

TEASERVE: Electronic Auction of Tea¹

It is more than five years since TEASERVE, the world's first electronic tea auction centre began operation. As Dr. Karthik, the Special Officer who heads TEASERVE walked down the corridors of his office, it was a mixed bag of feelings. He was happy to see that the e-auction has been operating undisturbed ever since 2003, while the efforts of Tea Board of India to run e-auction of tea met with a turbulent weather and had to be abandoned for a better system. Although TEASERVE has already achieved some of the objectives Dr. Karthik was concerned about the overall performance of TEASERVE. There are issues that need to be resolved so that the performance of TEASERVE indeed improves.

There are many issues on which the future of TEASERVE hinges. TEASERVE continues to be dominated by its parent organization INDCOSERVE on both the buying and selling side. Is this good in the long run? Although the number of buyers registered is large, not many procure through TEASERVE. There is a widespread perception that the quality of the tea procured through TEASERVE is not good. Consequently there is a lower price realization for the sellers. How to break this vicious circle? The advent of electronic auction threatens to diminish the role of brokers and the region buyers, who buy tea in bulk to supply it to other regions of country. Buyers may also face fierce competition. Dr. Karthik wanted to know what is the next step forward?

Tea Industry

India is the largest producer and third largest exporter of black tea in the world. It is also the largest consumer of black tea accounting for around 80% of the total tea production in country. Tea Industry in India had beginning in the eighteenth century though the first commercial plantation that took place in 1835 primarily in Upper Assam and was followed by commercial tea plantations in South India in 1930's. Tea is mainly produced in sub tropical and equatorial countries, as it requires a warm and humid climate, plenty of well-distributed rainfall and long sunny days.

In North India, there are five major tea producing regions namely Assam Valley and Cachhar (in Assam) and Dooars, Terai and Darjeeling (in West Bengal) - together these two states account for almost the entire (98%) of North Indian production. In South India, tea production is concentrated in the states of Tamil Nadu (primarily the Nilgiris tea belt and the Anamalais) and Kerala (primarily Munnar and Wynaad regions). Tea produced in India is mainly of CTC (Cut, Tear and Curl) category (89%) followed by Orthodox (10%) and Green Tea (0.8%).

There are two kinds of structures dividing Tea industry: Tea estates and Bought Leaf Factory (BLF) or Tea Smallholder Sector. Tea estate dominate tea production in India with an estimated share of 84% of total production, the balance (16%) being from the BLF. The estate sector production is highly integrated from raw material to the end product where

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tea estates produce green leaves in the field and manufacture made tea from it at the factories within/near the tea estates. Whereas, the BLF sector consists of independent tea factories that purchase green leaf from small growers in the region which is processed at the BLFs to produce made tea. In India the BLFs are small factories with typical annual production capacity of 0.3 - 0.6 million Kgs. In contrast estate factories are larger (typically 0.8 to 2 million Kg per annum).

Tea marketing channels in India

Primary marketing of tea involves movement and sale of bulk tea from its first source namely the estates or the BLFs, to the bulk buyers (either actual users i.e., blenders or trade intermediaries). Also included in this category are direct exports by the producer himself and plantation packed tea (i.e., tea packed at the garden itself). The primary marketing of tea is done using one of the two channels: Public auction system, Private sales.

Public auction system

An auction is a primary marketing channel for selling tea to the highest bidder. The auction system serves two basic purposes. The first purpose is to facilitate price discovery by bringing the buyers and sellers to a common platform with broker's intermediation. Buyers bid for lots of tea and each lot is sold to the winning bidder. The second purpose is that the auction system provides a guaranteed transaction protocol for the transaction. The transaction includes activities such as delivery of tea to warehouse, storing, sampling, bidding and payment.

Auctions are held under the direct supervision of the auction organizers, i.e., Tea Trade Associations of the respective auction centres. The auction system is a unique multipartite interaction of sellers, buyers, warehouse keepers and brokers and involves a complex interplay among them, organized by a set of auction rules framed by the auction organizers of respective auction centres. The auction marketing channel presents the buyer with availability of a wide range of offerings or choices of tea. At the same time the seller enjoy a congregation of buyers with diverse requirements of tea along with the guaranteed transaction protocol. Tea auction in India is a unique and time-tested for primary marketing of tea given their transparency (public auction) and adherence to rules.

