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## QUALITY IMPROVEMENT AND WORKER'S SAFETY IN THE SRI LANKAN TEA INDUSTRY

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## SUMMARY

This study looks at two case studies of marketing chains of tea in the low-grown areas around the Ratnapura region of Sri Lanka. The findings of this study help understand the complex nature of the Sri Lankan tea industry and the level of involvement of the various stakeholders in the marketing chain depending on the methods of sale and level of value addition. The findings also discuss the relationships and linkages in the marketing chain and examine quality standards, workers' conditions, farming, technical and marketing practices. Although tea leaf producers do not participate in the value addition of tea, they are getting prices that reflect world market prices directly through the auction system in Colombo. The major part of value addition is implemented either by Sri Lankan large-scale exporters after the auction has taken place or by international tea traders after the tea has been exported out of the country. Factory workers and tea producers benefit from social services because the tea factories are involved in quality assurance schemes that put a strong emphasis on social attributes and workers' welfare. As such, the main differences between the marketing chains studied here are found in the social benefits extended by the tea leaf processors to their suppliers and workers.

## 1. INTRODUCTION AND BACKGROUND

### 1.1 The importance of the tea industry to Sri Lanka

The Sri Lankan tea industry is of paramount importance to the country's economy. It contributes about 13 percent to the total export earnings of the country and is the highest net foreign exchange generator. In 2004 tea accounted for 13 percent of Sri Lanka's merchandise exports and earned US\$810 million. Tea is the third largest agricultural industry in Sri Lanka and represented 2 percent of overall GDP in 2005. The industry also generates direct and indirect employment for over one million people (Central Bank of Sri Lanka, 2005; SLTB, 2005).

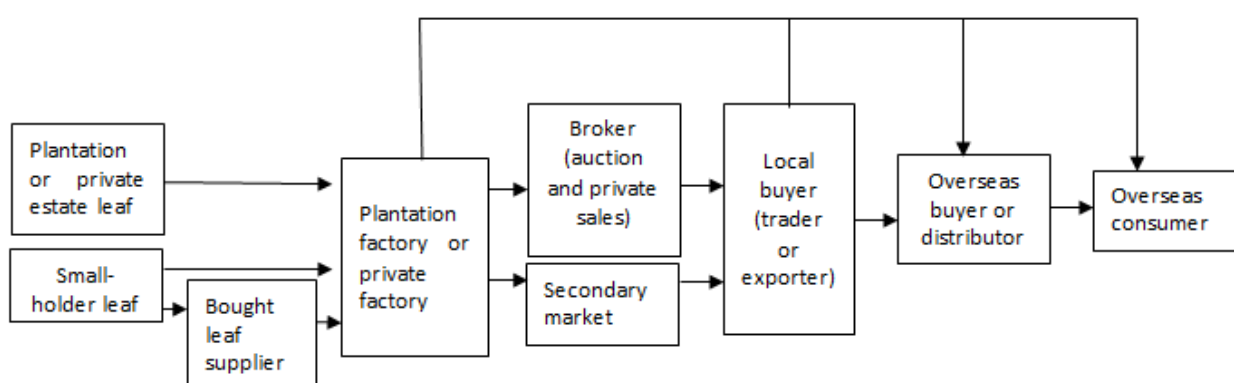
### 1.2 The global position

Sri Lanka is the world's second largest tea exporter with 19.2 percent global export market share in 2005. In 2004 Kenya, which produces mainly cut tear and curl (CTC)<sup>1</sup> tea surpassed Sri Lanka as the largest exporter, and held 22.5 percent of the global export market in 2005. Total world production in 2004 was 3.2 million tonnes with Sri Lanka's share as the fourth largest producer being 10 percent. About 44 percent of world production is CTC tea and 31 percent orthodox<sup>2</sup> tea, with green tea making up the balance. Sri Lanka competes mainly in the orthodox tea market where it has a 32 percent market share and is the leading producer (SLTB, 2005).

