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MARKET COMPETITIVENESS OF THE TEA INDUSTRY OF SRI LANKA

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2023

ACKNOWLEDGEMENTS

The author extends his sincerest gratitude to Murtaza Jafferjee for his counsel and support, without which this research publication would not have been a reality.

The author would also like to thank the following resource people (and where applicable, their teams), listed alphabetically, whose input and insights were indispensable during the process of writing these discussion papers: Tyeab Akbarally, Vige Bede-Johnpillai, Anil Cooke, Hishantha de Mel, Niraj de Mel, Lushantha de Silva, Romesh Dias Bandaranaike, Dilhan Fernando, Rohan Fernando, Mufaddal Jafferjee, Kumar Jayasuriya, Dr. K. M. Mohotti, Chrisantha Perera, Jihan Perera, Rohan Pethiyagoda, Dr. Chamila Pilapitiya, Dr. Roshan Rajadurai, Damitha Rathnayake, Naresh Ratwatte, Krishna Ravindran, Dr. Wasantha Shyamalie, Dr. Manoj Thibbotuwawa, Mathi Yugarajah Doraiswamy, and Romesh Walpola.

The author is also grateful to the management and employees of Pedro, Somerset, Great Western, New Deniyaya, and Rilhena tea estates and Uva Halpewatte tea factory for their support during field visits.

Finally, many thanks to Latisha Daluwatte, and the Advocata Communications team for the design of the cover, the content and the layout of the report.

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HISTORICAL EVOLUTION OF THE TEA INDUSTRY

The history of the plantation industry of Sri Lanka is rife with government intervention.[1] While the Dutch government merely traded cinnamon that grew in the wild, under British rule, the cinnamon industry soon became a fully-fledged state monopoly. This monopoly, characterised by a reserve price for cinnamon, did not last long. The reserve price distorted the market so detrimentally that the industry was no longer profitable, and in 1833, the government abandoned its monopoly in the trade altogether.

Having learned its lesson about state intervention in plantation agriculture, the British government took a more laissez-faire approach to the coffee industry that soon replaced the island nation's cinnamon industry. Unlike cinnamon which was mostly grown in the wild and in a few plantations near Colombo, coffee proved to be a large-scale forest-clearing operation.[2] The coffee boom, however, did not last long. By 1847, financial woes in London changed the market conditions so unfavourably for Sri Lanka, that Java and Brazil emerged as new market leaders in coffee production[3]. The plantations that continued to grow coffee had to give up on the trade later, when Coffee Rust, a fungal disease, began killing coffee trees in the island starting 1869.

Several early attempts to introduce the tea bush to Sri Lanka following the collapse of the cinnamon industry failed. By 1834, tea had already arrived in Assam, India, and in 1839, an indigenous variant of Assam tea was planted unsuccessfully at the Royal Botanical Gardens in Peradeniya. In 1841, Worms brothers planted Chinese tea at the Rothschild and Labookellie estates in Central Province, but soon abandoned the project owing to high costs of production

The first successful attempt at tea cultivation came in 1867, when James Taylor, a planter of Scottish origin, cultivated tea along the edges of the Loolecondera Estate in Lower Hewaheta. By the next year, Taylor had planted nineteen acres of Loolecondera with tea. By 1872, Taylor had set up a fully operational tea factory at the estate, and made the first ever sale of Ceylon tea.

The tea industry thus took off. As the scale of the industry expanded, so did the need for better market organisation. In 1883, the first public tea auction took place in Colombo at Somerville & Co., with full support from the Ceylon Chamber of Commerce. The Colombo Tea Traders' Association was formed the following year, followed by the formation of the Colombo Stock Brokers' Association two years later in 1896, which was renamed Colombo Brokers' Association in 1904.

[1] All references in this section, unless otherwise noted, come from: Forrest, D. M. A Hundred Years of Ceylon Tea, 1867-1967 (London: Chatto and Windus, 1967)

[2] Before the rise of the coffee industry, coffee was grown in Sri Lankan homesteads first as a peasant crop, and then as a minor crop. See: Moldrich, Donovan. Bitter Berry Bondage: The Nineteenth Century Coffee Workers in Sri Lanka. (Sri Lanka: Neptune Publications, 2016)

[3] "Tea History Timeline," History of Ceylon Tea, Dilmah, https://www.historyofceylontea.com/history-of-tea-timeline.html

As the tea industry boomed, the British colonial government saw a role for itself in the industry's advancement. First, in 1925, it assumed responsibility for research and development with the establishment of the Tea Research Institute. The Ceylon Tea Propaganda Board was established in 1932 to help promote the generic 'Ceylon tea' brand abroad[4].

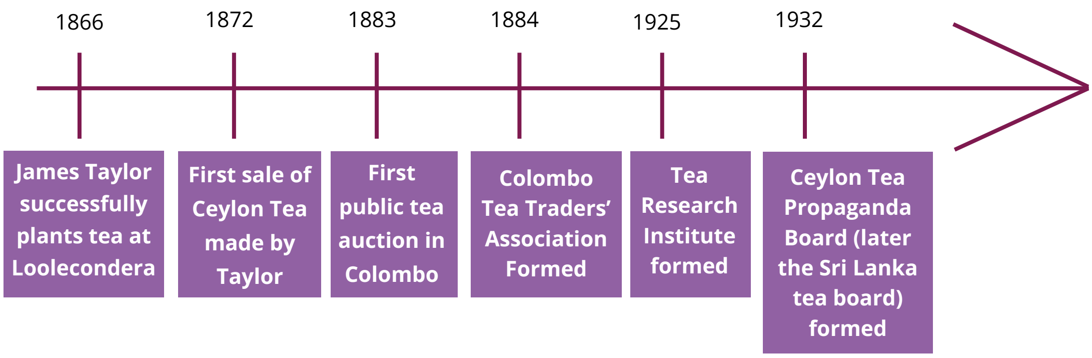


Figure 1 : Early timeline of the Sri Lankan tea industry

Following independence in 1948, the tea industry underwent a period of reorganisation, as nationalistic political forces sought to 'Ceylonise' the tea industry. The nationalisation policies of the S. W. R. D. Bandaranaike government in the 1950s, in particular, accelerated the flight of capital away from the Sri Lankan tea industry towards East African nations[5]. The impact of this capital flight, however, was not felt immediately, as the industry managed to expand in the coming years. In fact, in 1965, Sri Lanka dominated the global tea industry for the first time as the largest tea exporting country in the world[6]. The following year marked hundred years since the beginning of the tea industry in the island nation, to celebrate which, the first International Tea Convention was held in Colombo[7].

The growing prosperity of the industry did not last long. Between 1972 and 1973, the government introduced sweeping land reform measures that led to the nationalisation of 502 privately held tea lands. As the new Land Reform Act and the Agricultural Corporations Act went into effect in 1975, the tea estates held by Rupee and Sterling companies, registered in Sri Lanka and Britain respectively, were also nationalised[8]. The Sri Lanka State Plantations Corporation (SLSPC), Janatha Estates Development Board (JEDB), Usawasama (Up Country Co-operative Estates Development Board), Janawasama, and electoral cooperative, all of which were owned by the state, took over the management of these nationalised tea estates[9].

[4]"A Mature Industry," Sri Lanka Tea Board, http://www.srilankateaboard.lk/index.php/a-mature-industry

[5]https://www.historyofceylontea.com/ceylon-publications/maxwell-fernando-archive/shift-of-fortunes-of-sri-lankastea-enterprise.html

[6]Forrest, D. M. A Hundred Years of Ceylon Tea, 1867-1967 (London: Chatto and Windus, 1967)

[7]"Independence and After," Sri Lanka Tea Board, http://www.srilankateaboard.lk/index.php/independence-and-after

[8]The land reform act limited the maximum extent of land that a tea producer may own to 50 acres. See Land Reform Act No. 1 of 1972, National State Assembly of Sri Lanka; Land Reform Act No. 39 of 1975, National State Assembly of Sri Lanka

[9]"History and Background," Janatha Estate Development Board, https://www.jedb.lk/history-background/

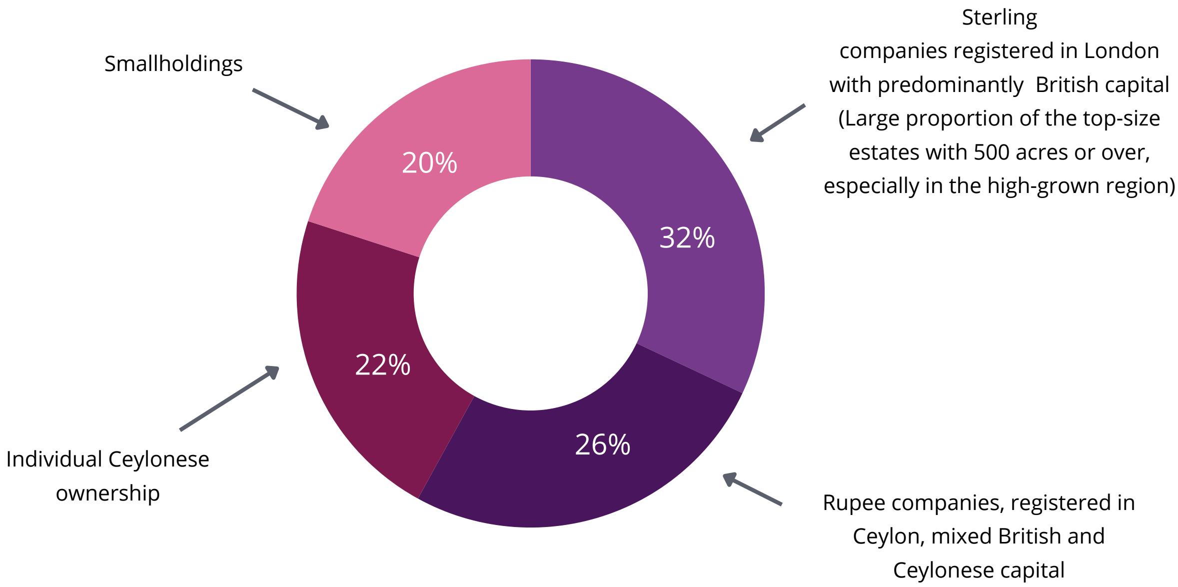


Figure 2 :Composition of tea estates right before nationalisation took place (Forrest 1967)

Further structural reform to the industry came in the form of the Sri Lanka Tea Board, which was created in 1976 with the dual mandate of both regulating and promoting Sri Lanka's tea industry[10]. As such, the Ceylon Tea Propaganda Board was integrated into the promotional division of the Tea Board.

In 1977, the government abolished Usawasama, Janawasama, and the electoral cooperatives owing to their poor performance. The management of the nationalised estates that came under their purview was handed over to the SLSPC and JEDB[11].

By the early 1990s, the continuing ill-performance of the state-owned estates could no longer be ignored. The government appointed a task force to investigate the inefficiencies of the state-run plantation companies, while The World Bank, as well as other donor organisations, conducted their own reviews of the nationalised estates. Every report was seemingly in consensus that the ownership of the tea lands should be privatised.

The government, aware of the political sensitivities of privatisation, came to a compromise championing privatised management instead of privatised ownership. Under this plan, the state would continue to own all nationalised estates, but their management would be temporarily delegated to the private sector. As such, between 1992 and 1997, the estates were restructured to form 26 regional plantation companies (RPCs), out of which, 24 were leased out to the private sector until 2045. SLSPC and JEDB retained the management of the two remaining RPCs.

[10] Sri Lanka Tea Board Law No. 14 of 1975, National State Assembly of Sri Lanka

[11] All references in this section, unless otherwise noted, come from: Kelegama, Saman, Nisha Arunatilake, Janaka Wijayasiri, Sri Lanka Tea Industry in Transition: 150 Years and Beyond (Colombo: Institute of Policy Studies of Sri Lanka, 2018)

The Tea Industry Of Sri Lanka :

THE PRESENT CONTEXT OF SRI LANKA'S TEA INDUSTRY

The proliferation of private tea smallholdings in the late 1970s, and especially the 1980s, commenced a series of market-friendly reforms into Sri Lanka's tea industry. The 1971 Janatha Vimukthi Peramuna (JVP) insurrection laid bare the severity of the unemployment crisis among the Sinhalese youth in the south of Sri Lanka. Montague Jayawickrame, Minister of Public Administration, Home Affairs and Plantation Industries between 1977 and 1987, identified and promoted smallholder tea cultivation in part as a solution to this issue. The increase in the supply of Ceylon tea was met by a reciprocal increase in the demand for Ceylon tea. Arab nations came out of oil crises of the 1970s much richer than they were before, leading to a significant boost in the demand for Ceylon tea in the Middle East[12]. The implementation of market-friendly trade policies following the fall of the Soviet Union in 1991 enhanced the demand for Ceylon tea in the post-Soviet states, notably Russia[13].

Presently, at the green-leaf stage, there are two major types of players that dominate the tea industry: RPCs and smallholders. RPCs are spread across an extent of around 266,400 hectares, mostly in the upper elevations, although there are some RPC estates in the Galle and Matara districts, which comprise the lower elevations of tea cultivation[14]. In addition to tea, RPCs cultivate several other plantation crops such as tea, rubber, and cinnamon. However, tea continues to be the dominant crop, covering an area of about 76,259 hectares.

The Tea Control Act No 51 of 1957 defines a tea smallholding as an extent of less than ten acres[15]. In general, however, any tea land that does not belong to an RPC is considered a smallholding. Accordingly, about 0.5 percent of tea smallholders own tea extents between ten and 50 acres of land. In 2020, there were 418,328 reported tea smallholdings in Sri Lanka, most of which are situated in the lower elevations. In 2020, the total extent of tea smallholdings in Sri Lanka was 390,190 acres, which amounted to an average of 0.93 acres per tea smallholding. 77.14 percent of tea smallholders owned less than one acre of tea land, and 97.65 percent of tea smallholders owned less than three acres of tea land.

Most tea smallholdings are situated in the lower lower- and mid-elevations, with 108,471 tea smallholders, representing a total cultivated extent of 43,056 hectares coming from Ratnapura District, and 85,185 tea smallholders, representing a total cultivated extent of 30,145 hectares coming from Galle District. In contrast, the Kandy and Nuwara Eliya districts, which comprise the upper elevations of tea cultivation, together have only 45,499 tea smallholders, with a total cultivated extent of 17,120 hectares. Given the appeal of vegetable farming among small-scale farmers in the upper elevations, the smallholder tea extent in the upper elevations has considerably reduced in the previous decades.

[12] Lewi, Charles, "The 1973 Oil Crisis and After," Journal of Post-Keynesian Economics, Vol. 1, No. 2 (Winter 1978-1979): 3-26

[13] http://www.srilankaembassy.ru/en/statistics

[14] All statistics in this section, unless otherwise noted, come from: "Statistical Information on Plantation Crops 2020," Ministry of Plantation Industries and Export Agriculture, 2022

[15] Tea Control Act No. 51 of 1957, The House of Representatives of the Dominion of Ceylon

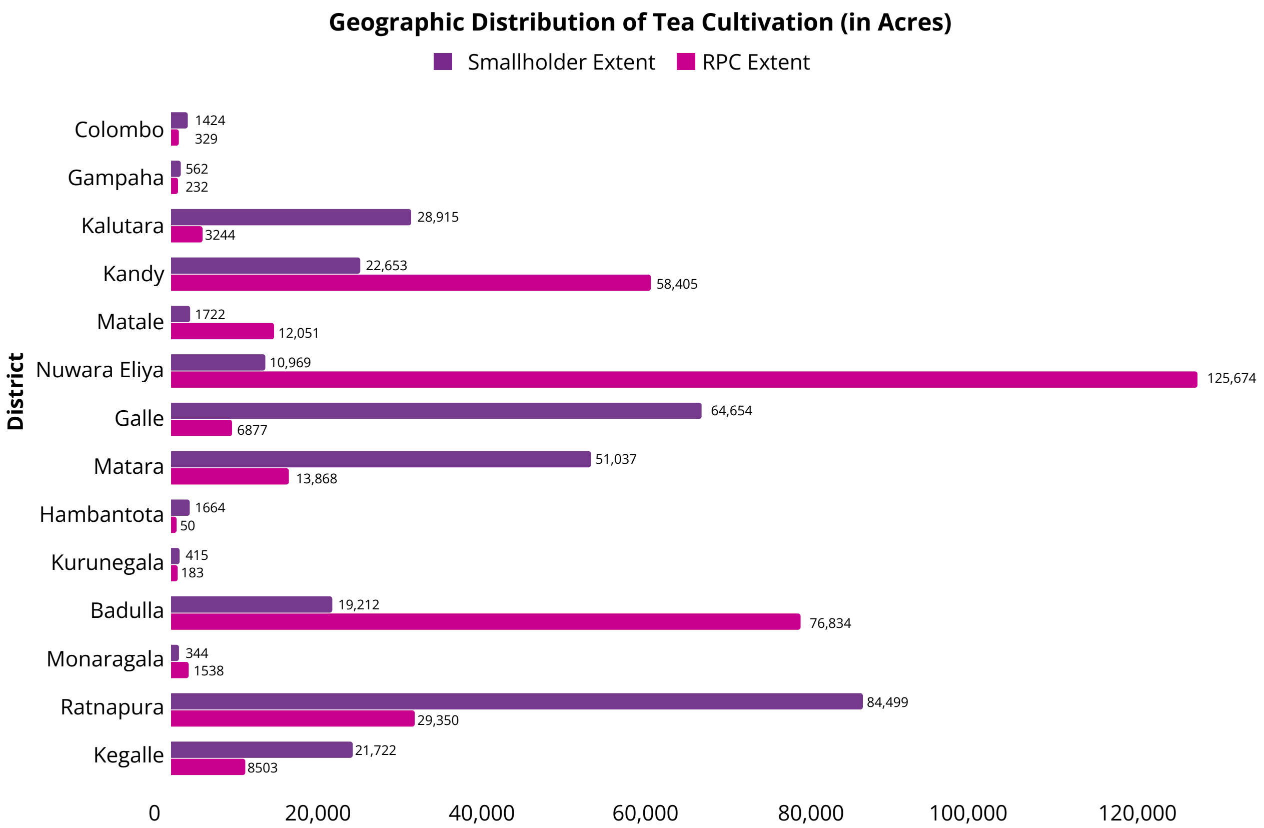


Figure 3 : Tea cultivation, by sector and district (Source: Economic Census 2013/14, DCS)

Despite the economies of scale that the larger estates in the RPCs may benefit from, tea smallholdings have proven to be somewhat more efficient than RPCs when it comes to the production of tea. RPCs own 32.5 percent of the cultivated tea extent, whereas tea smallholders own 67.5 percent of the total tea extent of Sri Lanka. However, tea smallholders contribute to the production of 74 percent of the made tea in Sri Lanka, whereas RPCs produce around 26 percent of the share.