The first tea auction in India was held in Calcutta in 1861. Today, India has 7 auction centres, 3 in North India (Kolkata, Guwahati and Siliguri), three in South India (Cochin, Coonoor and Coimbatore) and a smaller centre in Amritsar. Auctions are conducted at these centres every week.

Private or direct sale

In private sale, tea is sold from the distant gardens/estates to buyer through trade intermediaries or brokers or directly by the producer. Tea sales through registered buyer follow rules and regulation of auction system but without bidding. Whereas, sales done

through agents/ trade intermediaries/ un-registered brokers do not follow any specific rules and such transactions are negotiated on a case-to-case basis.

Secondary marketing of tea is done by the intermediaries mainly the blenders and wholesalers to the consumers in value added form (blended, packed, flavoured, etc.) by purchasing tea from the primary marketing channels (auctions or private sales). The secondary supply chain for tea is both long and complex consisting of tea wholesalers, blenders and retailers (including grocery retailers and bulk tea shops).

Auction Process Overview

The auction system is a complex interplay among different stakeholders governed by a set of rules and procedures framed by auction organizers of the respective auction centres. Exhibit 1 has as schematic sketch of the auction process. Several key entities are involved in an auction. In the case of tea auctions, these are enumerated below:

- **Local Tea Trade Associations:** These are Auction organizers
- **Tea Producers or Sellers:** The sellers can be either estate factories or BLFs
- **Tea Brokers:** The brokers are auctioneers of tea, who sell tea on behalf of the sellers at the auction centres
- **Tea buyers:** Tea buyers are purchasers (bidders) of tea in the auction centres. The profile of tea buyers varies from centre to centre based on the kind of tea offered. But in general they are either Packeters/Blenders (who buy for their own brands or packets) or Buying Agents (who buy on behalf of upcountry buyers or importers)
- **Warehouse keepers:** Teas to be sold in the auctions are stored at the warehouses under the supervision of warehouse keepers. Post sales the teas are delivered to the respective buyers only against delivery orders issued by brokers.

Tea sale through auction process can be divided into three phases:

Pre-sale activities: These include dispatch of tea to warehouses, generation of arrival and weighment report subsequent to the arrival of tea at the warehouses, cataloguing and Printing, Tasting and Valuation by broker, Sampling and its distribution

Sale activities (Bidding at the auctions): Buyers congregate at the auction centre on the designated auction days and each broker sells his tea as per the designated schedule. Bids are manual 'open outcry' system and the tea is sold to the highest bidder.

Post-sale activities: This includes the payment date (prompt date) by buyers to sellers (via the brokers), delivery of teas and claims settlement.

The auction rules have been laid down in two categories. First set of rules are directly linked to the fundamental principles of the auction system. These need to be evaluated basically from a conceptual angle. Industry convenience and related aspects of these rules are secondary in importance. The rules, which fall into this category, are Lot Size, Division of Lots and Bidding on behalf of others (Proxy Bidding).

The second set of rules relate to the auction process. These rules are basically linked to the auction process and hence while evaluating these rules, industry convenience, fairness and

practically should be borne in mind. Essentially these rules relate to the auction process viz. pre-sale, sale and post sale conditions and include: Pre-sale related rules (like Catalogue Closing Time, Sampling, Withdrawals, etc.), Sales related rules (like Rate of advancement of bidding, reopening of bids etc.) and Post sale related rules (like reprints, prompt date, etc.).

CTTA Manual Auctions

Coonor Tea Trade Association (CTTA) was formed in 1963. This association consists of Buyers, sellers and brokers. CTTA is governed by managing committee. The managing committee is comprised of seven seller members, seven buyer members, two broker members, one Tamil Nadu Government representative and one Tea Board representative. There are 180 registered sellers, 187 registered buyers and 10 brokers in CTTA. All business entities have to take license from Tea Board and deposit some membership fee at the time of joining. Brokers get an idea about the demand and price of tea and they work on the behalf of sellers.