### 1.3 The tea marketing chain

Figure 1 below indicates the structure of the Sri Lankan tea marketing chain. It demonstrates how the tea leaves are bought from the estate by a supplier or are sold directly to a factory where it is processed. This tea is then purchased by a broker and is sold via an auction or through other means of sales to an exporter or to an overseas buyer. The marketing chain can take many routes before reaching the final consumer, depending on the type of tea, methods of trade, market structure and type of buyer.

**Figure 1: The Sri Lankan tea marketing chain**



<sup>1</sup> Cut, tear and curl, is a method of manufacture of tea which is used widely for tea bags. This type of manufacture is mostly used in countries such as Kenya and India.

<sup>2</sup> Orthodox is another form of manufacture which treats the tea leaf in a milder manner than that used to produce CTC tea. This type of manufacture is largely used in Sri Lanka.

## 1.4 Methods of sale

Under the rules and regulations of the Ceylon Chamber of Commerce a minimum of 90 percent of tea sold must pass through the auction in Colombo. This is the most popular method of sale since its commencement in 1883. Currently the Colombo auction handles nearly 300 000 tonnes of tea annually. It is held twice a week throughout the year and teas are sold on “ex estate” terms or in the main sale catalogues. Registered exporters in Sri Lanka purchase the majority of the tea through the Colombo auction. Brokers are present at the weekly auction at the Ceylon Chamber of Commerce where bidding takes place in a highly competitive atmosphere (SLTB, 2005)

Tea can also be sold through private sales where transactions are carried out through the selling broker who determines the price at which a line of tea is offered for sale on a private basis in consultation with the seller or producer. Some advantages of this method include quick receipt of sale proceeds by the producer; the buyer or exporter receives the tea within a few days from the date of manufacture; and prompt shipment to foreign markets on an almost immediate basis ensuring freshness of product.

Forward contracts are yet another channel used for the sale of tea which, unlike private sales, covers a far more general basis of transaction. In this case an estate could enter into a contract involving, for example, three months of production at a predetermined price. Here too the price is subject to approval by the Sri Lanka Tea Board and selling broker in order to ensure that the contract is finalized at a level of price that keeps to international market trends (Dayananda, 1986; John Keells Limited, 2002).

## 1.5 The competitive context of the Sri Lankan tea industry

Sri Lanka produces tea throughout the year (see Figure 2 for map of Sri Lanka). The variety in weather and soil gives rise to six major agroclimatic zones within the country (see Figure 3). These teas are different to one another in their liquoring properties and appearance of leaf. Like other food and beverage categories (Poole, Martinez and Gimenez, 2007), the tea “category” need not be regarded as a commodity, but as a range of distinct products amenable to differentiation in the market. This diversity is a strength of the Sri Lankan tea industry, but it is not exploited adequately to its advantage.

The tea industry of Sri Lanka enjoys relatively good infrastructure. The plantations have easy access to Colombo via a network of roads. The Ceylon Tea Promotions Bureau and Tea Research Institute of Sri Lanka play important supporting roles assisting in specialized research and promotional activities.

