Committee	2005	Initially weekly, presently fortnightly
5	Amritsar	Kangra Tea Planters Society	1964	Fortnightly
6	Cochin	Tea Trade Association of Cochin	1947	Tuesday & Wednesday
7	Coonoor	Coonoor Tea Trade Association	1963	Thursday & Friday
8	Coonoor	Tea Serve	2003	Wednesdays
9	Coimbatore	Tea Trade Association of Coimbatore	1980	Fridays

Source: Tea Board of India

- Auction takes place among five important stake holders. They are as follows:
- Auction Organizers
- Seller/ Manufacturers
- Brokers/ Auctioneers
- Buyers
- Warehouse keepers

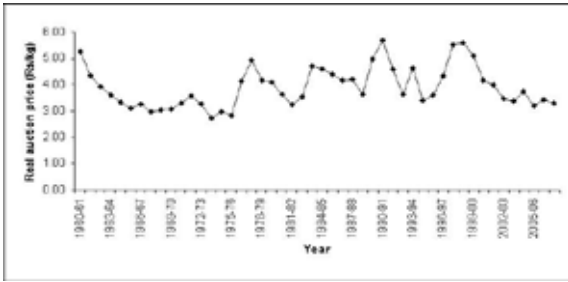
In the auction process auction organizers monitor the whole auction mechanism and publish reports of the sale. Sellers or manufacturers do not have any active role in this system. They simply give the authority of their tea to concern broker and this broker used to sell tea after tasting and grading. These brokers are the controller of the whole selling process. They collect samples of tea from the warehouses and send them to registered buyers. Accepting or rejecting a bid for a particular lot of tea is also in their hands. Besides these, a buyer cannot bring tea from warehouse without the permission of brokers. Buyers are the bidder for tea in auction. Tea is kept in registered warehouses and warehouse keeper has to take all the responsibility of this tea. After the selling process is over at the auction, brokers use to issue a permission receipt to the buyer to collect the particular amount of tea from concern warehouse. Electronic bidding or shortly e-auction system of tea is developed with wide connectivity of computer networks. The world's first electronic auction of tea organized jointly by Calcutta Tea Traders Association and Tea Board was held at Nilhat house which is the headquarters of the country's largest tea auction firm J. Thomas & Co. on 19th Nov 2008

Long-run average nominal price movement of Indian tea Fig.2



Source: Tea Digest 2008-09, Tea Board, India.

Average real auction prices of tea at 1960-61 prices Fig-3



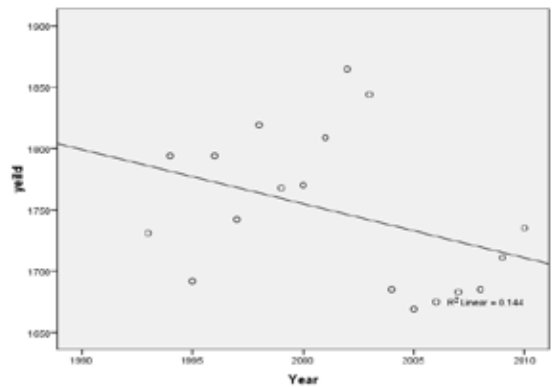
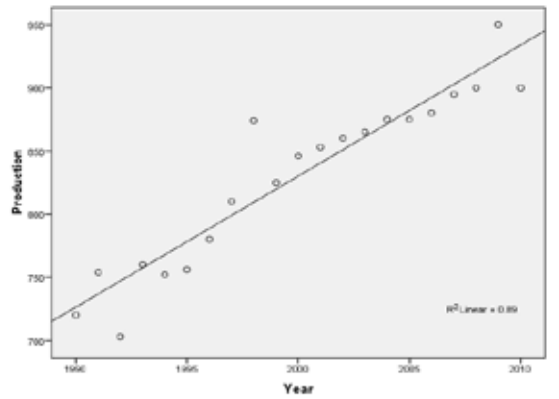
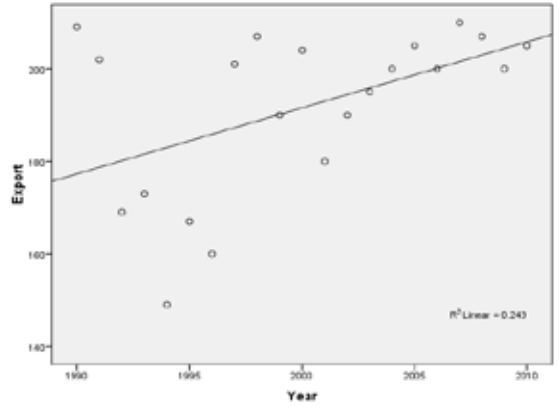
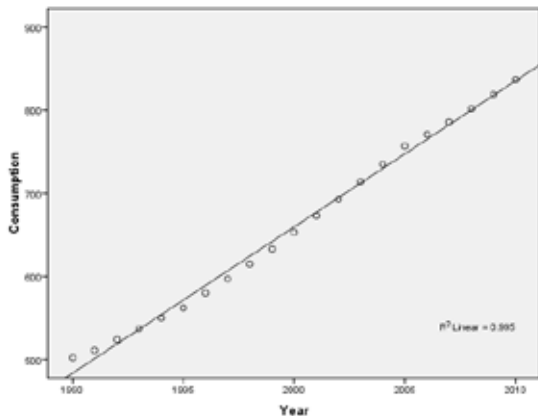
Source: Tea Digest 2007-08, Tea Board, India and Labour Bureau, Government of India.