CTTA runs manual open cry auctions to sell tea. The auction takes place twice a week (Thursday and Friday). The leaves are sold on one day and the dust the following day. The following steps are followed:

1. Tea arrives at the warehouse every Monday.
2. The catalogue is prepared on the following day of arrival of tea in the warehouse.
3. On the second day the samples are drawn and sent to the buyers. A maximum of 3 kg of sample is drawn per lot. The sample size varies and it is decided based on the last year's purchased quantity of buyer.
4. After 11 days of tea arrival auction takes place. The auction rules are decided by Tea Board. The price is based on per kg. The brokers are the operators of auction system. The sequence of brokers is changed every week. Based on the number of brokers every broker gets a chance to start auction on an auction day.
5. Each broker has his two catalogues: one for leaf and one for dust. Each lot must comprise of minimum of 5 bags and the divisibility is allowed for minimum of 9 bags.
6. The buyer's prompt is 12 days. Prompt denotes the number of days within which the winning buyer needs to make the payment. If a buyer misses the prompt he/she is not allowed to participate in next auction.

The CTTA manual auctions had certain problems. The buyer's prompt is more than other comparative mechanisms of selling tea. This would mean longer cash realization cycle for the sellers. There is no standardization of grades, which makes the tea selling process very cumbersome. The auction takes place for whole day. Buyers watch the market in first few sessions, which sometimes result in loss for first brokers. CTTA made an effort to introduce electronic auctions as it was felt that some of these problems could be addressed through this. The E-Auction system that CTTA designed did not give expected results. The electronic system was developed as a replica of manual open cry auctions. The auction was run sequentially lot-by-lot. The system developed by Accenture, failed for some reasons. CTTA

was not able to get real price discovery in this process. Lot-by-lot marking down resulted in a set market as there are specific buyers per lot. Bidding would continue for whole day and it made the process no simpler than the traditional open cry method.

One auctioneer had the following to comment on the existing manual auction process for tea:

A number of intermediates are involved in this tea selling process until it reaches the ultimate consumer. One has to get registered to participate in some auction centre. The access to the auctions centre is limited to the local members only. Generally, there are only 200 registered buyers at some auction centres, which do not truly represent the real market. There exist a number of tea grades, which result in a complex selling process. The International standards of CTC are only 4 grades but in India for CTC there are 15 grades. The ultimate objective of 'discovery of fair price' could not be achieved with the existing system. Some efforts have been done on the improvement in the existing manual auction system by creating an electronic version of the auction process. But, over a period of time to accommodate the interests of all the participants, the electronic version was modified so much that it became just a replica of manual open cry system.

E-Auction at TEASERVE

TEASERVE is the world's first electronic tea auction centre started by the parent organization INDCOSERVE. INDCOSERVE is an apex organization to coordinate the activities of all the Industrial Cooperative tea factories. The need for cooperative tea factories was realized because initially the small tea growers in the Nilgiri district of South India had to supply their green leaves only to private tea factories. These small growers faced several problems such as low rates for their leaves, heavy rejections of leaves in peak season and manipulation in weighing of their leaves. This scenario prompted Government of Tamil Nadu to form tea factories under cooperative sector with first Industrial Cooperative Tea factory established in 1962. The Tamil Nadu Small Tea Growers Industrial Cooperative Tea Factories Federation Limited (INDCOSERVE) was established in the year 1965 and is functioning under the administrative control of Department of Industries and Commerce, Government of Tamil Nadu.

In acceding to the representation made by the small tea growers of the Nilgiris district, the Government accorded permission for setting up of an Electronic Tea Auction Centre. Accordingly the new tea auction centre under Cooperative sector in the name of "Tea Manufacturers' Service Industrial Cooperative Society Limited" (TEASERVE), was registered on August 28, 2002 and setup at Coonoor in the Nilgiris District. TEASERVE commenced its Electronic Auction proceedings with effect from October 1, 2003. Only the registered buyers could participate in the electronic auction proceedings.