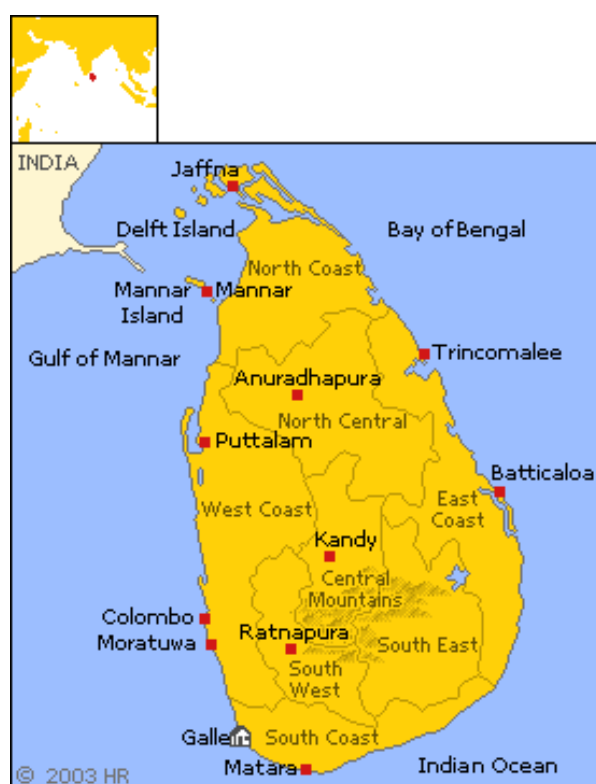
The country is especially strong in the market for traditional teas in the Middle East and the Community of Independent States. However, Sri Lanka, like other tea producing countries, is seen as a supplier of bulk teas to the world, where the global tea trade is dominated by multinational companies. As a result the Sri Lankan tea industry has an underdeveloped capacity to monitor consumer trends and add value to its product locally with about 60 percent of total tea exports still in bulk form and subject to commodity-based price swings. Apart from a few exceptions of Sri Lankan-owned brands capturing substantial market share overseas, the industry has been slow to innovate, upgrade, add value, and move closer to consumers.

The tea trade has been an important industry for Sri Lanka since its inception in colonial times; the United Kingdom was Sri Lanka’s largest and most lucrative tea export market for many years. Although the country has over a century of experience and expertise in production and manufacture, today Sri Lanka is facing stiff competition from other producer countries such as India, Indonesia and Kenya, the last of which currently supplies about 60 percent of the tea needs of the United Kingdom (ITC, 2004). Thus Sri Lanka is in danger of losing its pioneer and first-mover advantages. Although other export destinations such as the Russian Federation and the United Arab Emirates have become

more important in Sri Lanka's exports portfolio, the United Kingdom is still a significant destination in terms of the lessons that can be learned from the country that is hailed worldwide as the trend-setter in tea.

In addition to these problems the Sri Lankan tea industry is facing added pressure from competitors such as Kenya who in 2004 surpassed Sri Lanka as the largest tea exporter. Kenya is a dominant producer of CTC tea which is becoming increasingly popular in many markets. Sri Lanka as a leading supplier of good quality orthodox teas, which command relatively higher prices, is under threat by competitors such as Viet Nam and Indonesia offering similar but cheaper teas. Sri Lankan margins are in danger as more and more foreign producers are attracted by premium prices paid for orthodox Ceylon teas.

**Figure 2: Map of Sri Lanka**



**Figure 3: Location of plantations**



Source: *Ceylon Tea, Individualitea in Specialiteas*, Sri Lanka Tea Board & The Colombo Tea Traders' Association (2004)

### 1.6 The context of the study

Tea growing areas are mainly concentrated in the central highlands and southern inland areas of the island nurtured by excellent basic conditions for tea production. These areas are broadly grouped under three elevations, with "high grown" ranging from 1 200 m upwards, "medium grown" covering between 600 to 1 200 m and "low grown" from sea level up to 600 m. The elevation and the extent in hectares are shown in Table 1 below. Teas grown in these elevations are different from one another in their liquoring properties and the appearance of the leaf. The high and medium grown areas mostly produce the traditional Broken Orange Pekoe (BOP) and Broken Orange Pekoe Fannings (BOPF) and the low grown plantations produce leafy varieties of tea.

**Table 1: Extent in hectares according to elevation**

<b>Elevation</b>	<b>Extent (hectares)</b>
High growns	52 410
Medium growns	61 386
Low growns	74 175
Total	187 971

*Source: (SLTB, 2006)*

The region chosen for this study is in the surrounding areas of Ratnapura which belongs to the low grown area. This region mostly consists of smallholder tea gardens with very small areas of cultivation ranging from around 0.4 to 4 hectares.