	Total Production (KG)	RPC Share	Small Holder Share
2015	328,771,066	27%	73%
2016	292,573,586	25.5%	74.5%
2017	307,719,805	24.5%	75.5%
2018	303,944,234	25.0%	75.0%
2019	300,120,670	24.8%	75.2%
2020	278,851,765	26.1%	73.9%

Table 1: Production of tea by the numbers (MoPI 2020, Tea Board annual reports)

The RPCs and tea smallholdings only make up the initial stages of the value chain of the tea industry of Sri Lanka. The tea plantations and estates send their green leaf to factories for processing. Tea factories belonging to RPCs are generally referred to as ‘estate factories’, and most estate factories are ‘own-leaf factories’, which means that they only process green leaf sourced from their own estates. On the other hand, private tea factories that mostly run on green leaf purchased from smallholders are called ‘bought-leaf factories’. There is another type of factory that runs on bought-leaf, called Tea Shakthi Factories. Tea Shakthi Factories are owned by the Tea Shakthi Fund, the government fund aimed at uplifting the tea smallholder community. In 2021, there were 936 tea factories, of which 75 were exclusively own-leaf, and 288 were exclusively bought-leaf[16].

Tea is processed, and sometimes even blended, at the factories. Unless the factory conducts private or direct sales with buyers, the processed tea is then transported to brokers, who play the role of intermediary between the producers and buyers of tea. In 2021, just three percent of the total tea sales were either private or direct sales, and the rest was sold at the Colombo Tea Auction[17]. There are currently eight brokers in Sri Lanka’s tea industry that connect tea factories with buyers.

Mode of Sale	Total Sales (Million KG)	Percentage
Colombo Tea Auction	287	96.96%
Private Sales	8	2.70%
Direct Sales	1	0.33%

Table 2 : Breakdown of tea sales in 2021 (SLTB 2021)

The tea that is traded at the auction is either exported or sold in the local market. Given the high demand for Ceylon tea in other countries, and the high prices that Ceylon tea fetches in the international market, most of the tea that is produced in Sri Lanka is ultimately exported. In 2021, Sri Lanka produced a total of 299,488,422 kg of tea, and exported 285,871,722 kg, which puts domestic consumption at 4.5 percent of the total production of tea[18].

Tea exports thus account for a significant share of Sri Lanka’s foreign exchange earnings each year. While tea is no longer Sri Lanka’s largest annual source of foreign exchange earnings as it once used to be, it has consistently accounted for more than ten percent of Sri Lanka’s foreign exchange earnings in the past several years[19]. Sri Lanka’s export earnings from the tea industry crossed USD 1 billion for the first time in 2008, and has hovered around USD 1.5 billion in the last few years[20].

[16] “Annual Report,” Sri Lanka Tea Board, 2021
[17] “Annual Report,” Sri Lanka Tea Board, 2021
[18] “Annual Report,” Sri Lanka Tea Board, 2021
[19] Forrest, D. M. A Hundred Years of Ceylon Tea, 1867-1967 (London: Chatto and Windus, 1967); Annual Reports of the Central Bank of Sri Lanka
[20] FAOStat

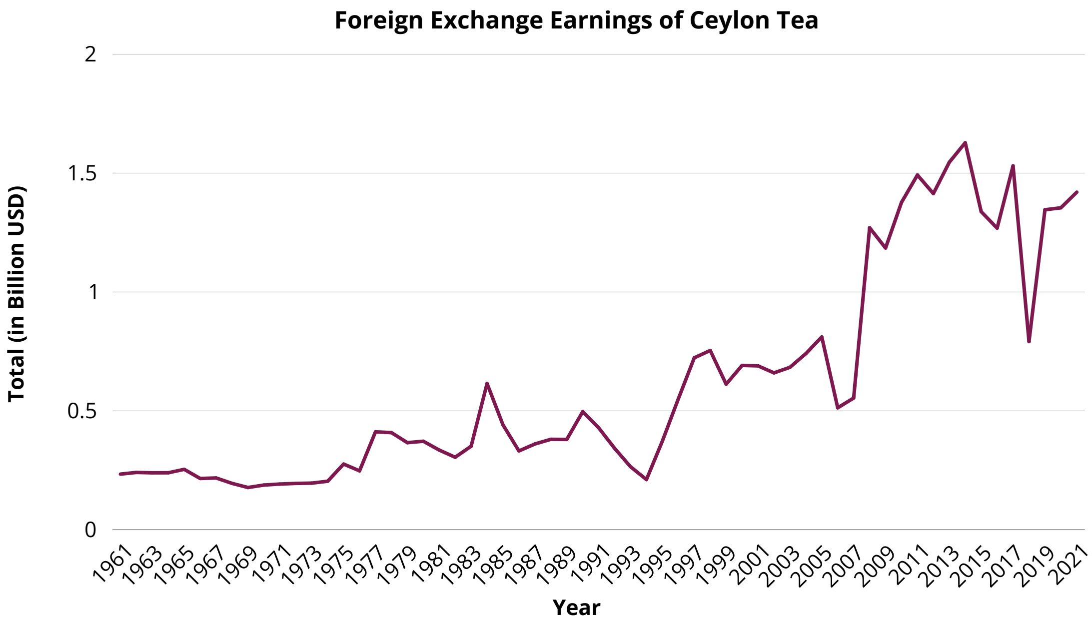


Figure 4: Foreign exchange earnings of the Sri Lankan tea industry (FAOStat)

Figure 5: Tea industry's share of Sri Lanka's total foreign exchange earnings (CBSL Annual Reports)

In addition to planters, brokers, exporters, and domestic sellers, there are numerous other actors, representing both the public and private sectors, that comprise the present structural makeup of the Sri Lankan tea industry. State institutions such as the Ministry of Plantation Industries, Ministry of Agriculture, Sri Lanka Tea Board, Tea Small Holder Development Authority, and the Tea Research Institute support the operations of the tea industry from the side of the government. Private collectives such as the Colombo Tea Traders' Association, Tea Exporters' Association of Sri Lanka, The Planters' Association of Ceylon, and Sri Lanka Tea Factory Owners Association also play a prominent role in the regular operations of the industry by representing the common interests of the various strata of private stakeholders in the industry.

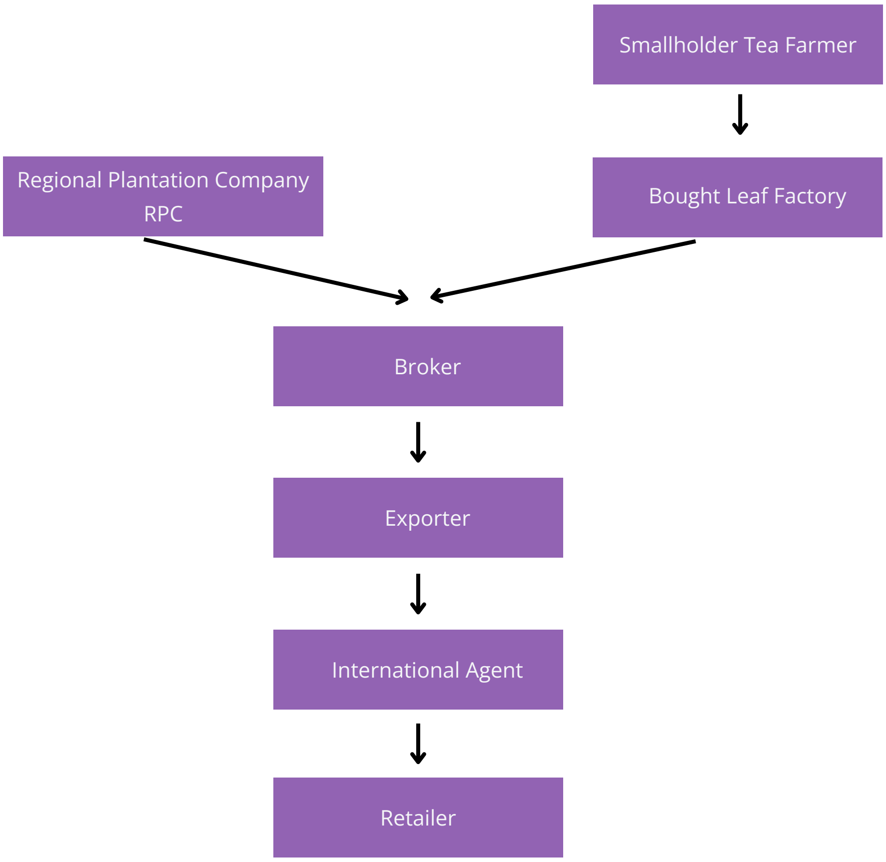


Figure 6: Tea Industry Value Chain

SRI LANKA'S TEA INDUSTRY: THE GOOD AND THE BAD

That Sri Lanka's tea industry is in grave decline is a commonly held view, even among those involved in the tea industry. While there may be some truth to this belief, particularly given the anecdotal narratives of the tea industry in its 20th Century heyday, the numerical evidence points to a reality that is more mixed. Neither is the outlook for the future of the industry too promising, nor is it devoid of any opportunities for market advancement. The recent performance of Sri Lanka's tea industry highlights both strengths and weaknesses of the industry, signposting both opportunities and challenges for sustaining its position as a leader of the global tea industry.

STRENGTHS AND OPPORTUNITIES

1. GLOBAL LEADER IN TEA PRODUCTION

Sri Lanka continues to dominate the global tea industry as a large producer and exporter of tea. While endogenous and exogenous factors such as market and weather conditions dictate the production and export of tea by each country each year, Sri Lanka has consistently managed to remain a top five producer and exporter of tea throughout the years. In 2021, Sri Lanka was the fourth largest producer of tea, supplying a total of 299,339 metric tons of made tea to the domestic and international markets.

Country	Production in 2020 (Metric Tons)
China	3,063,151
India	1,343,060
Kenya	537,832
Sri Lanka	**299,399**
Turkey	282,028

Table 3 : Production of tea by country in 2021 (International Tea Committee, 2022)

Sri Lanka ranked even better among exporters of tea in the same year, exporting 282,843 metric tons of tea as the third largest tea exporting country in the world. While Kenya and Sri Lanka export most of the tea that they produce, China and India consume most of the tea that they produce domestically, exporting only a fraction of their production. As such, in 2020, Sri Lanka was behind only Kenya and China in the export of teas, and ahead of India.

Country	Exports in 2020 (Metric Tons)
Kenya	558,925[21]
China	378,322
Sri Lanka	**282,843**
India	190,847
Vietnam	145.000

Table 5 : Export of tea by country in 2021 (International Tea Committee, 2022)

These numbers reiterate Sri Lanka's dominant position in the global tea industry. A closer look at the export figures shows that Sri Lanka's tea industry is in an even better position internationally than the overall production and export numbers might suggest, because of Sri Lanka's dominance in the market for orthodox black tea

2. DOMINATES THE ORTHODOX BLACK TEA MARKET

Sri Lanka remains a relevant player in the international tea market because it dominates the global market for its forte, orthodox black tea. Sri Lanka is not only a leading producer of black orthodox tea, but is the uncontested market leader when it comes to the export of black orthodox tea.

In 2021, Sri Lanka claimed almost one-fifth of the global black orthodox tea production—271,000 metric tons out of a total global production of 1,421,000 metric tons. In the production of black orthodox tea, Sri Lanka came second only to China, which produced 436,000 metric tons in 2021, mostly for domestic consumption, and Turkey, which produced 276,000 metric tons, again mostly for domestic consumption.

[21] Kenya exports more tea than it produces because tea produced in several other African nations are sold at the Mombasa auction.

Production of Black Orthodox Tea in 2021 (in 10,000 metric tons)

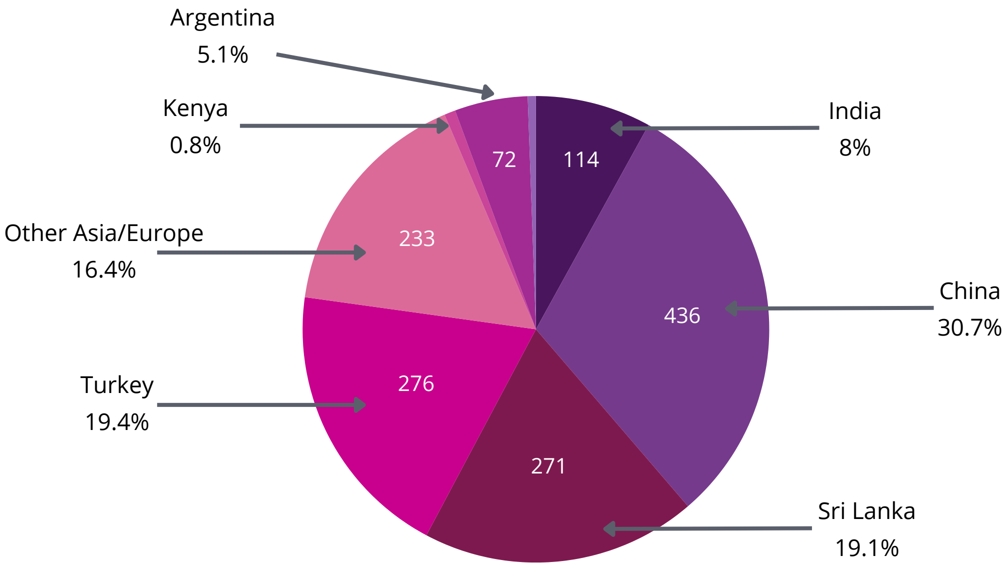


Figure 7 : Production of black orthodox tea by country in 2021 (International Tea Committee, 2021)

Sri Lanka's dominance in the export market of orthodox black tea is often understated. In 2021, the author's calculations, based on data from the Annual Bulletin of Statistics of theInternational Tea Committee, estimate that Sri Lanka's export market share of black orthodox tea was 51.2 percent, or 256.07 million kilograms out of 499.69 million kilograms. Argentina, which produces a different variety of orthodox black tea, was a distant second with 13.5 percent of the export market share. One may reasonably argue that Sri Lanka lags behind China, India, and Kenya in the overall production of tea, and Kenya and China in the overall export of tea; however, no competitor of Ceylon tea comes close to Sri Lanka's stronghold in the international market for orthodox black tea.

Export of Black Orthodox Tea in 2021 (in 1,000 Metric Tons)

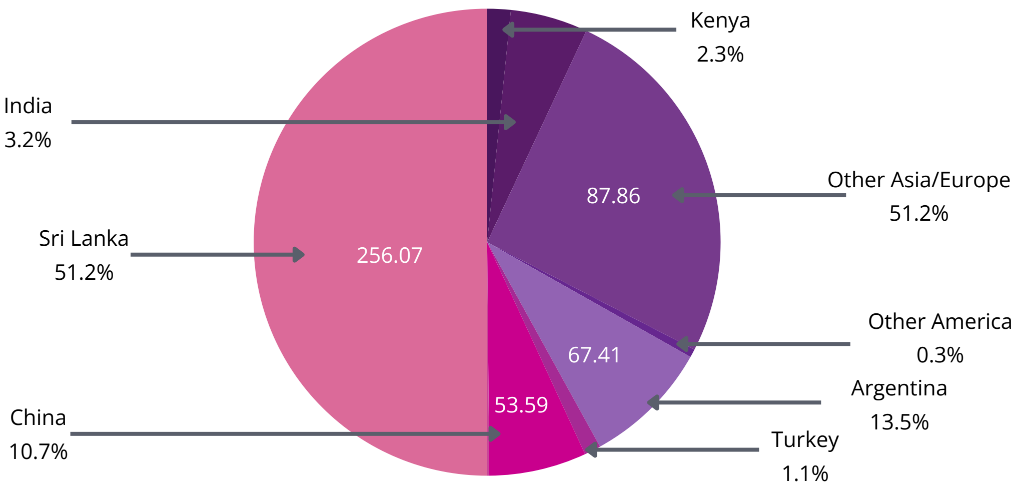


Figure 8 : Estimated export of black orthodox tea by country in 2021 (International Tea Committee, 2021)

3. FETCHES THE HIGHEST PREMIUMS FOR BLACK TEAS

Sri Lanka not only dominates the black orthodox tea market, but also fetches the highest premiums in the black tea market, solidifying Sri Lanka's position as a world leader in the tea industry. At the regional tea auctions held in black tea producing countries, Sri Lanka has consistently fetched the highest prices for its teas, despite constant price fluctuations. The high premiums that Sri Lanka fetches in the international tea market are attributable to the general scarcity of black orthodox teas, the unique character of Sri Lanka's black orthodox tea that puts it in high demand in the export market, and Sri Lanka's moderate levels of tea supply.