TEASERVE was initiated mainly to avoid exploitation of small growers by the middleman with the following objectives:

- To help and ensure small tea growers in getting reasonable and remunerative prices for their tea
- To establish various necessary price discovery mechanism for primary marketing of tea and administer them in a transparent manner
- To maintain stability and avoid speculation in the price of tea
- To ensure that due representation is given to all the sections of the tea industry in primary marketing of tea
- To disseminate market intelligence to its members
- To safeguard the interest of the small tea growers and plantation workers in general, and to promote tea as a health drink.

The TEASERVE has 168 seller members on its roll with a paid up share capital of Rs. 1.34 million, which includes the Government share participation of Rs. 0.50 million. The details of the sector-wise tea factories enrolled as seller members in TEASERVE are as follows:

(1) INDCOSERVE Tea Factories	16
(2) Private Bought Leaf Tea Factories	134
(3) Private Estate Factories	16
(4) TANTEA	1
(5) Government of Tamil Nadu	1
TOTAL	168

Till January 2008, 172 buyers and 428 Interstate buyers have been registered in TEASERVE. INDCOSERVE plays an important role both as a seller and as a buyer at TEASERVE. Exhibit 2 has details on the performance of TEASERVE since its inception and Exhibit 3 has the price fetched in other tea auction centres during 2005.

The whole setup for online auction is provided by Computer Maintenance Corporation Ltd. (CMC). CMC has appointed to two personnel at TEASERVE to monitor auction process. The total initial investment for E-Auction system (computer software and hardware part) is Rs. 10 million. There are total 60 computers using which the bidders can place their bid for various lots on the day of auction. All computer machines are Linux based. The frontend has been designed in C++ and backend supported by databases. All machines are connected with LAN. Java strings are used to generate reports. The system can store 7 years data. The CMC personnel claim 100% success of the system. They have never faced any failure in the system since E-Auction has been started. There is no role of brokers as the system is 100% automatic. TEASERVE charges Rs 2.00 to buyers and Rs. 75.00 to the seller per sold lot as a participating fee. Out of the seller fee, CMC is given Rs 32.00 for the sold lots.

All the buyers participating in the auctions and the sellers have their login and password to participate in the auctions. The sellers can view the whole auction process and status of market price. The workstation can be locked by the buyer which can be unlocked by entering password. The catalogues are also available online. TEASERVE runs 4 - 5 sessions in one day. In a typical two-day auction session TEASERVE sells up to 2000 lots. There is one

more session conducted at the end known as *out-lot session*. This session comprises of all unsold tea during the day. It is also useful for the bidder who could not participate in regular sessions. In the out-lot session both leaves and dust are auctioned together.

TEASERVE is an online tea auction system where the bidders are actual operators of the market. The bidders put their bid and watch the real time information about the market (price per kg). On the day of sale, all the lots catalogued for the particular sale would be available for simultaneous bidding. This system is unlike in the manual outcry auction, where each lot comes up for auction one after the other. Only after the hammer goes down for a lot, the auctioneer takes the next lot in a manual auction. On an average, the hammering time for each lot in a manual auction is about 45 seconds. In an E-auction, the hammering of the lots (lot confirmation) happens at the end of the session. Bidder cannot see confirmed lot of other bidder. They are allowed to see only their own information and the current best bid.

On the day of auction, the buyers start bidding at specified time allotted by TEASERVE by logging on to live auctions through their individual terminals using their login Id and password. Each and every bidder has unique firm code and bidder code. For security reasons the bidders are provided passwords which they can change and the password expires every 3 months. The information on garden code, lot number, number of bags, grades, best price in the market, number of bidder and last sold price appears in the screen for bidder reference. The bidder has the option to view the lots engaged in auction for particular garden and for the entire garden. The confirmed lots will turn to different colour to show that the lots are confirmed.