## 2. CASE STUDY 1: NELUWA MEDIGAMA TEA FACTORY

The stakeholders involved in this chain are:

Smallholders – Neluwa Medigama tea factory – Auction

These smallholders sell tea leaves plucked from their gardens to the Neluwa Medigama tea factory which is then processed into black tea and sent to the Colombo auction to be sold. No direct sales take place via this factory. This tea factory is owned by the John Keells Group and employs about 100 people. This factory has a capacity of 16 000 kg. About 1 000 smallholders from surrounding areas bring tea leaves to this factory randomly between 15.00 and 21.00 daily. They pluck tea once a week as opposed to several times a day in the high grown areas.

### 2.1 Quality requirements

The factory managers inspect the tea for damaged leaves and for leaves that are too young, overgrown or deceased. Over 60 percent of the tea brought to the factory must be of good quality to be accepted for processing.

The factory is HACCP-certified and operates under ISO 22000:2005. The factory does not have any glass equipment or glass windows for safety reasons, and instead has wire meshes to keep out insects and birds. Waste generated within the factory is separated into glass, paper and plastic outside the factory. A compulsory footbath medicated with Condis and chlorine is provided at the entrance to the factory. Workers must also wash hands and wear head gear and aprons when entering the factory.

The factory maintains cleanliness records of its workers, factory and machinery. These are also audited both internally and through random visits by external auditors. The factory workers are also examined for skin, chest, throat and other infections every two months.

### 2.2 Worker conditions and economic impact

20 percent of the factory workers are from the same village where the factory is located. The other workers come from villages further away. All workers are provided food and lodgings. Main meals consist of rice and three different dishes (vegetables and fish or meat). They also receive three cups of milk tea daily. They are paid LKR300<sup>3</sup> on a daily basis. All factory workers receive 14 days of paid leave a year. All workers are insured and compensation is paid for any injuries on the premises. They work 8-hour days and are paid 1.5 times more for overtime. There are first-aid boxes in the factory and a rest room is provided for the workers. The factory administration staff receives medical allowances, and accommodation free of charge. They also receive book loans for their children. All workers and staff are provided training (usually every six months) and are regularly tested on their knowledge and expertise. Factory workers receive free medical treatment too on site during medical check-ups that occur every two months.

The smallholders are paid 68 percent of the sale price at the auction for the green leaf tea supplied to the factory.

### 2.3 Technical impacts and linkages in the marketing chain

The factory provides fertilizer to the smallholders and a 30 percent government subsidy is usually provided for this fertilizer. A free service provided by the factory advises smallholders about good agricultural practices, manure use, and growing and plucking techniques. Seed plants are known to

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<sup>3</sup> At the time of study the exchange rate was LKR100 ≈ US\$0.92

produce lower yields but last longer (about 100 years). Vegetatively propagated tea plants yield more but only last for about 25 years. Tea bushes in low grown areas are about 30 years old and are significantly younger than those in high grown areas. Government aid is provided for uprooting and replanting of tea which occur every 25 to 30 years.

Of the tea manufactured in the factory 1 kg of tea is sold to the estate owners at market price, but is sold at a lower rate (usually about LKR5.80/kg/month) to the workers. Staff at the factory receives 1 kg of tea free every month.

Samples containing 3kg of tea manufactured in the factory are sent to brokers. These teas are then sold to the auction via the brokers. The Tea Board certifies the standard and quality of the tea exported from Sri Lanka through the symbol of the lion logo (Figure 4). The most popular markets for tea produced in low grown areas are the Russian Federation and the Middle East.

**Figure 4: Lion Logo**



Source: <http://www.pureceylontea.com/lionlogo.htm>

### 3. CASE STUDY 2: KARAVITA TEA FACTORY, PEENKANDA

The stakeholders involved in this marketing chain are:

Smallholders – Karavita tea factory – Auction

This factory is located close to Ratnapura and is also owned by the John Keells Group. This is a modern factory where many functions are automated and computerized. This factory utilizes smallholder tea which is then processed into black tea and sent to the auction to be sold. About 1 000 smallholders supply tea to this factory which has a capacity of around 18 tonnes. The Karavita factory employs approximately 130 workers.