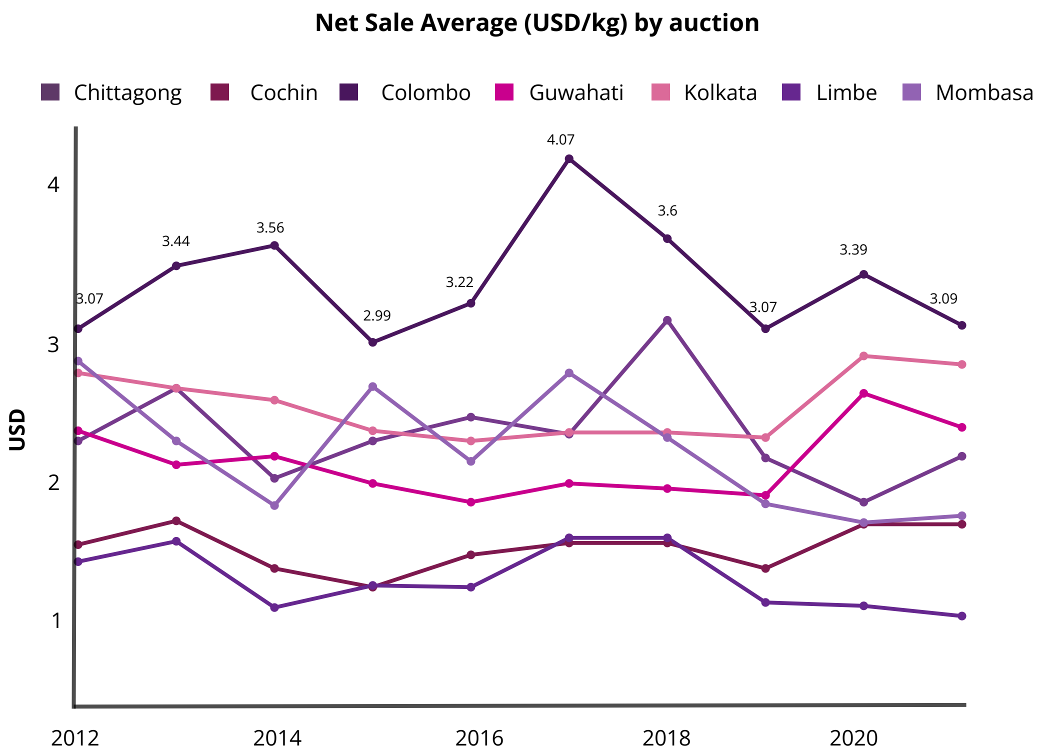


Figure 9

Compared to the 'crush, tear, curl' (CTC) method of producing tea, the orthodox method of tea production requires more resources and time, as well as compliance with traditional rolling techniques. As such, orthodox teas are more scarce in the international market compared to CTC teas, and fetch higher prices. In 2019, while the aggregate global production of black CTC tea stood at 2.079 billion kilograms, the aggregate global production of orthodox black tea was only 1.222 billion kilograms[22].

Sri Lanka's orthodox black tea further stands out in the international market from orthodox black teas produced in other countries because of the unique character of Ceylon teas. Liquor, aroma, flavour, leaf appearance, leaf size, and the quality attributes of teas are all determinants of the price of tea[23]. The unique taste profile, historical narrative, and the recognition of Sri Lanka as a high quality producer of orthodox tea all contribute to the high premiums that Sri Lanka fetches at the tea auctions[24].

[22] "Annual Bulletin of Statistics," International Tea Committee, 2019

[23] Tanui, John, Wanping Fang, Weiying Feng, Peifen Zhuang. Xinghui Li, "World Black Tea Markets: Relationships and Implications for the Global Tea Industry," Journal of International Food and Agribusiness Marketing, Vol. 24, No. 2 (April 2012): 148-68

[24] Takeo, Tadakazu, Pradip Kumar Mahanta, "Comparison of Black Tea Aromas of Orthodox and CTC Tea and of Black Teas Made from Different Varieties," Journal of the Science of Food and Agriculture, Vol. 34, No. 3 (March 1983): 307-10

The unique demand for Ceylon orthodox black teas compared to other orthodox black teas is apparent in how orthodox black teas of other origins perform in the export market. Although China produced 262 million kilograms of orthodox black tea in 2019, it only exported 64 million kilograms of it, consuming the rest domestically. As China is a large tea consuming country, this number is not surprising; however, given the relative scarcity of orthodox teas in the black tea market, all of China's domestically consumed orthodox black teas would have been exported if it was possible to fetch higher prices in the international market than in the domestic market. On the other hand, Argentina is also a large producer of orthodox black tea, producing 80 million kilograms in 2019 and exporting 72 million kilograms of it[25]. However, the different, and arguably inferior, profile of Argentina's orthodox black tea is evident in the fact that most of it is exported to the United States at low prices. The United States uses Argentina's black tea primarily to manufacture iced teas, where the quality of the tea counts for less compared to the hot tea industry[26].

The growing scarcity of Ceylon tea compared to its rising demand also contributes to the higher premiums that Ceylon tea fetches at the auctions. While Kenya has trapped itself in a cycle of oversupply to its largest consumers in the last several years, Sri Lanka has unintentionally taken the opposite route. The growth in the demand for tea in Sri Lanka's primary export markets has outpaced the growth of Sri Lanka's supply of tea. In fact, Sri Lanka's production of tea has been declining over the last several years.

Between 2010 and 2020, the production of tea in Kenya grew by 2.89 percent on average every year, far outpacing the growth in the demand for black tea[27]. In 2020 alone, the production of processed tea in Kenya increased by 19.43 percent compared to the previous year, while no black tea consuming economy saw a remotely proportional increase in the demand for black tea. Among the largest consumers of Kenyan black tea, only the growth rate of Pakistan's consumption of tea outpaced the growth rate of Kenya's supply of tea. The consumption of black tea by other major buyers of Kenyan tea, such as the United Kingdom and Russia, declined over this period. This oversupply of tea by Kenya subsequently led to the suppression of the average prices at the Mombasa tea auction, as can be seen in Figure 9.

On the other hand, Sri Lanka's production of tea declined by an average of 1.87 percent during the same period, while the consumption of black tea by most of Sri Lanka's major buyers, except Russia, increased[28]. The better bargaining position that Sri Lanka has thus carved out for its teas in recent years contributes to the high premiums that Sri Lanka fetches for its teas in the international market, positioning Sri Lanka well in the global tea industry.

[25] "Annual Bulletin of Statistics," International Tea Committee, 2019

[26] Thea, Ana Euginia, Luis Brumovsky, Miguel Eduardo Schmalko, Maria Antonia Lloret, "Differences in Quality Parameters Between Types of Commercial Tea from Argentina, International Journal of Food Studies, Vol. 2 (October 2012): 168-78

[27] FAOStat

[28] FAOStat; Intergovernmental Group on Tea, "Current Global Market Situation and Emerging Issues," Food and Agriculture Organization of the United Nations, February 2022; Intergovernmental Group on Tea, "Current Market Situation and Medium Term Outlook," Food and Agriculture Organization of the United Nations, May 2018; Intergovernmental Group on Tea, "Current Market Situation and Medium Term Outlook," Food and Agriculture Organization of the United Nations, May 2016; Intergovernmental Group on Tea, "Current Market Situation and Medium Term Outlook," Food and Agriculture Organization of the United Nations, October 2014

WEAKNESSES AND CHALLENGES

The high prices of Ceylon tea alone do not guarantee the future sustainability of Sri Lanka's tea industry, which faces hindrances from increasing international competition, a stagnant market scope, and uncontained costs of production.

1. INCREASING INTERNATIONAL COMPETITION

While the gradual decline in the production of Ceylon tea over the years has inflated the premium that Ceylon tea receives in the international market, this strategy is not entirely infallible. Substantial undersupply, paired with the growing demand for tea in countries that have traditionally consumed Ceylon tea, could push international buyers towards other countries that produce black tea. In late 2021 and early 2022, when the supply of Ceylon tea dropped substantially due to the ban on agrochemical fertiliser, traditional buyers of Ceylon tea who could not afford to pay the inflated premium for Ceylon tea temporarily looked towards India to fulfil their consumption needs[29]. The decline in supply is attributable to both RPC and smallholder sectors, and all elevations of production, as own-leaf and bought-leaf factories in the high, medium, and low elevations have seen a reduction in their production levels in the past decade.

Year	Production (in Million KGs)									
	Leaf Ownership				Elevation					
	Bought Leaf (Smallholder)		Own Leaf (Non smallholder)		High		Medium		Low	
2012	234.2	71.3%	94.2	28.7%	73.7	22.4%	52.6	16.0%	202.1	61.5%
2013	245.4	72.2%	94.6	27.8%	75.8	23.1%	56.1	16.5%	208.1	61.2%
2014	247.5	73.2%	90.5	26.8%	78.9	23.3%	49.2	14.6%	209.9	62.1%
2015	239.6	72.9%	89.2	27.1%	75.4	22.9%	51.0	15.5%	202.4	61.6%
2016	218.1	74.5%	74.5	25.5%	64.4	22.0%	44.5	15.2%	183.7	62.8%
2017	232.4	75.5%	75.3	24.5%	64.6	21.0%	45.7	14.9%	197.4	64.2%
2018	228.1	75.0%	75.9	25.0%	65.0	21.3%	47.1	15.5%	191.8	63.1%
2019	225.7	75.2%	74.4	24.8%	63.1	21.0%	47.2	15.7%	189.9	63.3%
2020	206.0	73.9%	72.9	26.1%	62.2	22.3%	46.7	16.7%	169.9	60.9%

Table 6 : Declining production across categories of producers (Source: MoPI 2020)

[29] https://island.lk/production-loss-in-sri-lanka-buoys-demand-for-indian-tea/

While Sri Lanka's export capacity has remained mostly stagnant over the last several decades, drastically declining in the recent years, Kenya has consistently increased its export capacity[30]. The increased production of tea in Kenya is in part attributable to the higher premiums that Kenyan tea has been receiving in the international market overtime, although the premiums have, as of late, alarmingly declined. The heavy presence of multinationals such as Lipton (whose business strategy has exclusively focused on increasing supply to the mass market to drive down prices) in the Kenyan tea industry has also helped Kenya boost its production numbers. The prioritisation of production quantity by Kenya's Tea Directorate and the Kenya Tea Development Authority, intended to gain further ground in the international mass market, has also aided Kenya's production boost[31].

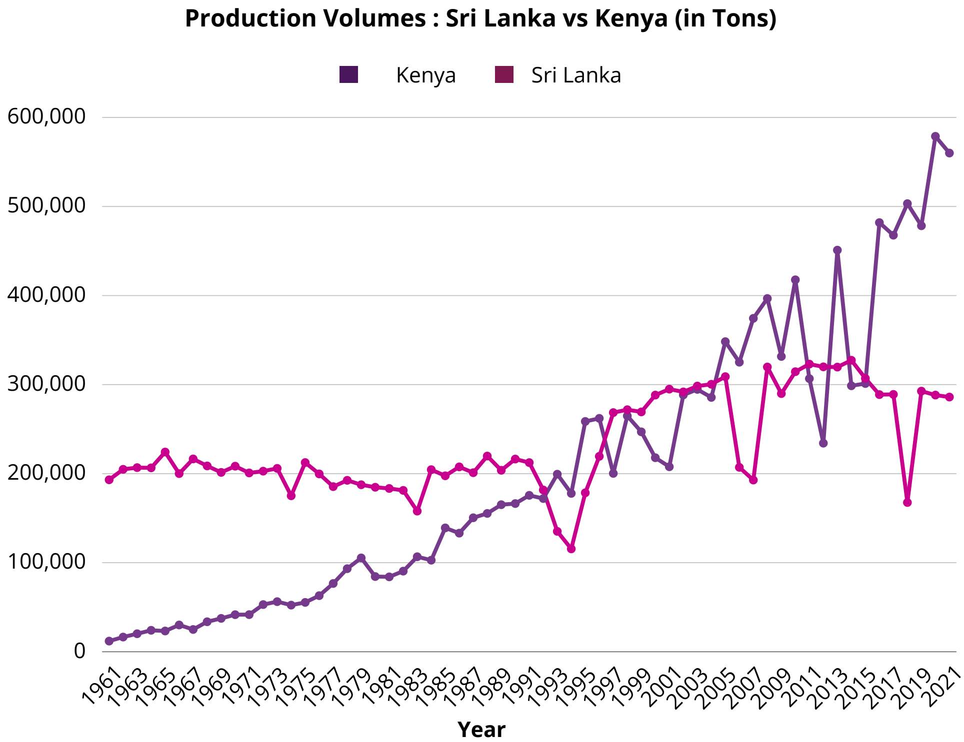


Figure 10: Export volumes of tea, Sri Lanka vs. Kenya (FAOStat)

Sri Lanka has, without question, lost some ground in the international market owing to Kenya's rise as a mass supplier of black tea. For instance, countries such as Egypt and Pakistan, which used to be reliable buyers of Sri Lanka's orthodox black teas, have almost entirely shifted to the consumption of Kenyan CTC teas[32]. Moderating the supply of Ceylon tea to inflate premiums is a gamble, which could lead to Sri Lanka losing its prominence in the international market if the hand is overplayed. This trade-off is particularly relevant if the island's tea industry continues to rely primarily on the international mass market to purchase its teas.

[30] FAOStat

[31] Intergovernmental Group on Tea, "Current Market Situation and Medium Term Outlook," Food and Agriculture Organization of the United Nations, May 2018

[32] FAOStat

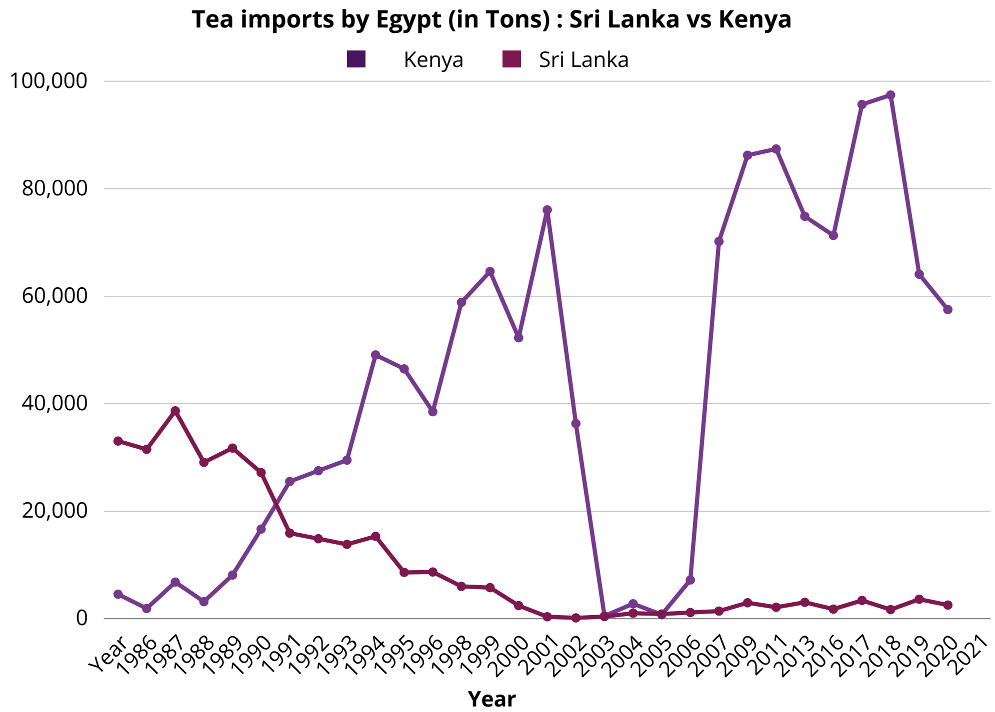


Figure 11

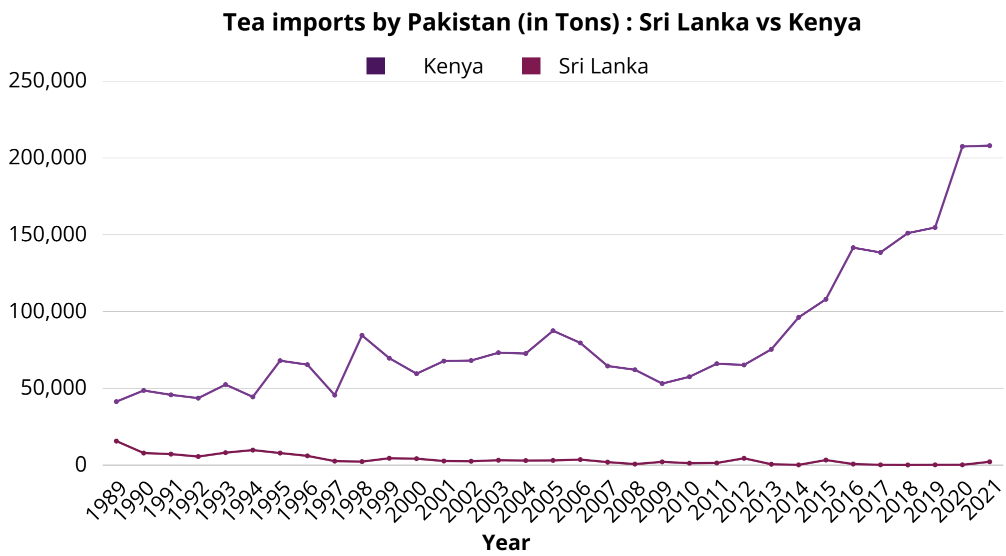


Figure 12: The decline of Sri Lankan tea exports to Egypt and Pakistan since the rise of Kenyan tea (FAOStat)

2. EXCLUSIVE RELIANCE ON A FEW DEVELOPING MARKETS

Sri Lanka's continuing reliance on the international mass market for tea, which is primarily made up of developing countries in the eastern hemisphere, hinders the growth potential of the island's tea industry. Between 2016 and 2021, the ten largest buyer nations of Ceylon tea remained virtually unchanged, except for Ceylon tea's loss of ground in Japan. Besides China and Japan, who are not significant buyers of Ceylon tea to begin with, every country on this list is characterised by either unstable governance, economic turmoil, or both.