Note: Real prices have been computed using the wholesale price index for agricultural commodities with the base year 1960-61.

1.2 Export Production and Domestic Consumption:
Table: 2Area, Production, Yield, Export, Volume of export, Unit value and Retention 1990-2010 (India)

Year (1)	Area (Th. ha) (2)	Production (M. kgs) (3)	Yield Kg/ha (4)	Export (M. kgs) (5)	Value of export (Cr.Rs) (6)	Unit value (Rs /kg) (7)	Retention (3-5) (8)	Domestic Consumption (9)
1990	416	720	1731	209	1025	51.05	511	502
1991	421	754	1794	202	1120	55.45	522	511
1992	420	703	1692	169	971	56.05	534	524
1993	418	760	1794	173	1132	65.19	587	537
1994	425	752	1742	149	9677	64.64	603	550
1995	427	756	1819	167	1190	71.24	589	562
1996	431	780	1768	160	1207	75.44	620	580
1997	434	810	1770	201	1721	85.79	609	597
1998	474	874	1809	207	2238	107.08	667	615
1999	490	825	1865	190	1902	100.61	635	633
2000	504	846	1844	204	1827	89.41	642	653
2001	510	853	1685	180	1602	89.08	673	673
2002	512	860	1669	190	1720	90.05	670	693
2003	516	865	1675	195	1796	92.15	670	714
2004	520	875	1683	200	1855	92.95	675	735
2005	525	875	1685	205	1917	93.05	670	757
2006	526	880	1711	200	1896	94.08	680	771
2007	530	895	1735	210	2001	95.25	685	786
2008	540	900	1741	207	1972	95.75	688	802
2009	550	950	1736	200	1925	96.25	750	819
2010	560	900	1785	205	1982	96.07	795	837

Source: Tea Board of India.



1.3 Export, production and domestic consumption (Regression Analysis):

Table-3

Variables Entered/Removed			
Model	Variables Entered	Variables Removed	Method
1	production, domestic consumption ^a	.	Enter

a. All requested variables entered.

Table-4

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.741 ^a	.549	.496	12.763

Predictors: (Constant), production, domestic consumption

Table 4 shows the R² value for the model which is .54 and the adjusted R² that is .496. The value indicate that around 50% variation in the

dependent variable i, e export of tea in our case is explained by the independent variables viz. production and domestic consumption. The R² value indicates that the model is suitable.