#### 3.1 Quality requirements

The factory managers inspect the tea brought to the factory for damaged leaves and for leaves that are too young, overgrown or deceased. The factory is certified against HACCP and ISO 22000:2005. This factory also operates under the Japanese 5S system – seiri (organization), seron (neatness), seiso (cleanliness), seiketsu (standardizing), shitsuke (discipline).

Waste generated within the factory is separated and disposed appropriately. Workers are required to wash hands and wear head gear and aprons when entering the factory. The factory maintains cleanliness records of their workers, factory and machinery. These are also audited both internally and through random visits by external auditors. The factory workers are also examined for skin, chest, throat and other infections every two months.

#### 3.2 Worker conditions and economic impact

There is a Human Resource Manager on site who is responsible for the workers' wellbeing and workers' conditions. All prices paid to the workers and smallholders are written on a public white board accessible and transparent to all. In the workers' spare time they are encouraged to express their thoughts and ideas through creative writing and artistic expression. They are given one free cup of tea a day and are also provided uniforms, safety equipment and accommodation. First aid boxes are available in the factory and a number of workers are trained to administer first aid. Free evening meals are provided to those who work the night shift. All workers are insured for injuries occurring on site. In addition to a daily wage of LKR300 workers are also given bonuses and gratuity payment.

Smallholders are paid according to auction prices for the green leaf they supply to the factory. Other crops such as banana, black pepper and betel leaf also contribute to smallholder income. The children of many tea smallholders work in other government or private organizations in the city or nearby towns.

#### 3.3 Technical impacts and linkages in the marketing chain

Low grown teas do not generally suffer from seasonal variations. This tea factory produces about 15 different grades of tea, and two garden marks are sold via a broker to the auction. Workers are provided safety, quality and hygiene training by factory management and advice is provided by the Tea Board. All workers are regularly kept updated through good, transparent communication with the management.

Fertilizer is provided to smallholders by the factory management for which payment is collected through instalments. Smallholders also have access to certain loans and credit schemes. They are provided guidance and advice on good agricultural practices by the factory management and the Tea Smallholder Development Authority. The Labour Department assists with risk assessment within the factory.

## 4. OTHER OBSERVATIONS ON THE SRI LANKAN TEA MARKETING CHAIN

### 4.1 The auction

Considering that the bulk of the tea exports are sold through the auction system, many of the relationships considered in this research between the buyer and seller are also linked in a way to the auction system. However it is also true that some of the Sri Lankan sellers assist their buyers in private sales or forward contracts outside of the auction system. Some of the larger, branded British buyers expressed their preference to buy outside of the auction through forward contracts or private sales. This push from large powerful buyers to buy outside of the auction would have a negative impact on the auction system if they unanimously were to decide in the future to boycott the auction. Buying outside the auction can benefit large buyers who can exert power and control over the supplier and influence prices. The auction system has thus far worked well to protect the supplier and the Sri Lankan tea industry because auctions are highly regulated and expose teas from large and small estates to the same, fair and equal competition and bidding on an open stage that reflects world market prices (Kasturiratne, 2008).

### 4.2 Value addition

The value-added share of total Sri Lankan tea exports has been fluctuating recently around the 35 percent mark. The share of value-added products in Sri Lankan tea exports has been stagnating if not declining over the years down from 45 percent of tea exports in 1996 (SLTB, 1998). Indeed, fewer than 20 companies of the 200 registered exporters in Sri Lanka export their own brands. Table 2 below shows the disparity in free-on-board (FOB) prices between branded Sri Lankan marketers and Sri Lankan traders.