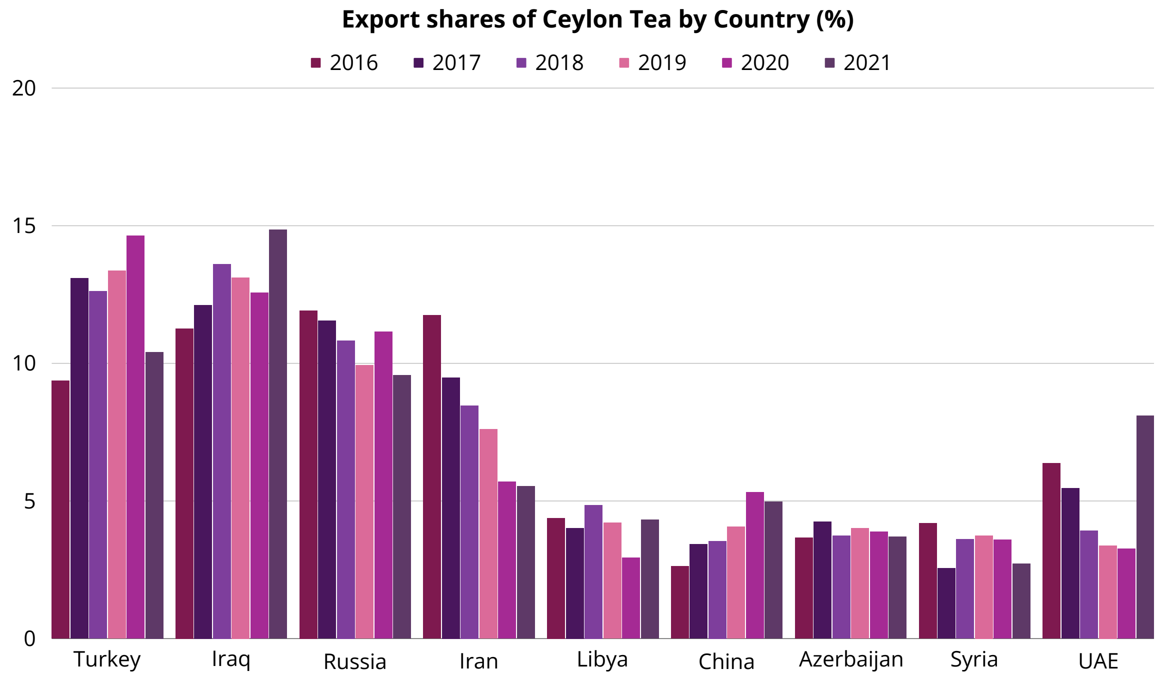


Figure 13: Major export destinations of Ceylon tea (SLTB Annual Reports)

Ceylon tea's disproportionate reliance on these countries poses two major challenges to the growth of the industry. Firstly, consumers in these mostly developing economies are limited in their ability to pay high prices for tea, despite their high demand for tea. Accordingly, these countries, except for China and Japan to an extent, collectively represent the international mass market for tea, where economically unsophisticated consumers are uber-sensitive to price changes. This highly price-sensitive nature of the mass market limits the competitiveness of higher-priced Ceylon teas, imposing a strict upper boundary on the premiums that Ceylon tea can fetch in the international market.

On the other hand, political instability in these countries could prove to be detrimental to the sustenance of the Ceylon tea industry. In 2015, the demand for tea at the Colombo auction significantly plunged due to various international political issues that affected the stability of the domestic economies of the primary international buyers of Sri Lanka's tea. Some of these issues included the Russian annexation of Crimea, turmoil in the Middle East, severe currency depreciations, and economic sanctions [33]. Given that these issues continue to persist, the concentration of Ceylon tea in a few volatile markets poses a threat to the industry's future [34].

[33] Intergovernmental Group on Tea, "Sri Lanka Tea Industry Review of 2014 and 2015 and Outlook for 2016," Food and Agriculture Organization of the United Nations, May 2016

[34] The sanctions imposed against Russia by the international community following Russia's occupation of Ukraine, however, has had a favourable impact on the tea industry of Sri Lanka. Conversations with exporters of Ceylon tea to Russia reveal that the sanctions have allowed for greater value addition in Sri Lanka itself, and has led to more

OPPORTUNITIES FOR CEYLON TEA IN OTHER MARKETS

Critics of the present export destinations of Ceylon tea point to the economic and political instabilities of those nations as evidence that Sri Lanka should look towards other international buyers, preferably in more advanced economies. Some further argue that consumers in advanced economies have the capacity to pay higher premiums for Ceylon tea than its current consumers in the Middle East, North Africa and the intercontinental nations of Europe and Asia.

While the Sri Lankan tea industry has yet to fully explore the specialty tea segments of advanced economies, merely shifting to advanced economies would not necessarily mean high premiums. Statistics show that the most mass market consumption of Ceylon tea, with the help of the supermarket discount culture, takes place in the advanced economies of the West. For instance, 58.58 percent of tea imported for consumption in the United Kingdom in 2021 came from Kenya, purchased at an average of USD 2.20 per kilogram, which is far below the premium for Ceylon tea. Moreover, 44.44 percent of tea imported for consumption in the United States came from Argentina, purchased at an average of USD 1.24 per kilogram, which is even lower than the average premium for Ceylon tea. These figures show that the common perception of advanced economies as the ideal destinations for Ceylon tea in order to earn higher premiums is not necessarily founded on reason.

The truth is, the highest prices for tea in the international mass market exist in the developing countries to which Sri Lanka already caters. The only way the risk of concentrating on these unstable markets can be hedged away without reducing the profitability of the Ceylon tea industry is to penetrate the specialty markets in the advanced economies. These speciality markets, discussed in more detail later, are growing but miniscule in size, which means that in the present context, the risk factor associated with catering to high-volatility economies may hardly be avoided. In fact, other large tea exporting countries such as Kenya, China and India also substantially rely on a similar pool of buyers as Sri Lanka for the sale of a majority of their teas[35].

reliable payments from Russian importers. The sanctions did not include food and beverages, which is the reason why Sri Lanka is able to continue exporting to Russia.

[35] The top buyers of Kenyan tea in 2019 were Pakistan, Egypt, the United Kingdom (UK), the United Arab Emirates (UAE), the Commonwealth of Independent States of the former Soviet Union (CIS), Sudan, Yemen, Afghanistan, and Poland, whereas the top buyers of Indian tea in 2019 were Russia and the CIS, Iran, the UAE, Pakistan, the UK, Egypt, China, Germany, the United States, and Poland. See "Annual Bulletin of Statistics," International Tea Committee, 2019

3. STAGNANT GLOBAL MARKET FOR TEA CONSUMPTION

Another increasingly relevant obstacle to the future sustenance of the Sri Lankan tea industry, and tea industries of other nations, is the stagnant—and sometimes declining—demand for the consumption of tea worldwide. Large economies such as the United States, United Kingdom, the European Union, and Russia, in particular, have seen a decline in the total consumption of tea in the last decade[36]. The following table outlines how the per-capita consumption of tea has changed over the past several years, with significant declines among developed countries. Of the largest consumers of tea, China, India, Bangladesh, Pakistan, and Turkey saw an increase in consumption. It is unclear whether this increase necessarily provides room for the expansion of the Sri Lankan tea industry, given that most of these nations consume tea that is domestically produced.

Country	Per-capita consumption of tea (KG)	
	2014-16	2019-21
United Kingdom	1.68	1.61
Germany	0.39	0.29
United States	0.40	0.34
Afghanistan	2.19	0.82
Bangladesh	0.48	0.52
China	1.32	1.78
India	0.74	0.81
Japan	0.84	0.77
Pakistan	0.81	1.08
Turkey	3.20	3.23
Egypt	1.05	1.00
CIS (inc.Russia)	0.89	0.82

Table 7: Per capita consumption of tea (Source: International Tea Committee 2022)

A caveat that further dilutes these numbers is the growing popularity of infusions (also known as tisanes or herbal teas), which are marketed as 'teas' but do not contain actual tea[37]. The global market for infusions, which now stood at USD 2.76 billion in 2017, is expected to grow at an annual rate of 4.94 between 2022 and 2027[38]. The rise of the market for infusions, while increasing the demand for tea, weakens the growth prospects of tea-growing countries such as Sri Lanka in the long run, given the use of no tea leaves in the production of infusions.

The declining popularity of tea in the global market can be attributed primarily to the rise of the coffee industry worldwide. While there is no single explanation for the rise of the coffee industry, some attribute it to the rise of the Starbucks culture in the United States, and the Americanisation of the global culture overtime. The preference for coffee in the United States, however, began way before the rise of coffee franchises, and famously goes back to the boycott of tea in 1770s as a form of protest against the government of Britain[39]. Some argue that the preference for coffee in the United States goes even further back, both with tea generally not being considered a masculine drink in early American culture, and the high tariffs imposed on teas imported to the United States by the British government[40].

[36] Intergovernmental Group on Tea, "Current Global Market Situation and Emerging Issues," Food and Agriculture Organization of the United Nations, February 2022

[37] https://www.sciencedirect.com/science/article/pii/S2225411017300986

[38] https://finance.yahoo.com/news/herbal-tea-market-size-grow-051500168.html

[39] MORE THAN THE BOSTON TEA PARTY: ...University of Colorado Boulderhttps://scholar.colorado.edu › downloads

[40] https://www.teaandcoffee.net/blog/23628/why-do-americans-prefer-coffee-to-tea/

Beyond the obvious cultural advantage exploited by the global coffee industry, its rise is also explained by the creative resurgence of the industry in recent times, which the tea industry has failed to successfully replicate. The rise of specialty coffee, and the treatment of coffee drinking as a social and artisanal experience with the rise of coffeehouses, has enhanced the demand for conspicuous consumption of coffee by the newer generations[41]. While the global tea industry has attempted to reach this level of demand for conspicuous consumption, it has so far failed to reach the premiums extracted by the coffee industry. This shortcoming of the global tea industry has inevitably limited the opportunities for the growth of the Sri Lankan tea industry as well.

4. INCREASING COSTS OF PRODUCTION

Despite catering primarily to a price-sensitive export market with little capacity to accommodate high prices, the costs of production of the Sri Lankan tea industry continue to rise. The rising costs of production are making the tea industry increasingly less profitable, leading to questions about the profitability of the industry.

The average cost of production per a kilogram of tea rises every year, with labour costs making up around 70 percent of the total cost of production[42]. If the growth of the premiums that Ceylon tea receives in the auction is not identical to the growth in the cost of production, the industry runs the risk of becoming unprofitable. In fact, in 2014 and 2015, the average cost of production was higher than the average auction price of Sri Lankan tea, resulting in substantial losses among tea producers

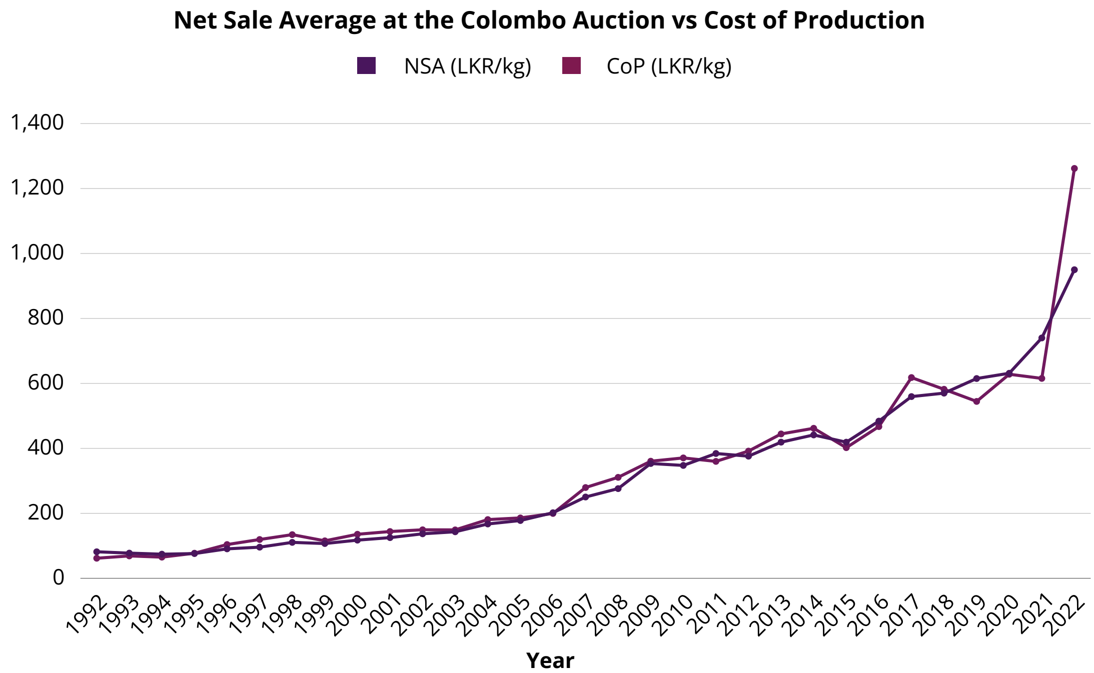


Figure 14 : Profit margins in the Sri Lankan tea industry in the last decade (Talawakelle Plantations PLC 2023)

[41] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8417051/

[42] "Cost of production of tea per kilogramme, 2014/15 - 2018/19," Department of Census and Statistics, http://www.statistics.gov.lk/Agriculture/StaticalInformation/rubb8

With the ever-rising costs of production, Ceylon tea brands, which consequently bear more expensive price tags in the international mass market, are becoming increasingly uncompetitive, with price-sensitive consumers opting for lower-priced retail alternatives. Despite the high premiums that the Sri Lankan tea industry continues to earn, the decreasing international competitiveness of Ceylon tea due to rising costs of production could very well push Sri Lanka out of the island's dominant position in the global tea industry.

THE DISCUSSION PAPERS

What follows this introductory chapter is a series of four discussion papers that identify four causes, two each in the factor market and the product market, which reduce the market competitiveness of Ceylon tea. If unaddressed, it is not an exaggeration to state that these deterrents of competitiveness result in a permanent collapse of the island's tea industry.

The first discussion paper tackles the unique labour market-related issues faced by the tea industry, primarily due to the market distortions of the attendance-based minimum wage that characterises the industry's labour market. The second discussion paper studies industry-specific land issues that disincentivise long-term capital investments. The third and fourth discussion papers are concerned with insufficient value addition and quality control, resulting in lower premiums for Ceylon tea than the industry would otherwise be able to earn.

The strengths of the Sri Lankan tea industry, and the opportunities that remain open, however, present various ways forward for the industry to successfully overcome these challenges and sustain its position as a leader of the global tea trade. Various interested parties have at various points in time, offered recommendations to stakeholders of the industry, both public and private, as to how the future of the industry should be approached. The discussion papers also include an economic analysis of those proposed solutions, weighing their potential costs and benefits to different stakeholders and the industry at large.

These discussion papers are the culmination of the comprehensive review of existing literature, meticulous analysis of data, and extensive interviews with various stakeholders of the Sri Lankan tea industry, including planters, plantation workers, smallholders, estate factories, bought leaf factories, brokers, exporters, buyers, researchers, and current and former representatives of state institutions that are part of the Sri Lankan tea industry.

It is important to note that the proposed solutions in the discussion papers are not recommendations by Advocata Institute for the tea industry of Sri Lanka, but a cumulation of solutions that have been proposed by the industry itself. The purpose of the discussion papers is to evaluate the positives and the negatives associated with each proposed solution from an economic lens, so that industry stakeholders and policymakers have a complete understanding of the potential effects, both good and bad, of policy decisions that they may pursue.

DISCUSSION PAPER 1

LABOUR PRODUCTIVITY, WELFARE, AND THE MINIMUM WAGE IN TEA PLANTATIONS

The attendance-based minimum wage model is partly responsible for the high costs of production of Sri Lanka's RPCs, and their low productivity, helping make Ceylon tea uncompetitive in the international market. In contrast, the smallholder sector, with its market-based wage model, stands out as a more efficient counterpart. Despite being billed as a guarantor of a living wage, the minimum wage model imposes a ceiling on the earnings of estate workers, and also helps preserve the traditional power structures of tea plantations, in which estate workers sit at the bottom. This discussion paper establishes an economic framework to analyse the minimum wage model, and explores the strategies that RPCs could pursue, with the help of policymakers and other stakeholders of interest, to enhance the industry's competitiveness under the minimum wage model. The paper also evaluates alternative wage models proposed by stakeholders, that take a more market-based approach to employment within the industry.

The cost of production of tea in Sri Lanka's RPCs is the highest in the world. This unmatched high cost makes the island's tea industry both uncompetitive and unprofitable in the international market. Labour costs comprise 65 to 75 percent of the cost of production at the green-leaf stage in RPCs.