Performance of TEASERVE

TEASERVE provides fair and transparent tea auction. TEASERVE sells on average 200-250 lots in 30 mins (1 session). The transaction cost in TEASERVE is only Rs. 0.66 per kg of tea sold as against the transaction cost of Rs. 1.77 incurred by the CTTA. The cycle time in TEASERVE is only 18 days as against 25 days in CTTA. However, TEASERVE is not able to sell whole tea through auctions. The total quantity sold against quantity offered at TEASERVE and average price of tea in 13 auctions from January 2008 to March 2008 are presented in exhibit 4. The leftover tea from one auction is put for sale in the next consecutive auction.

At the outset, the cost of selling teas through TEASERVE is lower for the sellers compared to the open cry auction conducted by CTTA (see exhibit 5 for details). It is evident from the table that TEASERVE is clearly in favour of the sellers. Furthermore, unlike CTTA where the prompt period is 12 days, it is 9 days in TEASERVE. Therefore one would expect more sellers to come to TEASERVE and offer their produce. However, in reality it is not happening and there are several reasons for this.

- One issue could be that many sellers have long standing financial arrangements with brokers, typically, advances taken for running their factories. In this manner the brokers are able to exert some implicit pressure on the sellers to offer their produce only in auction centres where they operate. As a result, they hesitate to sell their produce through TEASERVE.
- Another issue is the widely held perception that TEASERVE currently operates merely as an “organizer of the auction system”. Sellers require additional roles from TEASERVE such as providing technical expertise on certain matters relating to quality and market trends, financial help.
- Sellers also say that prices realized in TEASERVE are generally lower than that realized in the open cry auction at CTTA. This may or may not be true, but if such a perception exists, then other sellers with higher quality will hesitate to bring their produce to TEASERVE. Even now the perception seems to be that for quality sales and purchases, the CTTA auction centre is better.

According to the brokers, they play a crucial role in auctioning of tea. For instance a huge variation in terms of price can be observed between two consecutive auctions. As an example the broker will be able to sell a certain grade of tea for Rs 120 per kg in the current auction even when its price in the last auction was Rs. 97. The broker sometimes adds value by negotiating with buyers to get an idea about the current market conditions. A good quality tea gets good price but broker has to negotiate to sell a lot of low quality tea. Although they have to entertain 30-55 buyers at a stretch in single session of auction, they still prefer manual auction. They believe that face-to-face interaction helps more in finalizing the contract. How will the e-auction help the seller under such conditions? As compared to manual auction, brokers are less likely to support TEASERVE as they have apparently no role in the new system.

The availability of various grades of tea is more in manual auctions. Also, as per the discussions with the buyers, they do not get the desired quality of tea at TEASERVE. At times the buyers would prefer divisibility of lots with other buyers. This facility is not available at TEASERVE. At TEASERVE the buyer has to follow ‘Take it or leave it’. In that case sometimes buyers end up with sacrificing the lots or face the risk of not being able to meet the demand posed by his customer. One of the reasons for the buyers to have some preference towards TEASERVE is that it takes less time to run auction. The auction runs for 30 min whereas manual auction continue for whole day. Also TEASERVE results in accurate and easier quantity calculations.

The experience of the buyers depends on the nature of buying and the purpose. Buyers interested in purchasing a large number of lots for exporting tea (50%) prefer TEASERVE for getting tea at low price. The buyers who export major portion of tea are further interested in Internet-based electronic auction. This will save their time in attending various auctions by personally going to different places. On the other hand, buyers prefer manual auction when they have domestic customers (more than 50%) which wants quality tea.

On the other hand, buyers with major domestic market are not keen to participate in e-Auctions. They cannot plan their buying process as there is less time to plan for the order in

consultation with ultimate buyer. As far as Internet based tea auctions are concerned, the domestic market-oriented buyers have risk of losing their customers. Once the auctions are open to the buyers located all over country, the ultimate customer can also participate in the auctions. The other concern for buyers is the fluctuations in price of tea at TEASERVE. The buyers pay more in TEASERVE than in manual auctions for tea lots.

Even though TEASERVE is able to meet some of the objectives, some problems are identified which are due to auction process itself or due to the problems in whole TEASERVE supply chain:

- The participation of sellers is very less. The predominant sellers are INDCO factories. More factories are needed to bring in the TEASERVE system.
- The number of buyers presently participating in TEASERVE auctions does not represent the true market. The reason being the membership rules which allow the local region members only.
- The expectations of buyers are not fully met at TEASERVE like number of grades, expected quality of tea and divisibility of lots.
- The buyers have to come to TEASERVE auction centre personally which wastes a lot of time.