Table-5

ANOVA ^b						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3375.203	2	1687.601	10.361	.001 ^a
	Residual	2768.997	17	162.882		
	Total	6144.200	19			
a. Predictors: (Constant), production, domconsumption						
b. Dependent Variable: export						

In this table the sum of squares is reported for the regressor that is 335.203 and for the residual is 2768.997. And the total is just the sum of the two. The degrees of freedom is reported that is (N-1). Here is this table we are interested in the F value that the F test statistic (10.361) that is the mean square divided by the degrees of freedom. We observe that the p value is .001 which is much less than 0.05. This shows that the relation is significant one. If the p value shows an insignificant result we need not to move further but in our case it is significant and therefore we may move to the next table of coefficients.

Table-6

Coefficients ^a						
Model B		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		Std. Error	Beta			
1	(Constant)	-5.904	57.755		-.102	.920
	Domconsumption	-.045	.074	-.268	-.618	.545
	Production	.272	.120	.983	2.266	.037
a. Dependent Variable: export						

In this table the coefficients value are reported for the two independent variables along with the constant term that is the intercept term for our regression model. The t value is simply the Bvalue divided by the standard error. The p value or the sig. value shows which that for the independent variable production only the relation is significant one because the p value is less than .05.

Model: $Y = -5.904 - .045 (X_1) + .272 (X_2)$

Where Y= Export, X₁ = Domestic Consumption, and X₂ = Production.

Now we can summarize the relationship as, there is a negative relation between domestic consumption and export. When domestic consumption decreases by 0.45 mkg export increases by 1 mkg (production being constant). And for the relation between production and export we can say that when production increases by .272 kgs the export increases by 1 mkg (Domestic consumption being constant). And the constant value that is -5.904 shows the intercept term for our regression.

2.0 Guwahati Tea Auction Centre

Though commercial production of tea in Assam was started in 1833, she is the highest producer of tea in India but there was no selling outlet within the state for a long time. Then on 25th Sep 1970 Guwahati Tea Auction Centre (GTAC) was established at Guwahati, the fast developed city in North East. The first meeting of Guwahati Tea Auction Committee, the auction organizer was held at Shillong, then capital of Assam on August 29, 1970 and the inaugural sale was decided on September 25, 1970. In this first sale in Guwahati stadium's guest house, first lot of tea was auctioned at a price of Rs 42.50 per kg, a very high price in those days. Within three decades, the Guwahati Tea Auction Centre have emerged as the second largest CTC tea auction

market in the world and second largest overall next only to Colombo auction centre in Sri Lanka.

To operate in GTAC every seller, buyer, broker and warehouse keeper have to register themselves with GTAC. They also have to pay annual registration fee according to the size of the firm. Presently GTAC has 665 producer sellers, 247 registered buyers, 9 reputed brokers and 34 warehouses (2008 statistics). Tuesdays and Wednesdays are the auction days and auction takes place in the auction hall of GTAC.

GTAC is following the same auction procedure similar to the other auction centres in India. Every broker is given a particular time period to offer his lot by rotation. Bidding is started from a lower rate. Brokers have the power to accept or reject the bid. When starting bid is accepted, other buyers can also bid for the same lot of tea. In case, if the initial bid is rejected by brokers for a particular lot, it remains unsold and auction proceeds to the next lot. Brokers can reopen such previous rejected lots only before the cessation of bidding on the five subsequent lots. Once a lot is knocked down by the auctioneer in the name of a particular buyer, it cannot be reopened. Highest bidder must accept the entire lot. If one lot consists of 16 to 34 packages the bidder can divide it with one other buyer. Lots of 5 to 15 packages are not divisible and cannot be shared. Such divisions are announced in the auction room by the highest bidder. In GTAC sale continues generally for two full days and in peak season in July to October sale may continue for three days. After this selling process, buyers can collect their tea from particular warehouses with the permission of brokers. GTAC sold 29.64 per cent of the total tea produced in Assam. Beginning with a modest sale 9.098 mkg of tea at an average price of Rs 5.68 per kg in 1970-71, it has registered a stupendous growth over the years and sold 148.51 mkg of tea in 2006-2007 at average price of Rs 68.06. It has seen the largest volume of CTC tea auction in the world.