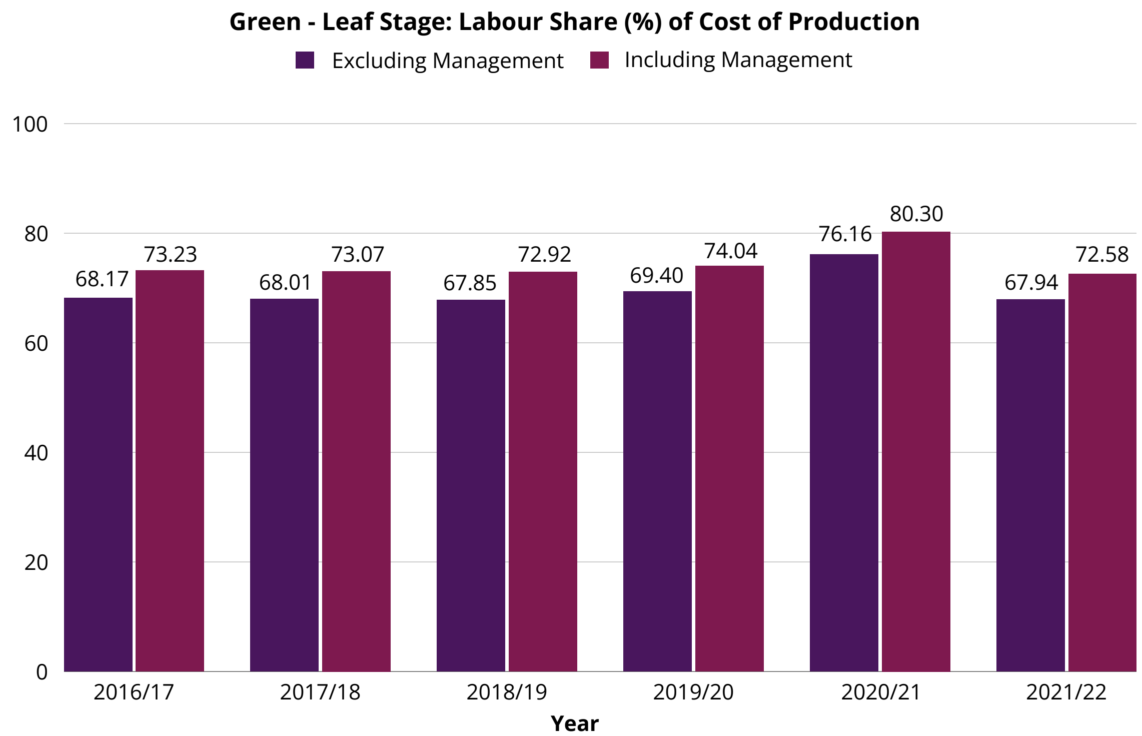


Figure 1 : Labour share of the cost of production of tea at the green-leaf level (Department of Census and Statistics)

In order to understand the high share of labour costs in RPCs, it is important to first understand the unique historical and present-day factors that characterise the community of tea estate workers in Sri Lanka. Most estate workers, particularly in the upcountry estates, belong to the Indian Tamil community of Sri Lanka, which consists of descendents of estate workers who first came to Sri Lanka in the nineteenth century from South India, initially to work on Ceylon's coffee plantations, and subsequently the island's tea plantations[43]. Two centuries later, the Indian Tamil community, on whom the RPCs primarily rely to supply labour, still predominantly resides in estate housing.

Most workers on Sri Lankan tea plantations are pluckers, given the recurring nature and the labour intensity of the activity. The number of workers in a given tea estate assigned to various duties depends on the level of automation of the estate. Even in an estate where most activity is not automated, plucking makes up over 50 percent of the total labour hour requirement[44]. Given that some non-plucking activities, including some areas of field work and factory work, have been automated in many estates, conversations with RPCs reveal that pluckers make up more than 60 percent of the total workforce in estates. Field workers make up another 20 percent of the estate workforce, while factory workers constitute around 15 percent of it.

The labour share of the total cost of production in the tea industry is substantially lower in other major tea producing countries where RPC-style large-scale plantations are commonly found. In Kenya, labour costs are thought to make up only half of the cost of production in the green leaf stage, and around 20 percent in the processing stage[45]. In India, the labour share of the total cost of production at the green leaf stage is between 40 to 50 percent, while the share of labour cost in the processing stage is less than 5 percent[46]. While these numbers do not provide a clear picture on the relative labour and capital costs between countries, and data on this topic is unavailable, conversations with industry professionals reveal that the cost of labour in Sri Lankan tea plantations is significantly higher than in other countries to produce the same amount of tea.

The question then becomes: Why are the labour costs substantially higher in Sri Lankan plantations, compared to the labour costs in other major tea producing countries? The answer to this question is simple. The high minimum wage compared to other tea producing countries, and the substantially low productivity of workers, together make labour by far the most expensive input in the Sri Lankan tea plantations. In fact, the high labour wage rate and the low labour productivity are interconnected because the minimum wage is based on attendance, instead of performance. The lack of productivity incentives tied to the attendance-based minimum wage makes it nearly impossible for employers to economise the use of labour as an input in the production process amidst the rising wage rate.

[43] Wenzlheumer, Roland. From Coffee to Tea Cultivation in Ceylon, 1880-1900: An Economic and Social History, Brill's Indological Library, 2008

[44] https://www.ips.lk/wp-content/uploads/2017/01/The-Labour-Situation-on-S.L-Tea-Estates.pdf

[45] "Kenya Tea Growers Say Hampered by High Labour Costs," Reuters, 29 June 2016, https://www.reuters.com/article/kenya-tea-idINL8N19L0T5; Kidusu, M., F. Memba, Christopher Khayeka-Wandabwa, "Effects of Factory Labour Costs on Annual Returns to Tea Growers: A Case Study of KTDA Managed Factories in Kenya", Asian Journal of Agricultural Extension Economics and Sociology, Vol. 3, No. 6 (January 2014): 680-9

[46] Hannan, Abdul, "Study on Cost of Production, Pricing of Green Leaf, and the Relationship of Small Tea growers (STG) with Bought-Leaf Factories and Auction Centres," Centre for Education and Communication Working Paper, 2007

SMALLHOLDERS AS POSITIVE DEVIANTS

The tea smallholder sector, where labour is a function of the free market, offers a foil to the labour efficiency issues in the RPCs. As such, smallholders are 'positive deviants' in the tea industry of Sri Lanka when it comes to labour efficiency, a phrase coined by Jerry Sternin and Robert Choo to refer to those with better outcomes than their peers because of their unique practices[47].

The cost of labour does not similarly affect the tea smallholder sector for a variety of reasons. Firstly, the tea smallholder sector is made up of farmers who on average own less than an acre of cultivated tea land, allowing many smallholders to forego the need to hire labour[48]. Conversations with industry stakeholders reveal that at most 50 percent of tea smallholders tend to their own lands, usually with help from their families. The rest hire workers, usually villagers seeking daily work, at a substantially lower cost per worker compared to RPCs.

Even among smallholders who hire daily workers to perform plucking and other fieldwork in the smallholder sector, both the labour wage and the labour rate are substantially below RPCs. Whereas the cash and non-cash benefits received by each estate worker add up to around LKR 1,750 per worker at RPCs, with additional costs incurred by RPCs to provide non-cash benefits to the dependents of these workers, a smallholder tea farmer spends much less per worker per day; the daily average wage for a male worker in the tea smallholder sector is LKR 1,723, while the daily average wage for a female worker (mostly recruited for plucking) is LKR 1,250[49]. Conversations with industry professionals reveal that the plucking average of a worker in the smallholder sector is around 30 kg, which is substantially above the 18 kg plucking average of RPC workers. Accordingly, while a smallholder pays around LKR 41.67 to have a kilogram of green leaf plucked by a daily worker, an RPC pays around LKR 97.22 to have a kilogram of green leaf plucked by an estate worker. The average cost to have a kilogram of green leaf plucked is even smaller across the smallholder sector given that a sizable share of smallholders pluck their own green leaf.

While labour shortages are currently slowing down the pace of business at RPCs, the smallholder sector has expanded overtime as aforementioned, indicating the continued interest among individuals to become a tea smallholder. The lack of interest in being employed at RPCs stems primarily from the dignity issues traditionally associated with estate work, given the social perceptions and the historical conditions of estate labour. The tea smallholder sector does not suffer from such inferior perceptions, despite smallholders performing similar activities as estate labour, given the facets of land ownership and self-employment at play in the smallholder sector. As such, the plantation sector of Sri Lanka has much to learn from the tea smallholder sector, its more efficient counterpart characterised by a remarkably free-market setup.

[47] Sternin, Jerry, and Robert Choo. "The Power of Positive Deviancy." Harvard Business Review, 2000.

[48] https://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---ilo-colombo/documents/publication/wcms_65 4641.pdf

[49] See Central Bank Annual Report (2022).

THE ATTENDANCE-BASED MINIMUM WAGE

With its attendance-based minimum wage for tea estate workers, Sri Lanka has the highest labour wage rate among all black tea producing countries. Since March 2021, Sri Lanka's tea pluckers are paid a wage of LKR 1,000 a day, which is roughly equivalent to a daily wage of USD 3.24 (USD 5 before the foreign exchange crisis)[50]. In contrast, a tea plucker in Kenya is paid a daily wage of only USD 3.40, while in India, where wages of pluckers vary based on the region, a plucker earns roughly between USD 2 to 3 a day.

Country	Labour rate : Wage per kilogram of tea (As per exchange rate on July 19, 2023)
Sri Lanka	USD 0.17 - (18 kg a day/ LKR 1,000 daily wage)
Kenya	USD 0.08151[51] - (45 kg a day/ KSH 516.45 daily wage)[52]
Assam, India	USD 0.07353 [53] - (34 kg a day/ INR 204 daily wage)

Table 1 : Per kilogram labour wage of tea pluckers in major black tea producing countries

The attendance-based minimum wage applies to all permanent employees in the tea industry regardless of which part of the value chain they work in. As such, tea pluckers, most other field workers, and most factory workers in the Sri Lankan tea industry are paid the daily minimum wage based on their attendance if they fulfil a predetermined minimum daily target of work, which, for pluckers, is the plucking of 18 kilograms of green leaf, based on seasonal yield. However, conversations with employers and workers reveal that these minimum targets, though easy, are not rigid; a plucker may be paid the daily minimum wage even if they do not meet the 18-kilogram target, given the existence of a reasonable excuse.

[50]The Gazette of the Democratic Socialist Republic of Sri Lanka No. 2217/37, 05 March 2021

[51]https://nation.africa/kenya/blogs-opinion/opinion/higher-wages-would-hurt-tea-sector-1900

[52]Kenya's ability to maintain lower wages in the tea industry is driven by various labour market conditions that help keep the wages of unskilled agricultural workers low, such as the prevalence of child and migrant labour, as well as the structure of the tea industry itself. The TVPRA List, which is a list annually updated by the United States Department of Labour, consisting of goods that are produced using child and forced labour, lists tea from Kenya as a good produced using child labour. In fact, 15 percent of all tea industry workers in Kenya are estimated to be children. In contrast, only 5.6 percent of tea estate workers in Sri Lanka claim to know of the existence of child labour in Sri Lankan tea estates. Migrant workers, who are generally paid lower than native workers, are also believed to make up a substantial share of tea workers in Kenya. The labour incomes in the Kenyan tea industry are also affected by the fact that tea smallholders, who themselves do not earn a living wage, find it impossible to pay high wages to hired labour. See Bureau of International Labour Affairs, "List of Goods Produced by Child Labor or Forced Labor," United States Department of Labour, https://www.dol.gov/agencies/ilab/reports/child-labor/list-of-goods; "The True Price of Tea from Kenya," IDH and True Price, 2016; Thomas, Huw, "A Decent 'Cuppa': Worker Power and Consumer Power in the Sri Lankan Tea Sector," British Journal of Industrial Relations, Vol. 59, No. 1 (March 2021): 114-138; "Trafficking Risk in Sub-Saharan African Supply Chains, Commodity Report: Tea," Verité, 2018.

[53]https://www.oxfamindia.org/press-release/living-wages-tea-plantation-workers

HISTORY OF THE MINIMUM WAGE OF THE SRI LANKAN TEA INDUSTRY

The government of Sri Lanka first introduced a minimum wage specific to the tea industry in 1995, as the management of the RPCs was being privatised[54]. Between 1995 to today, the minimum wage has increased regularly. In 2013, the first collective bargaining agreement was signed between the Employers' Federation of Ceylon (EFC), the Ceylon Workers' Congress (CWC), Lanka Jathika Estate Workers' Union (LJEWU), and the Joint Plantation Trade Union Centre (JPTUC), setting the basic minimum wage at LKR 450 per a day of work, and along with additional employee benefits.

The collective bargaining agreement was revised twice afterwards, first in 2016, and then in 2019, increasing the basic minimum wage to LKR 500 and LKR 700 respectively. The additional benefits that the workers received during this period were also revised during each renegotiation of the collective bargaining agreement.

The additional benefits offered to the workers by these collective bargaining agreements mostly took the form of productivity incentives. Accordingly, in addition to a price share supplement, these benefits included attendance bonuses to those with 75 percent attendance each month, a productivity bonus, as well as an over-kilo rate for any tea leaves plucked above the minimum target of 18 kilograms.

The most recent attempt at renegotiating the collective bargaining agreement fell through, because of the inability of the planters and trade unions to reach a compromise on an increase to the minimum wage. The failed negotiations led to a verdict by the Wages Board of the Department of Labour to abolish the agreement, and increase the minimum wage to LKR 1,000 a day. This new daily minimum wage, comprising a basic salary of LKR 900, and a budgetary relief allowance of LKR 100, was mandated by way of an Extraordinary Gazette on March 5, 2021. The minimum plucking target for pluckers was also revised along with the new minimum wage, with the new target set to 18 kilograms of green leaf a day.

[54] Kelegama, Saman, Nisha Arunatilake, Janaka Wijayasiri, Sri Lanka Tea Industry in Transition: 150 Years and Beyond (Colombo: Institute of Policy Studies of Sri Lanka, 2018)

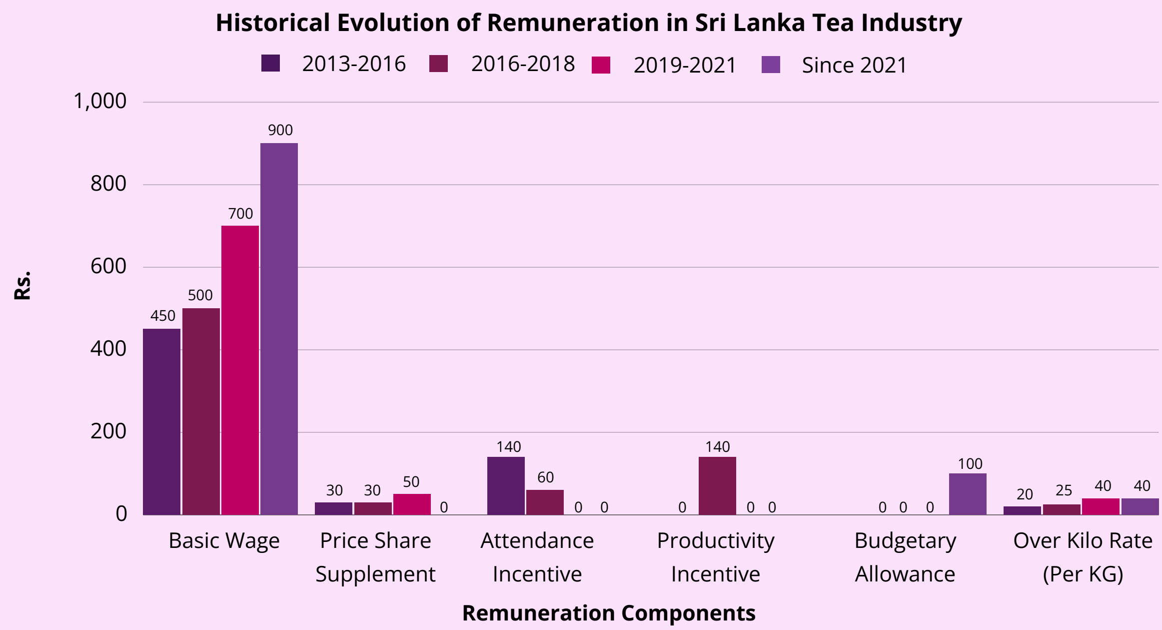


Figure 2 : Evolution of the minimum wage of the Sri Lankan tea industry post-collective bargaining agreement (Global Living Wage Coalition 2019)

MARKET DISTORTIONS OF THE MINIMUM WAGE

Although state-mandated minimum wages are a popular means of attempting to ensure that workers at the bottom of the income ladder receive a subsistence wage, they are theoretically heavily distortionary, and may not always fulfil their intended purpose. In an economy where prices are otherwise decided by the market forces of demand and supply, minimum wages are generally thought to be necessary when the market-determined price of labour is considered insufficient for the subsistence of workers. However, when the government sets a floor price for labour at a point above the equilibrium price, which is what the minimum wage does, the supply of labour by workers increases despite a corresponding decrease in the demand for labour by employers. This market readjustment results in less available jobs than before. Although the workers who are still employed will now earn a higher wage, many more willing employees will be unable to find work.

The question then is: Does the minimum wage in the Sri Lankan tea industry impose similar distortions on the labour market? The answer to this question is not clear cut, because unlike the economy considered in the theoretical explanation, the Sri Lankan tea industry exists within various other state-imposed market distortions. Therefore, in the tea industry of Sri Lanka, prices are otherwise not decided by the market forces of demand and supply anyway. However, there are obvious distortions that the minimum wage introduced to the Sri Lankan tea industry that raises questions about the justifiability of its continued existence.

A. HIGH COST OF PRODUCTION

Firstly, as discussed above, the attendance-based minimum wage increases the cost of production in the Sri Lankan tea industry, making the cost of labour as a share of the total cost of production disproportionately high. The ever-rising costs of production of Ceylon tea have, in fact, made Sri Lanka the highest cost tea producer among the major black tea producing countries. Cost of production estimates from 2007 show that Sri Lanka was the highest cost producer of tea even back then, and Sri Lanka's cost of production has only risen since then.

Country	Cost of Production / kg
Sri Lanka	US$ 1.89
India	US$ 1.63
Kenya	US$ 1.33
Rwanda	US$ 1.32
Uganda	US$ 1.20
Tanzania	US$ 1.16
Malawi	US$ 1.14
Zimbabwe	US$ 1.11
Vietnam	US$ 0.81
Indonesia	US$ 0.58

Table 2 : Cost of production of tea by country in 2008 (TECHNOSERVE 2007)[55]

Here, it is important to note that the attendance-based caveat of the minimum wage law also limits the ability of employers to reapproach the allocation of employees so that the production levels are maintained while reducing staff each time the minimum wage is increased. In the Sri Lankan tea industry, the labour cost has a relatively static relationship with the labour wage rate because the higher minimum wage, each time it is increased, is not tied to a proportionate increase in the incentives for higher labour productivity on the part of the workers.