The CTTA auctions were run electronically for a brief period, but for some time now, the electronic system has broken down and traditional open cry auctions are now in progress. As per the discussions with various members of Tea auction system, most of the members may prefer TEASERVE over manual auction if some of their concerns are addressed. The Tea Board of India, on the other hand, has insisted on reforming the auction process by porting it on to the electronic platform. Given these, there is a stronger motivation for TEASERVE to address buyer and seller side issues and strengthen the auction mechanism and develop allied services to attract the buyers and sellers. Dr. Karthik realized that with the accumulated experiences and learning TEASERVE could be transformed into an excellent platform for selling tea. Can he lead TEASERVE to this position is a question that he needs to answer well and immediately.

Exhibit 1
Steps involved in marketing of Tea through Auction Centres

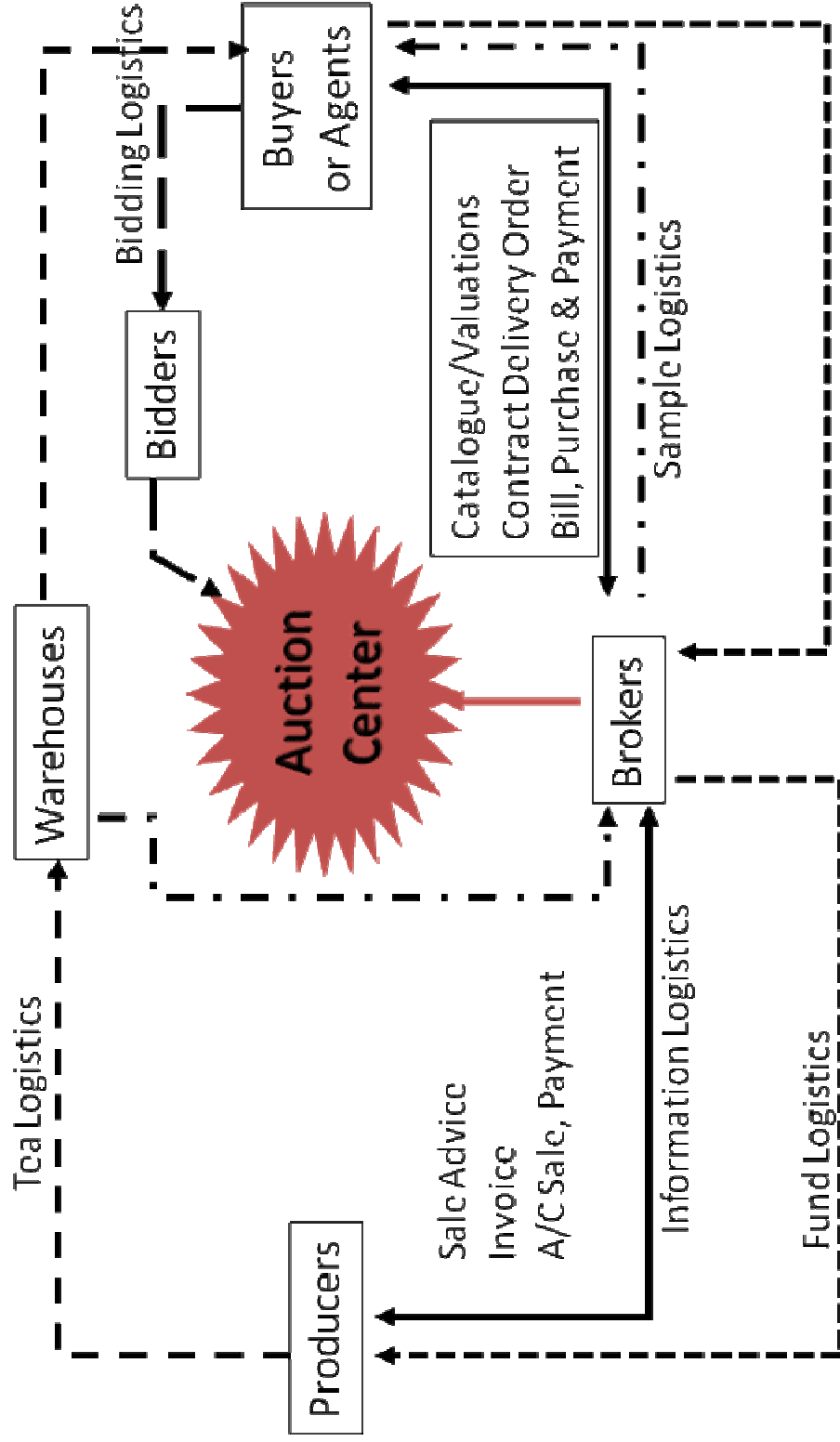
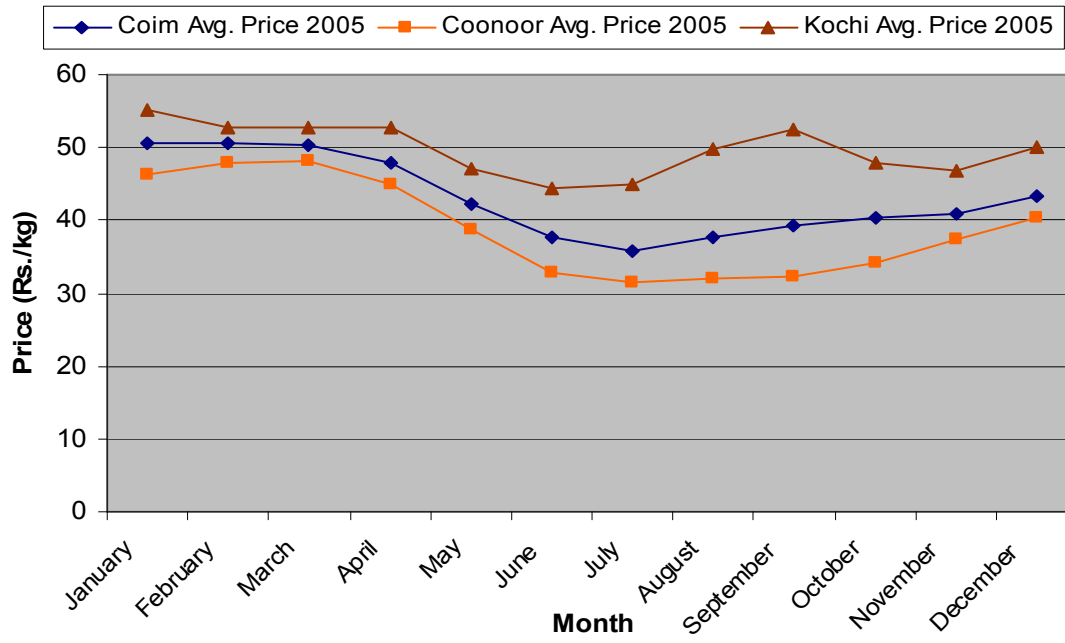