The Brokers and their selling price of tea in GTAC for the period Nov 2008

Table-7

Serial no.	Name of Broker	Kgs sold	Price (Rs)		
			CTC	Orthodox	Dust
1.	J Thomas & Co Pvt Ltd	1,45,8978.8	93.94	83.33	102.91
2.	Carritt Moran & Co. Pvt. Ltd.	698,307.6	97.56	109.93	106.37
3.	Assam Tea Brokers Pvt Ltd	66,051.3	104.14	NA	114.34
4.	Tea Brokers (Guwahati) Pvt Ltd	99633.4	90.92	103.38	94.19
5.	Contemporary Targett Prafull (P) Ltd	354,883.0	91.44	NA	98.82
6.	Parcon India Private Limited	255,073.2	90.42	NA	102.39
7.	Eastern Tea Brokers Pvt Ltd	450,919.7	95.30	79.62	101.12
8.	Associated Brokers Pvt Ltd	116,145.3	94.99	101.47	99.65
9.	Paramount Tea Marketing (P) Ltd	190,839.7	101.47	89.15	100.56

Source: Statistical Cell, GTAC.

Among the ten brokers of GTAC, J. Thomas & Co. Pvt Ltd handles highest amount of tea. In tea prices the highest price for CTC tea is Rs104.14 which is dealt by Assam Tea Brokers. The same broker has also sold Dust tea in a price range of Rs 114.34. In Orthodox tea Carritt Moran gained the highest price Rs 109.93. In GTAC the average price of Dust tea is higher than both CTC and Orthodox teas. Good quality tea of Assam is generally sent to Kolkata auction

Quantity sold and Average Price in GTAC**Table-8**

Period	Total quantity in mkg	Average price in Rs
1984-85	98	27.25
1989-90	149	40.34
1994-95	135	42.99
1999-00	160	79.03
2000-01	142	71.97
2001-02	141	63.17
2002-03	125	64.04
2003-04	133	58.24
2004-05	129	68.76
2005-06	141	61.07
2006-07	149	68.06
2007-08	-	100.18

Source: Year book (2006-2007) by Guwahati Tea Auction Committee.

Table-9

Descriptive Statistics							
	N	Mini- mum	Maxi- mum	Mean	Std. De- viation	Vari- ance	
	Sta- tistic	Sta- tistic	Statis- tic	Statistic	Std. Error	Statistic	Statistic
Qty	11	98.00	160.00	136.5455	4.88106	16.18866	262.073
AVGP	12	27.25	100.18	62.0917	5.49661	19.04083	362.553
Valid N (list- wise)	11						

As a measure of volatility of price, the coefficient of variation is calculated here as it is the simplest way to calculate historical volatility of price. The C.V for price here is 0.306 for the yearly average prices 1984-85 to 2007-08 shows less volatile prices.

The total quantity of tea auctioned and average auction price both have shown a sharp decline in between 2000-2007. The Tea Marketing Control Order was imposed in 1984 stating that every producer has to sell 75 per cent of their production through auction. As a result the quantity in auction increased dramatically. It increased from 98 mkg in 1984 to 160 mkg in the year 2000. During this period the average price was Rs 79.03 per kg. As the compulsory marketing order was abolished in 2001, its effect felt very soon and the quantity sold through auction decreased from 160 mkg in 2000 to only 125 mkg in 2002-2003. The cause was observed as most of the producers began to sell tea through direct marketing. Till 2006-2007 total quantity of tea increased to 149 mkg but price fell to Rs 68.06 per kg. Till now, big producers prefer auction as they have a faith in this marketing system and there is very little alternative channel available to sell bulk tea. And for some new producers auction is the readymade marketing platform where they will get at least a minimum return. For these reasons total quantity of tea in GTAC has increased but falling price indicates the quality of tea has degraded. In the year 2008, the average price is gradually increased to Rs 100 per kg. The International Tea Convention held in Guwahati helped in this positive change. Quality of tea is also improving during this time as most of the gardens are following re-plantation. Increasing stress on marketing by Tea Board and Tea Companies is another cause of this improvement.