In addition to the LKR 1,000 minimum wage, the non-cash benefits offered to estate residents by RPCs also contribute to the high labour costs incurred by estates. Estates generally provide housing, education, healthcare and childcare facilities to estate residents, regardless of whether they contribute their labour to the estate or not. These non-cash benefits, along with other payments such as bonuses, EPF, and leave provisions, roughly cost RPCs another LKR 750 per day per worker[56]. Accordingly, each worker on average derives a benefit of around LKR 1,750 on a regular workday as an RPC employee. This number is even higher when one considers the benefits derived by the dependents of RPC employees who do not contribute their labour to the estates. The prevalence of free-riding among dependents makes it difficult to provide an approximate value of the exact benefit derived by them.

[55] TECHNOSERVE, Tanzania Tea Competitiveness Study, 2007. See "Report on Small Scale Tea Sector in Kenya," Christian Partners Development Agency of Nairobi, Kenya, 2008.

[56] Rajadurai, Roshan. "Ceylon Tea Industry and Regional Plantation Companies." April 2023 (Hayleys Plantations PLC slides)

One way in which employers may reasonably attempt to reduce labour costs while drawing minimal ire from workers and the unions that represent them would be through cutting down on the overtime hours offered to workers, and the opportunities that the workers are given to earn above the daily minimum wage by working on Sundays and poya days. Conversations with employers and unions reveal that there were some estates that, to an extent, attempted to pursue such strategies. However, those employers have mostly been met with strong resistance from workers and the unions that represent them, preventing the large-scale execution of this strategy.

Even if estates are successful in such attempts, it could reduce the overall revenues and profits of the estates by substantially reducing the amount of tea leaves plucked. Alternatively, some estates have responded to the most recent increase in the minimum wage by moving sundry workers away from the minimum wage system into contract-based employment. However, most employers are not able to pursue this strategy with pluckers and factory workers because of the potential union resistance that such a move could draw.

B. LOW LABOUR PRODUCTIVITY

In the absence of productivity incentives built into the attendance-based minimum wage model, low productivity is another labour market distortion of the minimum wage of the Sri Lankan tea industry. The target of 18 kilograms for tea pluckers under the latest minimum wage revision discourages workers from plucking green leaves beyond that target, leaving Sri Lanka with the lowest worker productivity among major tea producing countries.

The lower productivity of Sri Lankan tea estate workers cannot reasonably be attributed to the high terrain of most Sri Lankan tea estates either. The terrain of tea estates in both Kerala, India and Assam, India bear resemblance to that of tea estates in Sri Lanka. Pluckers in these regions are substantially more productive than Sri Lankan pluckers, signalling that the low productivity may be arising from factors that are non-geographical.these regions are substantially more productive than Sri Lankan pluckers, signalling that the low productivity may be arising from factors that are non-geographical.

Country	Daily Plucking Average Per Worker
Kenya	45-60 kg
India	Assam :>34 kg, South India : 60 kg
Sri Lanka	18kg

Table 3 : Productivity of tea pluckers among major black tea producing countries (KHRC 2008; Kalyanaratne 2014)

The penalisation of high-productivity workers under the minimum wage model partly explains the low labour productivity in Sri Lankan tea estates. Given the absence of a built-in mechanism to monetarily reward high-productivity workers under the minimum wage system, high-productivity workers are unfairly not compensated for their higher efficiency. The lack of productivity-based differential compensation is a market failure (a missing market) caused by the minimum wage model, which disincentives high-productivity workers from offering the full extent of their potential to the estates. Conversations with RPCs also reveal that peer-pressure from low-productivity workers also discourage high-productivity workers from plucking more. Given that the latter anyway is not monetarily rewarded for demonstrating high productivity, the productivity of more efficient workers soon converges to the lower end as a result.

While the minimum daily target is a hindrance on a normal day when the yield is at satisfactory levels, on days when the yield is low due to bad weather or seasonal conditions, further productivity-based distortions arise. On such days, workers would either pluck less than 18 kilograms and still get paid the daily minimum wage, or pluck stalks and mature leaves that lead to higher percentages of refuse tea in the made tea. Both these anomalies reduce the profitability of tea estates.

STAKEHOLDER OPINIONS OF THE MINIMUM WAGE

Despite these labour market distortions that increase the cost of production while decreasing the productivity of workers, the attendance-based minimum wage not only continues to exist, but also regularly gets revised upwards. The popularity of the minimum wage is based on the perception that it guarantees the economic welfare of tea industry workers. The government of Sri Lanka billed the increase of the daily minimum wage to LKR 1,000 in March 2021, as a measure aimed at increasing the quality of life of estate populations, who continue to suffer from disproportionately higher rates of poverty compared to other populations[57]. In his 2019 Presidential Election manifesto, former President Gotabaya Rajapaksa pledged to increase the daily minimum wage for tea workers to LKR 1,000 so that estate populations "will enjoy a good economy, quality housing, education and healthcare facilities to lead a comfortable life"[58].

Despite the potential of the labour market distortions of the minimum wage to decrease the demand for labour by tea estates, resulting in less opportunities for employment, the present minimum wage provides those who continue to be employed in the estate sector with a subsistence wage. In fact, when the new minimum wage came into effect, workers in the Sri Lankan tea industry began earning substantially above the daily living wage required for subsistence, as estimated by the Global Living Wage Coalition. Even with the surge in inflation following government's balance of payments crisis, a working adult employed in an RPC still earns above the 'living wage' as approximated by the Global Living Wage Coalition, when the non-cash benefits to workers are also considered[59].

[57] In 2016, 8.8 percent of the estate population of Sri Lanka lived below the poverty line, compared to 1.9 percent of the urban population and 4.3 percent of the rural population. In 2019, 11.3 percent of the estate population of Sri Lanka was multidimensionally poor, which is an indicator of poverty based on education, health, and living standards, compared to 0.58 percent of the urban population, and 2.29 percent of the rural population. See. "Global Multidimensional Poverty for Sri Lanka," Department of Census and Statistics, 2019; "Poverty Indicators: Household Income and Expenditure Survey," Department of Census and Statistics, 2016.

[58] Rajapaksa, Gotabaya, "Vistas of Prosperity and Splendour," 2019

[59] https://www.globallivingwage.org

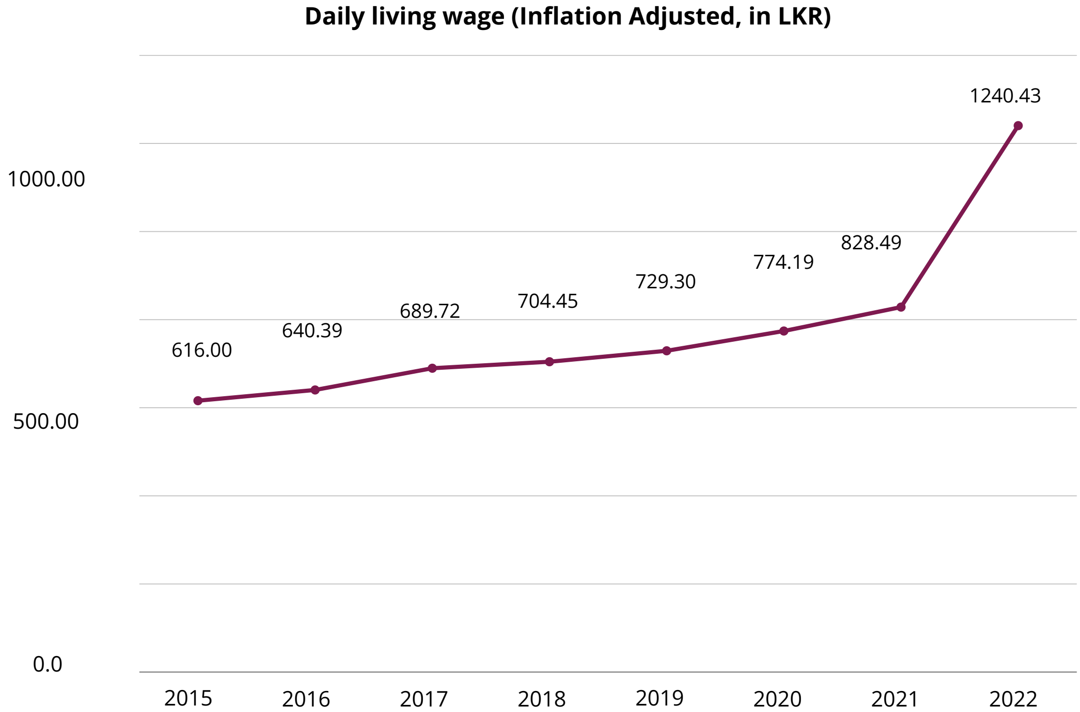


Figure 3 : Daily living wage estimates for tea industry workers, adjusted for inflation (Global Living Wage Coalition 2019)

The guarantee of a living wage for tea estate workers is one of the reasons that the attendance-based minimum wage continues to exist, despite its market shortcomings. The other primary reason why the minimum wage model has persisted all these years is the particular preference that trade unions in the estate sector have for this wage structure. The attendance-based minimum wage helps these trade unions, which are affiliated with political parties, maintain their relevance by exercising influence over both employers and employees. Not only do estate workers rely on the political muscle of the unions when renegotiating the minimum wage every few years, but they also depend on the trade unions to represent them when their labour rights are violated in the workplace. As such, even if the personal beliefs of tea industry workers do not fully align with the political activities of the trade union, workers find it personally beneficial to obtain the membership of, and pay dues to, the trade unions[60].

While both the government and the trade unions clearly prefer the existing attendance-based minimum wage model, it is not as clear if workers themselves unanimously prefer it. Conversations with tea estate workers reveal that there are many workers who genuinely believe that the attendance-based model is the best deal that they can get, especially after the most recent minimum wage hike. In fact, there is overwhelming support among estate workers for further increases to the minimum wage, which some estate leaders capitalise on for their political benefits[61]. However, a close look at trends in tea sector employment over the years reveal that, despite the high minimum wage, workers are leaving the tea industry in droves. In fact, the attendance-based minimum wage model seems to be at the root of many of the reasons why workers seek employment in other industries.

[60] Workers in the estate sector are highly unionised, especially in the higher elevations. Most workers belong to either the CWC, LJEWU, or the JPTUC, which are the three estate sector unions that have sufficient representation to be officially involved in minimum wage negotiations. The minor trade unions include the National Union of Workers (NWU), and the Upcountry People's Front (UPF). In 2018, the aggregate membership across these unions was at least 552,530, which is way above the official count of the number of estate sector employees in that year. See Rajasegar, Selvaraja, "RTI Reveals Annual Trade Union Membership Fees Collected from Plantation Workers," Groundviews, 05 April 2019, https://groundviews.org/2019/04/05/rti-reveals-annual-trade-union-membership-fees-collected-from-plantation workers/; "Sri Lanka Labour Force Survey: Annual Report - 2018," Department of Census and Statistics, 2019

[61] https://www.ft.lk/front-page/Planters-reject-worker-s-demand-for-Rs-2-500-minimum-wage/44-749231

LABOUR SHORTAGE IN THE ESTATES

Unskilled workers do not find the Sri Lankan tea industry to be an appealing industry to work in anymore, which has created a severe labour shortage in the tea industry of Sri Lanka. For instance, conversations with estate management revealed that Somerset estate in the Nuwara Eliya District, managed by Talawakelle Plantations PLC, saw a decline of workers from around 800 to around 400 between 2020 and 2023. To bring the number of workers back up to around 750, the estate has resorted to hiring cash pluckers from surrounding low-yield estates and re-recruiting retired workers. Part of this tendency to move away from agricultural work is to be expected as a country's economy develops over time as Sri Lanka has done over the years. The attendance-based minimum wage model of the Sri Lankan tea industry, however, accentuates the natural reasons that generally cause workers in the agricultural sector to move into the service sector as economies advance. The continued receipt of non-cash benefits from estates, even if they stop contributing their labour to the estates, is an added incentive to seek outside employment while maintaining their status as estate residents.

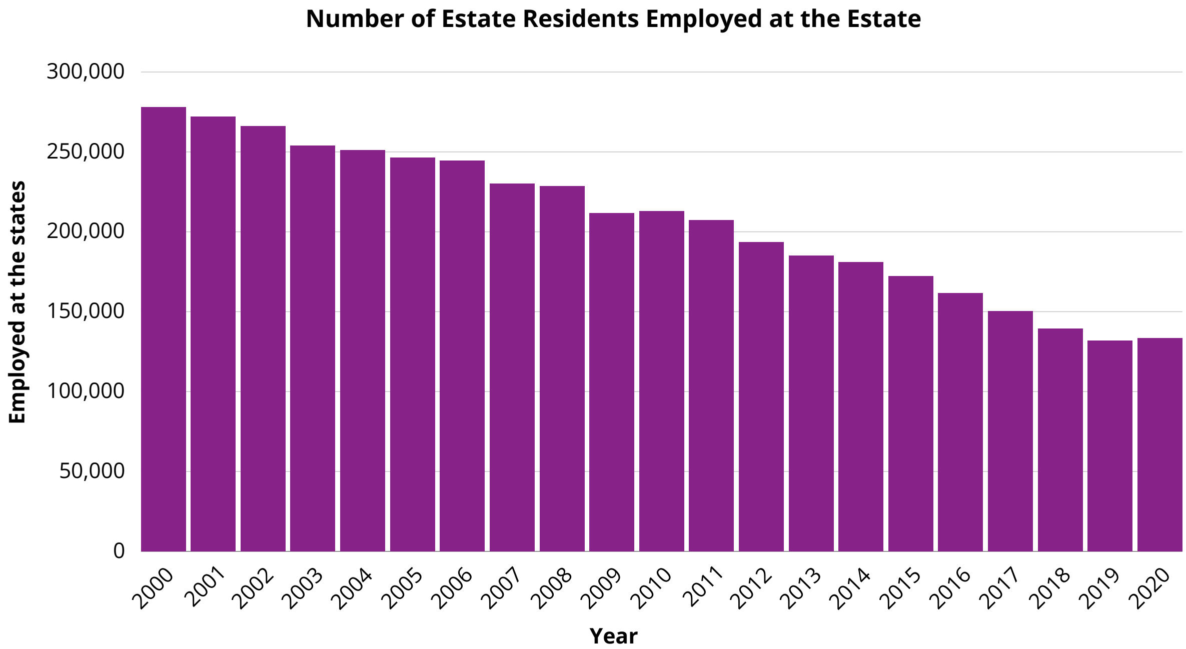


Figure 4 : Decrease in the number of estate workers over the last two decades (MoPI; DCS)

The hard ceiling on earnings imposed by the minimum wage model (which amounts to a monthly wage of LKR 22,000 at 22 days of work) limits the earning potential of estate work, compared to other work of similar skill level. The mean monthly income of an estate resident in 2021, the latest available year of the Labour Force Survey by the Department of Census and Statistics, was LKR 24,035. The mean monthly income among monthly wage earners (as opposed to daily wage earners, which estate workers fall under) alone was LKR 25,607. These numbers indicate that there is a considerable number of estate residents employed in jobs that pay higher than what they would have earned working at the estate, although the difference in the earnings is not substantial.

Unskilled labour in the agricultural sector, and especially in the tea industry which requires exposure to harsh elements of nature, is not traditionally attributed much dignity in Sri Lanka. The attendance-based wage model heightens the dignity issues of workers because it requires strict supervision of attendance hours and the fulfilment of the daily work targets, affording workers little agency in their work. This model, although intended to guarantee a minimum compensation for workers, ironically also imposes a ceiling on how much workers can earn, due to the minimal productivity incentives that it incorporates. In fact, the wage model is designed to penalise workers who are more productive than their co-workers by denying the more productive workers rewards for the harder work that they put in. By denying workers the opportunity to be additionally rewarded for hard work, the attendance-based minimum wage model breeds demotivation in the workplace.

The lack of dignity associated with unskilled labour in the tea industry is also attributable in part to the unfavourable living conditions in some estates, particularly when estates fail to meet the basic housing, sanitation, educational, healthcare, and nutrition-related needs of the workers. Despite RPCs usually providing workers who reside on the estates with most of these needs, conversations with workers in some estates reveal that these needs are sometimes under-met, leading to low standards of living for the workers. The poor living standards encourage workers, especially in the younger generations, to look for work outside of the estate in other industries, with hopes of eventually climbing up the social ladder, in which the estate sector sits at the bottom[62].

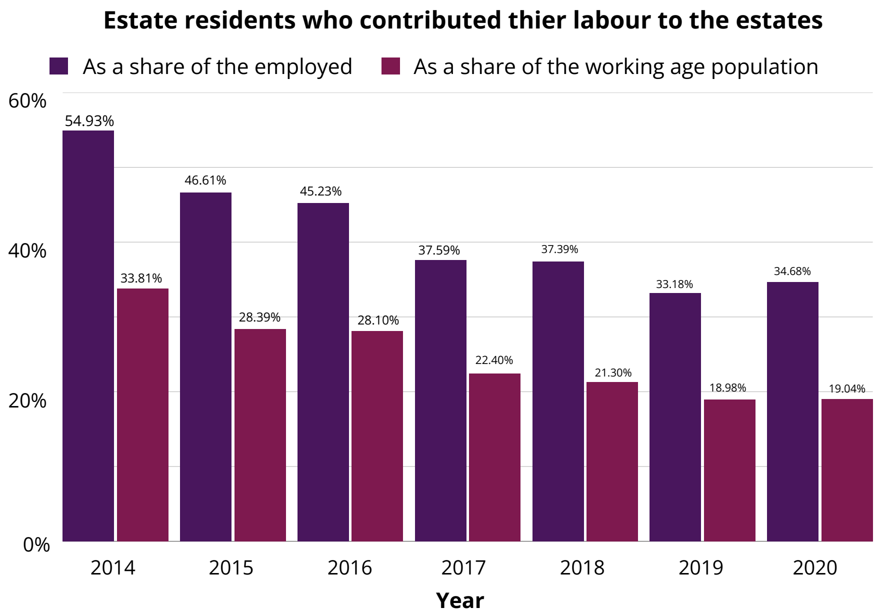


Figure 5 : Decrease in the percentages of those who reside on estates that actually contribute their labour to the estates (MoPI; DCS

[62]Chandrabose, A., "Outgoing Labour and Its Impact on the Tea Plantation Sector in Sri Lanka," Department of Social Studies at the Open University of Sri Lanka, 2015

The unwillingness of the younger generations of estate families to contribute their labour to the Sri Lankan tea industry can be seen in how the share of employed estate residents who contribute their labour to the estates has consistently dropped each year, in the last several years. The benefits that estate populations receive from the RPCs in the form of housing, healthcare, education, and sanitation are not conditional on their contribution of labour to the estates. Estate residents therefore find it far more appealing to find work outside of the estates, in workplaces such as garment factories or restaurants, while continuing to receive the benefits from RPCs that they are entitled to as estate residents. Some youths leave their families behind in the estates and move to cities such as Colombo, to work as housemaids, cooks, and in various odd jobs, because of the higher pay, greater freedom, and the better opportunities for social advancement that it offers them.