Exhibit 2

Performance of TEASERVE since inception

Sr. No.	Sector	Total quantity sold (in Lakh kgs)	Total sales value (Rs. In lakhs)	Average Rate per kg of Made Tea	% of Total Sales
Year 2003-2004 (October 2003 to March 2004)					
	INDCO Tea Factories	66.35	2049.30	35.67	75.29
	Bought Leaf Factories	15.55	518.27	33.33	17.64
	Estate Factories	5.07	243.38	47.99	5.75
	TANTEA	1.16	44.19	38.25	1.32
	TOTAL	88.13	2855.14	32.38	100.00
Year 2004-2005					
	INDCO Tea Factories	135.57	5677.32	41.88	75.74
	Bought Leaf Factories	33.10	1324.58	40.02	18.49
	Estate Factories	8.67	465.42	53.70	4.84
	TANTEA	1.65	86.20	52.33	0.93
	TOTAL	178.9	7553.52	42.20	100.00
Year 2005-2006					
	INDCO Tea Factories	113.75	3962.16	34.83	89.86
	Bought Leaf Factories	7.30	243.08	33.29	5.77
	Estate Factories	3.46	168.95	48.87	2.73
	TANTEA	2.08	90.32	43.29	1.64
	TOTAL	126.59	4464.51	35.27	100.00
Year 2006-2007					
	INDCO Tea Factories	140.11	6492.96	46.34	88.76
	Bought Leaf Factories	11.04	509.34	46.14	6.99
	Estate Factories	2.07	113.90	55.02	1.31
	TANTEA	4.63	189.32	40.89	2.93
	TOTAL	157.85	7305.52	46.28	100.00
Year 2007-2008 (Up to January)					
	INDCO Tea Factories	107.61	4441.19	41.27	95.68
	Bought Leaf Factories	3.63	154.11	42.45	3.23
	Estate Factories	0.43	25.52	59.35	0.38
	TANTEA	0.8	32.23	40.29	0.71
	TOTAL	112.7	4653.05	41.37	100.00

Exhibit 3**Average price fetched for dust in different auction centres (2005)**

Source: Tea Market Annual Report & Statistics 2006, J Thomas & Company Pvt. Ltd.

Exhibit 4**Tea offered and Tea sold through TEASERVE during Jan. 2008 – Mar. 2008**

Sale No.	Quantity Offered (Kg)	Quantity sold (Kg)	Average price (Rs per kg)	Leftover quantity (Kg)	Percentage of quantity sold
1	297,636	140,831	46.75	156,805	47.32
2	458,588	260,164	46.84	198,424	56.73
3	365,444	290,309	48.04	75,135	79.44
4	N.A.	719,049	N.A.	N.A.	N.A.
5	251,275	146,622	50.28	104,653	58.35
6	316,128	224,983	50.02	91,145	71.17
7	N.A.	N.A.	N.A.	N.A.	N.A.
8	N.A.	N.A.	N.A.	N.A.	N.A.
9	310,409	228,237	51.00	82,172	73.53
10	277,272	248,674	52.42	28,598	89.69
11	365,760	303,976	53.34	61,784	83.11
12	294,819	204,085	54.26	90,734	69.22
13	330,902	258,742	53.10	72,160	78.19

Exhibit 5

A comparative analysis of Manual Auctions & TEASERVE

Sl. No.	Criterion	Manual Auctions	TEASERVE
1	Number of Catalogues	Each broker has his own catalogues one for leaves and one for dust	Only two catalogues one for leaves and other for dust
2	Time per auction	The auction continues for whole day	There are only 3-4 sessions of 30 mins each on the day of auction. It saves time of tea buying
3	Number of grades	A huge number of grades are available	Limited grades of tea are available
4	Quality of tea	A good quality tea is sold	The tea quality is not as good as tea available in manual auction
5	Divisibility	The buyers can divide lots among each other at same price	No divisibility is allowed
6	Marketing	Buyers buy the tea and use mostly for domestic consumption	Due to large lots (no divisibility) the tea is bought in bulk for export
7	Time of bidding	The auction runs for whole day	The buyer gets only 30 mins. to bid
8	Uncertainty	The buyer is more certain of getting the type of tea of his/her choice	There is more uncertainty because in the last minute some other buyer may get the order
9	Anonymity	The buyer is aware of the market (information of other buyers)	Buyer knows only the prevailing price bided but not the person who bided the amount
10	Role of middle-men	Brokers operate the auctions	No need for middle-men, it is an automatic system
11	Cycle time (Days)	25 (at CTTA)	18
12	Commission paid	1%	Rs. 75 per lot
13	Commission (Rs.)	160.00	75.00
14	Sample Quantity	3 Kgs	1.5 Kgs
15	Cost of the sample	120.00	60.00
16	Total cost to seller*	280.00	135.00
17	Transaction Cost	Rs. 1.77/Kg	Rs. 0.66/Kg.
18	Prompt Time (Days)	12	9

* Assumptions for the above calculations: Lot size: 40 Kgs; Price for comparison: Rs. 40 per kg