3.0 Conclusion:

Regarding the research questions posed earlier, it is observed from the study that production do not have much impact on export of tea, rather it may be affected by the global demand, quality and price of Indian tea. Domestic consumption is negatively related to export. This observation is so far in line with the earlier study of Samantaray and Ashutosh (2012) and Kakaty (2014). And the second question is already discussed while discussing the auction process of GTAC. The regression analysis showed that export is negatively related to domestic consumption and positively to the production volume. Due to high prices in the international market and low quality Indian tea is

in less demand. Production showed a growing trend but is growing less than consumption. The trend line fitted for export showed very scattered trend. And the yield is showing a negative trend and is also scattered. The ageing of tea as stated by (Kakaty 2014) is the reason for negative yield.

The price and quality also plays an important role in determining export from a particular country. Since the demand for tea is very high within the country itself, this can be looked upon as one of the reasons for the slow growth of export from India. Growing domestic demand in India enhanced the relative profitability of domestic sales against exports. India is still the largest consumer of Black Tea in the world. Since 2000, domestic consumption has shown a steady and positive growth.

However, the major factors responsible for poor performance of Indian tea industry are high cost of production, the old age of tea bushes, lack of infrastructure, high price, labour problem, inefficient Tea Board, high labour cost, etc. Unable to face competition in the international market, it is slowly losing its traditional buyers and the India's liberalization phase has been less successful in revitalizing the tea growers. The rising competition at domestic as well as in international front has deepened the crisis of tea industry of India and has lost its position in the international market due to its high cost and poor quality.

References:

- Kakaty. C. Sarat, "Growth and Instability of Indian tea: an econometric analysis"- Discussion paper-NEEA (10-11) Feb, 2014, p.p: 68-79P
- Misra Bhubanesh, "Quality, Investment and International Competitiveness: Indian Tea Industry, 1890-1910". Economic and Political Weekly, Vol. 22. No. 6 (Feb, 7, 1987), p.p: 230-238
- Reddy V.N, "Global Tea Scenario: 2001 AD". Economic and Political Weekly, Vol. 26, No. 48 (Nov. 30, 1991), p.p: M145-M147 + M149-M151
- Samantaray. N. Manmath & Ashutosh Kumar, "An Analysis of Trends of Tea Industry in India"- The International Journal of Management, Vol.1/issue 4 (Oct 2012).
- Sarkar Kingshuk, "Trends and Price Formation Mechanism in Indian Tea Auctions"- Discussion Paper No.23, sponsored by Department of Commerce, Ministry of Commerce, Government of India.
- Majumdera A. Basu, Beraa B. and Rajan, A. 2010, Tea Statistics: Global Scenario. Inc. J. Tea Sci. 8 (1): 121-124
- Rao K B K, "India and the World Tea Economy Source": Economic and Political Weekly, Jul. 13, 1974 Vol. 9, No. 28
- Mitra, Neelanjana (1991), "Indian Tea Industry: Problems and Policies," Economic and Political Weekly, Vol. 26, No. 48, p. M-153.
- Joseph, K.J. (2011), "Commodity Markets and Computers: An Analysis of E-Auction in Cardamom Marketing from an Inclusive Innovation System Perspective".NRPPD Discussion Paper 9, CDS, Trivandrum.
- Kumar, Alok & Kumar, Ramani (1994), "India's Tea Exports: An Econometric Analysis of Performance and Constraints" Foreign Trade Review, Vol. 29, No. 2, p. 160.
- Krishna Kumar T & Mittal Ashok, (1995), "On liberalising Agricultural Trade: A Note of Caution from India's Experience with Tea Trade" Economic and Political Weekly, Vol. 30, No. 48, December 2, pp.3069-3074.
- Reserve Bank of India (1990), "Rising Tea Prices- Causes and Remedies"
- RBI Bulletin, Vol. 44, No. 10, p. 759.
- Asopa V. N. (2004), "Competitiveness in Global Tea Trade", Oxford-IBH, New Delhi.
- Banerjee, G. D. (2001), "Tea Marketing is no More a Fashionable Slogan in India" IAS- SI Quarterly, Vol. 19, No. 4, p. 32.