In addition to an increasing shortage of labour, the Sri Lankan tea industry is thus also presently grappling with issues that naturally come along with an ageing labour force. 50 percent of workers in the Sri Lankan tea industry are above 40 years of age, and only 10.4 percent of the workers are below 30. In an industry where productivity is a function of the physical strength of its workforce, the average worker is therefore 40.8 years old[63]. Conversations with RPCs reveal that some estates have begun to recruit retired workers on contract basis as a solution to the labour shortage, which will further increase the average age of the workforce.

FRAMEWORK FOR THOUGHT: BEYOND THE BINARY

Considering the primary intent of the attendance-based minimum wage of the Sri Lankan tea industry (economic welfare of the workers) and the primary reason that estate workers are running away from the (the lack of worker dignity), the question is: Is the attendance-based daily minimum wage the only way to provide tea industry workers with favourable economic circumstances? Or, are there alternative wage models that could guarantee a living wage for the workers, while also raising the dignity of their profession?

The answer to this operative question depends on at whom the question is directed. In conversations, trade unions largely espouse the attendance-based minimum wage as the most effective model of remuneration that will both ensure a living wage for the workers, while preventing their exploitation by employees. Conversations with workers reveal that, despite the overall lack of enthusiasm for employment in the tea industry among estate workers, those who are employed in the tea industry believe that the minimum wage model provides a reasonable guarantee for a good quality of life. In this context, how can the Sri Lankan tea industry ensure that the various labour market distortions of the minimum wage do not affect the long-term economic sustainability of the industry?

[63] "Annual Report," Tea Research Institute, 2017

DISCUSSION OF SOLUTIONS

SOLUTION 1: TRANSFER OF THE DISTORTIONARY COSTS OF THE MINIMUM WAGE TO CONSUMERS

If the attendance-based minimum wage model of the Sri Lankan tea industry is to continue, one way in which the plantations may attempt to overcome the negative impact of the resultant high production costs and low productivity is through a transfer of these costs to the consumer. This strategy necessarily involves a promotional strategy by the stakeholders—the plantations, exporters, and the Sri Lanka Tea Board (SLTB)—that embraces the high minimum wage and the low productivity of workers as evidence of Sri Lanka's favourable treatment of estate workers with high remuneration and zero exploitation. Such a message of ethical labour would play into the human sensitivities of consumers who are willing to pay a higher price for tea produced under more ethical labour conditions.

The existing wage model provides plenty of room to tie the Sri Lankan tea industry with the global movement for ethically sourced labour. Not only does Sri Lanka pay the highest minimum wage among major tea producing countries, but Sri Lanka also extracts the least labour out of each worker, leaving minimal room for worker exploitation. In addition, the RPCs, and even some bought leaf factories, provide workers with various benefits including free education, free healthcare, free housing, free childcare, and free access to sanitation, thereby better elevating the standards of living of tea sector employees compared to other countries. In fact, out of the countries studied by the Global Living Wage Coalition, Sri Lanka is the only country that pays its workers above the living wage estimate[64]. Unlike some of its competitors, the Sri Lankan tea industry does not substantially rely on child labour either, and, despite the migrant family background of most of the estate workers, does not pay differential wages based on personal migrant history.

Not only does the market for ethically produced teas already exist in some form, but there are also examples from other industries that ethical labour sourcing is a profitable message. Discussion Papers 3 and 4 delve in detail into the advanced markets, particularly in developed countries, that already cater to producers and consumers of ethically produced teas. Beyond tea, especially in the chocolate industry, some brands have successfully reframed the conversation around slave-free labour as a business strategy issue, switching to the ethical sourcing of labour as a means of increasing returns[65].

There are several reasons why this strategy may be one of the least disruptive, the most important of which is its alignment with the present preferences of both trade unions and estate workers. In fact, such a move would solidify the extant relationship between trade unions and workers, leading to minimal resistance from either party. Furthermore, this strategy necessarily involves the depiction of employment in the estate sector in a positive light, attracting outgoing workers back into the tea industry. If the promotional campaigns are indeed successful at boosting the returns of the plantations, workers will then have more bargaining power to demand even greater hikes to the minimum wage, and employers will have more room to accommodate such requests.

[64] Global Living Wage Coalition's studies based on the tea industry in Nilgiris, India and Southern Malawi showed that workers are paid below the living wage in both regions. See "Living Wage Report: Rural Nilgiris, Tamil Nadu, India," Global Living Wage Coalition, 2020; Anker, Richard, Martha Anker, "Living Wage for Rural Malawi with Focus on Tea Growing Area of Southern Malawi," Global Living Wage Coalition, 2014.

[65] Dahan, Nicolas M., Milton Gittens, Journal of Business Ethics, Vol. 92, No. 2 (March 2010): 227-49

Of course, the ability of producers to transfer the high costs of production resulting from the attendance-based minimum wage depends on the price elasticity of demand for tea as a consumer good. If the demand for a good is relatively price elastic, a price increase would reduce the quantity demanded of the good more than proportionately, leading to lower overall returns. However, if the demand for the good is relatively price inelastic, then the price increase will lead to only a less than proportionate decrease in the quantity demanded of the good, increasing the overall returns. Sri Lanka's tea industry would only be able to transfer the distortionary costs of the minimum wage to the consumer in the case its teas are relatively price inelastic. There is evidence, both empirical and theoretical, that tea is indeed an inelastic good.

PRICE ELASTICITY OF DEMAND FOR TEA

While research on the price elasticity of tea is limited, the Intergovernmental Group on Tea of the Food and Agriculture Organization of the United Nations (FAO IGT), has found strong evidence that the demand for tea, both black and green, is mostly inelastic. Based on a study of India, Japan, the United Kingdom, the United States, and China, FAO IGT finds that black tea is a relatively inelastic good in India, the United Kingdom, the United States, and China. A Euromonitor International study, which estimates the price elasticity of tea at -0.14, also confirms FAO's finding that tea is generally an inelastic beverage[66].

Country	Price Elasticity of Demand of Tea
India	-0.818
Japan	0.236[67]
United Kingdom	-0.325
United States	-0.393
China	-0.637

Table 4 : Uncompensated (Marshallian) price elasticity of demand for black tea (FAO IGT 2012)

This empirical evidence on the price elasticity of the demand of tea complies with the theoretical understanding of inelastic goods in economics. The demand for a good may be inelastic even in the event of a price change if it only costs a minimal fraction of the consumer's income, which is the case for tea. In the global mass market of tea, tea generally costs a few dollars at most, which is a negligible expense to the average consumer. In fact, in

[66] https://www.euromonitor.com/article/demand-protects-coffee-and-tea-industries-from-inflation

[67] The study finds that, in Japan, the demand for black tea is positively associated with price, suggesting that it is either a Veblen good with conspicuous consumption as a luxury, or a Giffen good with mass market consumption as a staple. If the former is true, it implies that there is substantially more room in Japan for the Sri Lankan tea industry to transfer its high production costs; however, more research needs to be conducted to confirm the validity of this argument. See Intergovernmental Group on Tea, "A Demand Analysis for the Tea Market," Food and Agriculture Organization of the United Nations, December 2011.

2022, the average household in the United Kingdom, a country traditionally known for its tea consumption, spent GBP 0.50 on tea out of an average total expenditure of GBP 528.80[68]. Given that tea makes up only 0.09 percent of the weekly expenses of the average British household, a slight change to the price of tea cannot be reasonably expected to cause a large shift in the demand for the beverage.

Another feature of inelastic goods is that they are generally habit-forming, which again is the case with tea. Most tea-drinkers are habitual consumers of the beverage who drink it at regular intervals, usually few times a day. This habit-forming nature of tea consumption again helps the demand for tea to remain largely unchanged even in the case of price increases.

Lastly, the lack of a cheaper substitute for tea is another cause of its inelastic demand. The average price of a serving of tea, both sweetened and unsweetened, is significantly lower than the average price of its alternatives, including coffee, milk, juice, and soda[69]. Therefore, even if a consumer is impacted by a price increase in tea, it is unlikely that the price increase will be large enough to convince them to switch to a substitute beverage.

The limitations of this strategy to counter the profitability effects of the high labour costs in the Sri Lankan tea industry are also primarily hidden in the price elasticity figures for tea as a consumption good in other countries. While tea is a relatively inelastic good in India, the United Kingdom, the United States, and China, the degree of inelasticity is higher in the United Kingdom and the United States, where the consumer market is more sophisticated compared to India and China[70]. These elasticity figures thus show that a strategy of cost transfer is more likely to be successful in more developed countries in the West. Given the overwhelming reliance of the Sri Lankan tea industry on developing markets in the East to buy Ceylon tea, unless the industry makes a substantial move to the more advanced markets prior to the implementation of a cost transfer strategy, such a strategy is less likely to be successful. Additionally, given the Sri Lankan tea industry's current reliance on the auction as the primary mechanism of export over private or direct sales, the ability of producers to effectively build a relationship of trust with consumers is limited, further constraining the likelihood of success of a cost transfer strategy.

While a well-executed promotional campaign with reduced reliance on auction sales and developing markets could potentially help producers transfer costs to the consumers, it is also a risky move on the part of producers because of the high potential to be discredited. While it may be true that tea industry workers are better paid and looked after in Sri Lanka than anywhere else, it does not mean that Sri Lanka is currently representative of the gold standard of what labour rights or welfare should ideally look like. As such, detractors may always find opportunities to point out failures on the part of producers to uphold the highest standards of labour rights and welfare, potentially bringing the Sri Lankan tea industry into disrepute.

[68] Data from the Family Spending Survey for the year 2022 by the Office for National Statistics, UK
[69] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3602945/
[70] Intergovernmental Group on Tea, "A Demand Analysis for the Tea Market," Food and Agriculture Organization of the United Nations, December 2011

A cost transfer strategy also does not address the labour market distortions of the attendance-based minimum wage model; in fact, it promotes the disproportionately high labour costs and the low labour productivity which is currently plaguing the tea industry. To make the future of the tea industry fully sustainable, it is important that these distortions are addressed head-on, so that the industry does not provide more fuel to the further breeding of these labour market inefficiencies. The continued existence of such inefficiencies under the price transfer strategy invites a closer inspection of the alternative solutions. Again, these alternatives are proposed by stakeholders who are sceptical of the espoused virtues of the attendance-based minimum wage.

Another criticism of the cost transfer strategy, to which there is some truth, is that its benefits fail to trickle down to the estates. Direct and private sales by estates may help avoid the concentration of these returns in the hands of a few exporters and advertising agencies, but the practicality of such a solution is a separate topic of discussion. Discussion Paper 3, which focuses on value addition, delves deeper into this topic.

SOLUTION 2: ALTERNATIVE WAGE MODELS TO MAKE SMALLHOLDERS OUT OF ESTATE WORKERS

Support for alternative wage models among industry stakeholders is premised on the belief that worker welfare and productivity are not necessarily mutually exclusive. By design, alternative wage models are meant to increase the productivity of workers, while also giving them the opportunity to earn more than they would under the attendance-based minimum wage model. Proponents of alternative wage models also bill these alternatives as offering workers more agency in the provision of their labour, thus addressing the labour dignity issues associated with the traditional wage model.

Alternative wage models are designed essentially to replicate a well-functioning aspect of the Sri Lankan tea industry, which is the smallholder industry. While the smallholder sector faces its own inefficiencies due to smallholders' limited access to technical knowledge, the labour efficiency of the smallholder sector foils that of the labour issues faced by RPCs.

Unlike in the RPC estates where the minimum wage model imposes a ceiling on the earnings of estate workers, the earnings of smallholders are a function of the amount and quality of the work that they put in. Given that smallholders are paid 68 percent of the price that their leaf fetches in the auction, there are incentives built into the smallholder model to increase both the quality and quantity of the output so as to optimise earnings. These incentives help the smallholder sector avoid the inefficiencies that ail large tea plantations. The market failure that penalises high-productivity workers in the estate sector by failing to offer them differential remuneration is also absent in the smallholder model. As tea smallholders own the land that they cultivate, and are their own bosses, the dignity issues associated with estate workers are also not prevalent among tea smallholders.

As such, the smallholder sector provides a model that RPCs may attempt to replicate in order to address the worker dignity issues in the estates, which has accelerated worker out-migration in the last decade. The following are three alternative models that are regularly proposed as alternatives to the traditional wage model in the estate sector, all of which emulate, at least in part, the efficiency incentives of the smallholder model.

1. OUTGROWER MODE

The outgrower model is an alternative wage model that links independent tea farmers to tea factories and/or traders, thereby giving them access to previously unavailable technology, knowhow, funding mechanisms, and consumer markets. The outgrower model, in theory, establishes a vertically integrated relationship between the producers and buyers of tea, and increases the incomes of farmers.

In the context of the RPCs of the Sri Lankan tea industry, the outgrower model can be implemented via the allocation of underutilised lands in the RPC to workers in the form of blocks. The worker will be responsible for improving the productivity in the allocated plot of land, ideally with effective participation of their family members in the fieldwork and plucking activities. The workers will then be paid based on the weight of green leaf that they supply to the factories. Since RPCs will still retain the formal ownership of the land, RPCs may supervise and monitor the entire planting and harvesting process to ensure that the necessary standards are met [71].

The outgrower model is believed to encourage more worker productivity compared to the attendance-based model because it incentivises more efficiency on the part of the workers at both the planting and harvesting stages. As the ability of the workers to pluck more green leaf now depends on the yield of the plot of the land, the workers will be incentivised to follow good agricultural practises and activities such as replanting and infilling, to make sure that the block of land that has been allocated to them is as productive as possible. The daily plucking averages will also increase because the workers' salaries now depend on the amount of the green leaves plucked.

Unlike the attendance-based minimum wage model, the outgrower model affords flexible work hours, provides workers with a sense of land ownership, and gives them the complete agency to decide how much of hard work they will put into the profession. As their pay will now be a function of efficiency and the number of hours worked, the productivity of workers will also increase. Under this model, workers therefore have the potential to earn more than they would under the attendance-based minimum wage model, without a fixed ceiling on how much they are able to earn.

[71] Shyamalie, Wasantha, N. N. K. Wellala, "Implementation of Outgrower System in Tea Plantations," Tea Research Institute, 2012

As the outgrower model gives workers more responsibilities, agency, and a great earning potential, it is also touted as a solution to the worker dignity issue surrounding the attendance-based minimum wage model. Based on this claim, the outgrower model may also be a solution to the growing labour shortage in the tea industry. However, opponents of the outgrower model point to the high supervision that is required in the outgrower model to ensure that workers abide by the necessary quality control measures and standards. The heavy supervision that a successful implementation of the outgrower model requires makes the extent to which the model could elevate the dignity of workers unclear. Simultaneously, the high supervision costs associated with the outgrower model, as well as the high costs associated with training unskilled workers to manage outgrower lands, could discourage some employers from adopting it.

Another concern associated with the outgrower model is the incentives that the weight-based remuneration system provides for the compromising of quality in favour of quantity. Discussion Paper 4 delves into the quality control issues in the tea smallholder sector, that primarily arise from the fact that hired pluckers are paid based on the weight of the tea leaves that they pluck. Given that the wage model in the outgrower system is mostly similar, there are real concerns that the outgrower model could lead to the plucking of fibres and stalks, as well as the plucking of premature and postmature leaves, reducing the quality of the made tea. In contrast, alternative wage models such as the revenue share system provide better incentives for upholding higher quality standards in the production process.

2. REVENUE SHARE MODEL

Revenue share model is somewhat like the outgrower model in that it is also an alternative remuneration structure that assigns each farmer a block of land to plant and harvest. However, unlike in the outgrower model, where workers are paid based on the amount of the green leaf that they supply to the factory, workers in the revenue share model are paid based on a predetermined revenue share formula. Identical to the arrangement between tea smallholders and bought leaf factories to split the revenue from the auction at a ratio of 68:32, the workers in the revenue share model split the revenue from the auction with the RPC based on a predetermined ratio[72]. Given that the auction price is based on the quality of the made tea, incentives are built into the system to ensure that workers under this model pay attention to the quality of the leaf plucked.

Like the outgrower model, the revenue share model encourages more productivity by rewarding the workers based on their performance. It also provides workers with affordable work hours, a sense of land ownership, and agency in work, helping change perceptions of the value assigned to unskilled labour in the plantation industry. While the workers under the revenue share model still require some sort of supervision, as incentives for quality control are built into the remuneration formula, less supervision is necessary to ensure that the quality of production is retained. Less supervision could help boost the dignity of workers, potentially increasing their enthusiasm to engage in plantation sector employment.