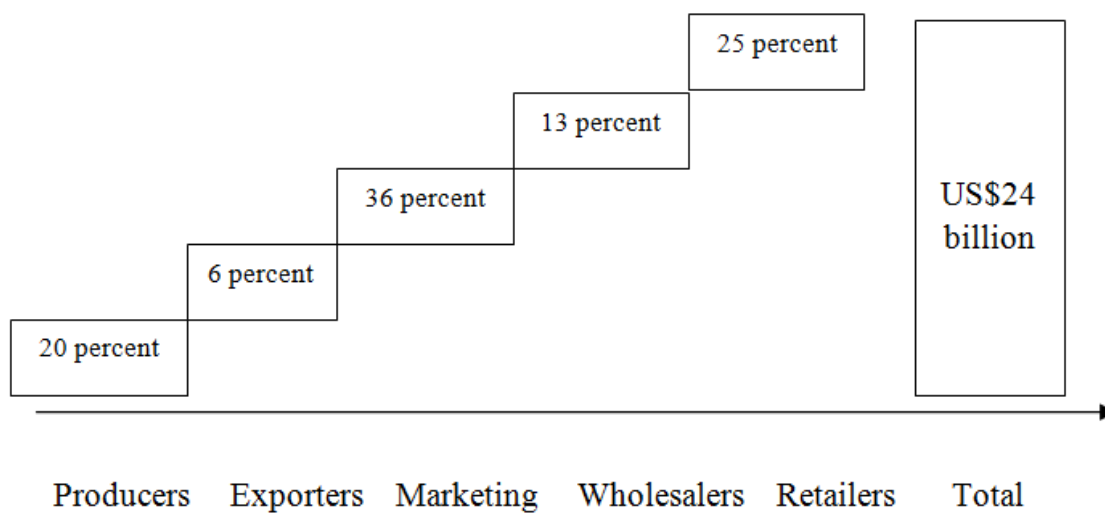
**Table 2: FOB price of branded tea marketers versus traders**

Branded marketers		Traders	
Company	FOB price US\$/kg	Company	FOB Price US\$/kg
Dilmah	4.43	Fern tea	2.00
Mlesna	3.37	Expo Lanka	2.00
Akbar Brothers	2.42	Stassen	1.98
Imperial	2.18	Vanrees	1.86
May	2.10	A.F. Jones	1.48

*Source: (Ranasighe & Fernando, 2002)*

Figure 5 below indicates the value composition of the world tea industry. This shows the relative importance of brand ownership and value addition through marketing activities. At this point it is important to note that Sri Lanka has only 1.5 percent of the global branded tea market (Liyanage, 2003).

Figure 5: Value composition of the world tea industry



Source: Liyanage (2003)

## CONCLUSIONS

The structure of the tea industry in Sri Lanka is complex. The two types of tea farmers are smallholders and estates owned by private plantation companies. About 90 percent of the tea manufactured in factories reaches the buyer or consumer through the auction system in Colombo. The rest is sold through direct sales, private sales and forward contracts.

The tea farmers that this study investigated are smallholders in the low grown areas. The overall examination of the tea marketing chains under inspection in this study has shown that while the smallholder teas constitute the majority of tea produced in Sri Lanka, their involvement in the tea marketing chain does not extend far. Their relationships with other chain stakeholders are confined mainly to factory management and government advisory services. They have no involvement in sales to the auction, the broker or any type of marketing activity for that matter.

The majority of the value added to tea occurs after the auction at the level of the exporter or international buyers overseas. In most cases the farmer is not directly involved in the end product which may be value added. The price paid to the farmer is a direct reflection of the commodity teas sold at the auctions at world market prices. Thus, higher world market prices directly benefit the producers as the prices paid for their leaf is a direct reflection of the world market prices. However, the benefit of value addition is accrued by the international blender or packer rather than within the producing country. This situation could be changed through better linkages within the marketing chain of Sri Lanka with value added inside the country and these benefits passed on to the producer.

Farmers could have a higher direct involvement in the marketing chain through other methods of sale that overpass the auction. Although this may seem lucrative in the short term, it is likely to prove risky in the long run. This is due to the fact that large buyers are likely to exert power on the farmers to reduce prices whereby farmers are likely to have to sell at even lower prices than world market prices. This method also provides very little guarantee for the future supply of the farmers. The auction system is highly regulated and protects the supplier from any unscrupulous buyer behaviour. It also provides a platform for teas from large and small estates to the same, fair and equal competition and bidding on an open stage that reflects world market prices.

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