[72] Perera, Prasanna, "Tea Smallholders in Sri Lanka: Issues and Challenges in Remote Areas," International Journal of Business and Social Science, Vol. 5, No. 12 (November 2014): 107-17

CASE STUDY OF THE REVENUE SHARE MODEL AT THE NEW DENIYAYA ESTATE

New Deniyaya Estate, which belongs to Talawakelle Plantations PLC, an RCP managed by Hayleys PLC, gradually introduced the revenue share model for labour employment beginning 2015.

Year	Revenue Share Extent
2015/16	18%
2016/17	23%
207/18	23%
2018/19	54%
2019/20	96%

Table 5 : The gradual adoption of the revenue share model at the New Deniyaya Estate

The data shared by the New Deniyaya Estate shows that, since implementing the revenue share model, the estate was able to increase profitability, net sale average at the auction, and workers' incomes since gradually switching to the revenue share model.

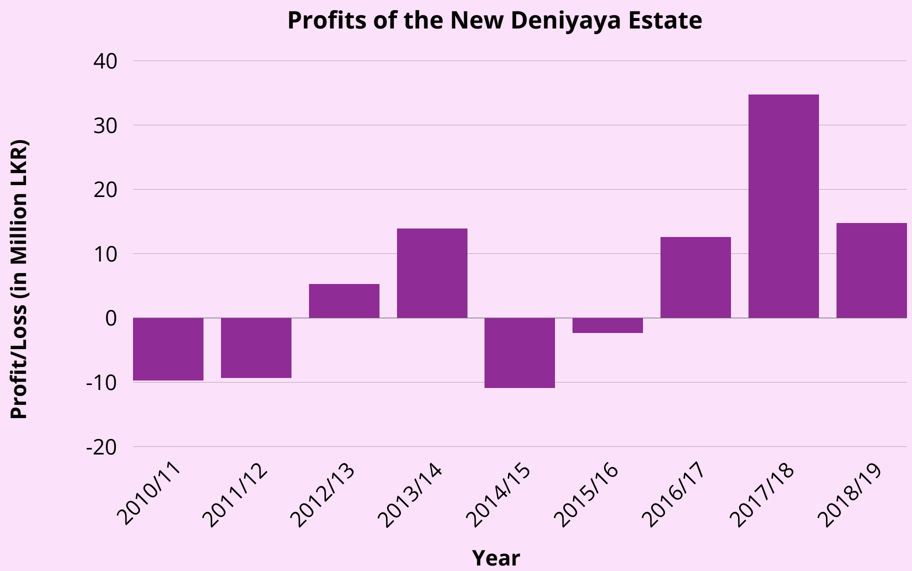


Figure 6: Profits of the New Deniyaya Estate

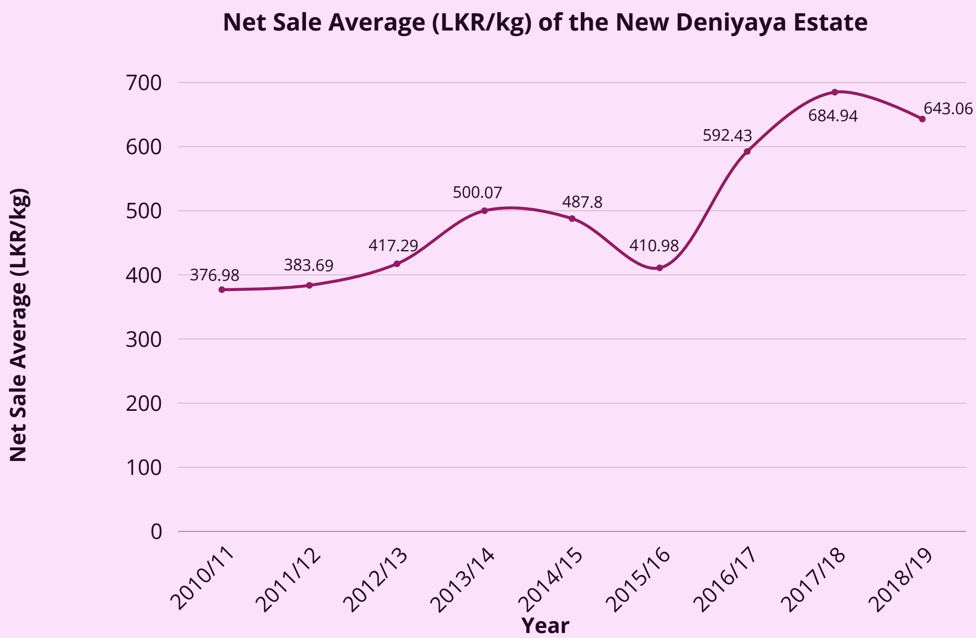


Figure 7 : Average auction price of the New Deniyaya Estate

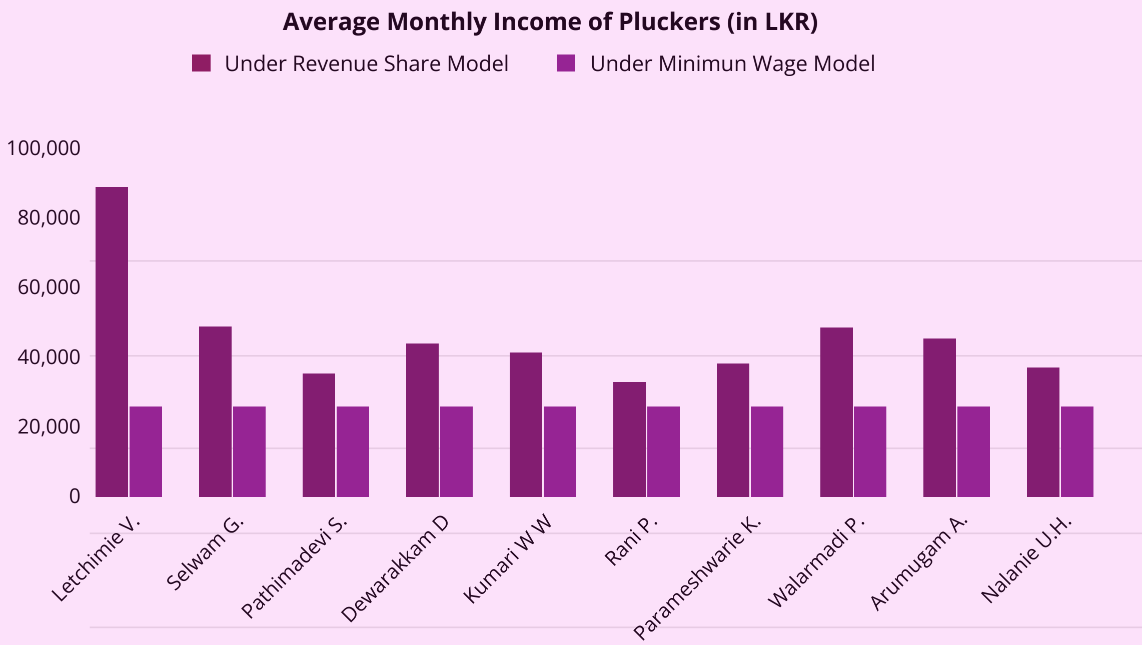


Figure 8 : Comparison of worker incomes under the revenue share model with counterfactual (under minimum wage)

Despite these positive aspects of the outgrower and revenue share models, there are real concerns that they could encourage child labour. These alternative wage models encourage workers to seek assistance from family members to help in the planting and harvesting processes to increase the supply of green leaf to the factories. While the voluntary contribution of labour from underage family members in ways that do not disrupt their education may not be harmful, opponents of alternative wage models frequently point to the incentives for child labour built into these alternative wage models when making the case against them.

Labour unions, who also have pointed out the potential for child labour, have traditionally opposed alternative wage models, and their resistance has been an impediment to the large-scale introduction of the alternative wage models in Sri Lanka. In fact, it is hard to believe that without the full endorsement of the labour unions, especially the CWC, that RPCs will be able to completely replace the attendance-based minimum wage model with an alternative wage model. As of late, however, labour unions have expressed more willingness to entertain discussions of alternative wage models. In conversations, labour union representatives admitted that the alternative wage models may be necessary in the future, although they are exclusively focused on improving the present minimum wage model while preserving the attendance-based structure on which it is based. Previously, RPCs have proposed compromise alternative wage models with the intent of winning over the support of labour unions to abandon the attendance-based minimum wage model.

3. HYBRID MODEL

In the hybrid model, the attendance-based minimum wage model is supplemented, not replaced, with the revenue share model. The attendance-based minimum wage model is in place for at least part of the month, and workers are also assigned separate plots of land to tend to, as in the revenue share model. Conversations with RPCs reveal that, in up-country estates leased by some of the companies, at least 30 percent of the workforce is enrolled in the hybrid wage model.

The hybrid model partly retains the benefits of the other alternative wage models, leading to improvements in worker productivity, and their potential to earn. More importantly, it retains the attendance-based wage model, making it more likely to win over labour unions that have traditionally opposed alternative wage models. This compromise also means that the hybrid model still retains some inefficiencies of the attendance-based minimum wage model, limiting the extent to which the cost of production may be lowered. It however serves as a pragmatic steppingstone to larger labour market reforms in the future in the Sri Lankan tea industry.

UNION RESPONSE TO THE HYBRID MODEL

The response by unions to the broad adoption of the hybrid model by RPCs reiterates that the attendance-based minimum wage is unsustainable, and that reforms are inevitable. As the pandemic, the Russia-Ukraine war, and the government's balance-of-payments crisis drove the Sri Lankan tea industry into further volatility, RPCs had no choice but to introduce wage model reforms at the estate-level. Instead of resisting the change and risking being left behind, the trade unions have now actively involved themselves in the reform process, and are negotiating with RPCs to ensure the sustenance of their relevance in the new wage model.

During conversations with the CWC, it was revealed that unions have put forth the following demands, if RPCs are to proceed with the hybrid wage model large-scale:

1. That the revenue share system only accompanies, not replaces, the attendance-based minimum wage model
2. That each worker be allocated a minimum of 2 to 5 acres under the revenue share system
3. That the lease should be longer term (RPCs have generally allocated land under the revenue share system for a period of 1 year at a time)
4. That worker earnings from the revenue share system also be incorporated into the EPF/ETF system
5. That unions are allowed to organise workers on issues related to the revenue share system.

The mere fact that unions are negotiating, and not outright resisting, the implementation of the hybrid model is evidence that the minimum wage model, on its own, has outlived its purpose.

The hybrid model is, however, a band-aid solution to the larger problem of labour inefficiency in the tea industry, given that it does not fully do away with the attendance-based minimum wage model. Whether the hybrid model, on its own, is capable of sufficiency reducing inefficiency in the labour market is not clear. Especially when it comes to addressing the labour shortage issues, employers may offer market-based incentives to increase the attractiveness of the tea industry to workers, alongside solutions such as the hybrid model.

SOLUTION 3: IMPROVED WORK CULTURE AND LIVING CONDITIONS (MARKET INCENTIVES TO ATTRACT WORKERS)

The traditional work culture at the green-leaf stage in the tea industry does not provide workers with the best incentives to enthusiastically contribute their labour to the industry. Given the industry's colonial history, and the relationships of the RPCs to the colonial past, RPCs have retained certain influences of colonial management systems which can be best described as outdated. In fact, strict supervision, clearly defined power structures, and expectations of obedience are not just apparent in the relationship between estate management and minimum wage workers, but also in intra-management relationships as well. Even the way that management dresses to work at some estates reflect allegiances to the colonial past, despite the uninspiring subtexts associated with it.

Such management styles, and the rigid work culture that they breed, are not only out-of-date, but also give workers little agency, sense of importance, and freedom in their work. These management styles encourage the phenomenon of outgoing labour in the Sri Lankan tea industry, and are also partly responsible for the mistrust that has emerged overtime between estate management and employees.

As a solution to the increasing labour shortage in the Sri Lankan tea industry, employees may adopt alternative management structures that could promote goodwill and trust between estate management and employees. While the revenue share and hybrid models of remuneration are obvious steps in this direction, there are also much less intricate changes that RPCs could implement that are also much more immediate. One recent proposal calls for the use of more dignified job titles, such as 'technical assistant' for pruners. Uniforms, safety gear, and corporate social responsibility programs aimed at uplifting workers' standards of living could help improve dignity in their profession as well. Another proposal is to give workers more recognition via opportunities to improve their expertise in the work that they do via trainings and certification[73].

These changes may also be coupled with improvements to the living conditions of workers, which have empirically proven to increase productivity at tea estates in Sri Lanka. One study demonstrates that improved housing conditions may increase the productivity of tea pluckers, not just by making them more content, but also by improving air quality[74]. Another study concludes that improved facilities, and interventions to combat issues such as alcoholism in the estates, could also improve the productivity of tea estate workers[75].

In fact, the heavy prevalence of alcoholism in the estate community arguably makes the case for increased benefits to estate workers being made in non-cash forms, until the issue of alcoholism can effectively be contained[76]. Conversations with planters reveal that many estate workers, both male and female, spend a substantial share of their income on alcohol, which they point to as one of the reasons that personal savings tend to be very low among the estate worker community. In this context, enhancements to the non-cash benefits received by estate workers may arguably have more potential to improve the human development parameters of estate workers than enhanced cash benefits[77].

[73] "Future of Work for Tea Smallholders in Sri Lanka," International Labour Organization, 2018

[74] Kalyanaratne, Ajantha, "Housing and Labour Productivity of Female Tea Pluckers in Sri Lanka," SANDEE Working Paper, 2014

[75] Balasuriya, Amila, Karin Fernando, Geetha Mayadunne, K. Romeshun, Thilini Samarasekera, "Investing in People: Social Welfare and Labour Productivity in Sri Lanka's Plantation Sector," Centre for Poverty Analysis and WUSP Sri Lanka, 2013

[76] https://storage.googleapis.com/jnl-sljo-j-sljm2-files/journals/1/articles/69/submission/proof/69-1-514-1-10-20181 226.pdf

[77] In the meantime, however, it is also important that relevant parties take a strategic approach to the tackling the issue of alcoholism among the estate worker community. Prevention programmes conducted by the Plantation Human Development Trust (PHDT), a tripartite non-profit organisation managed with the participation of the Government of Sri Lanka, RPCs, and plantation sector labour unions, have reportedly helped in this respect. See: https://www.ft.lk/Agriculture/alcoholism-prevention-programs-improve-plantation-productivity/31-99100

SOLUTION 4: WORK-TO-STAY REQUIREMENTS (COMMAND-AND-CONTROL REGULATION TO ATTRACT WORKERS)

A decidedly more command-and-control approach to solving the labour shortage issue would be to mandate that all estate residents contribute their labour to the estates in order to continue to retain their estate residency status and the associated non-cash benefits. Given that RPCs currently offer these benefits to all estate residents regardless of whether they contribute their labour to the estates, such an approach needs to come in the form of an amendment to the lease agreements that the private managers of the RPCs have with the government. This proposed solution, however, is both impractical and infeasible in the current context, making it a non-starter in the eyes of industry stakeholders.

Mandating the contribution of labour to the estates for workers to be able continue to reside on the estate would have obvious positive effects on the Sri Lankan tea industry. It would increase the amount of green leaf plucked, giving estates the ability to earn more revenues. Even if some estate residents who currently do not contribute their labour to the estate opt to leave instead of contributing their labour to the estates, the overall costs borne by the RPCs on labour welfare will decrease, leading to lower costs of production and higher profits.

However, a command-and-control move of this nature is sure to draw the ire of labour unions, whose resistance will make it quite hard for such reform to be implemented. Even if estates successfully override the resistance of unions, the mass evictions that will follow when some residents inevitably refuse to contribute their labour to the estates could garner international press coverage, and ultimately tarnish the reputation of Ceylon tea. Bad public relations of such nature could permanently destroy the Ceylon tea brand, making it even more uncompetitive in the international market.

Even if a work-to-stay mandate does not draw the ire of unions or consumers, such a mandate would do little to address the other aspects of the labour issue beyond the labour shortage problem. For instance, a work-to-stay mandate would not address the productivity and incentives issues among the workers in the Sri Lankan tea industry; it would worsen the current lack of productivity and motivation among workers by forcing those who do not want to work in the tea industry to contribute their labour just so that they may continue living on the estates.

A work-to-stay requirement would also create distortions in the non-estate labour markets by reducing the supply of workers for non-estate jobs from the estate sector. Given that many industries presently source labour from the estate sector, a reduction in the labour supply could have lasting impacts on industries not directly related to the tea industry. Furthermore, it is unclear how coercive models of higher labour participation would allow for the future sustenance of the Sri Lankan tea industry itself, which is already sufficiently inundated in various labour-related issues. In fact, to make labour completely uncoercive, some propose the complete liberalisation of the tea industry labour market.

SOLUTION 5: FREE MARKET LABOUR

Given the many market distortions in the tea industry labour market, and their ensuing costs, proponents of the free market propose the complete liberalisation of the tea industry's labour market. Presently, the industry houses plantation industry workers in state-owned housing, forcing plantations to provide for the welfare of the workers and their families. One may even argue that this system, where plantation workers are disintegrated from the rest of society, gives unfair competitive advantage to plantations in the sourcing of labour by allowing easier access to the labour of generations of plantation industry workers[78]. In fact, it is widely believed that the workers, who have limited information about what goes on outside of the estates and have little mobility to the outside world, have a competitive disadvantage in their choice of employment.

The notion that estate workers are really at a disadvantage when it comes to their choice of employment and bargaining power with estate management is founded in little truth. Estate employees increasingly have access to other forms of employment in close proximity to estates such as at garment factories. The increasing trend among estate youth to move to cities such as Colombo for employment further highlights the opportunities for the mobility of the estate populations. Estate residents who stay behind and contribute their labour to the estates are represented by the estate unions, which, as described above, are some of the most powerful trade unions in the nation. The only economic disadvantage that estate workers face in comparison to other populations is the lack of property ownership, which impacts their ability to both build wealth based on real estate, and relocate outside of estates if they wish to do so.

An alternative system where estate communities are integrated with the rest of society would offer them better educational and social opportunities. An essential component of free-market labour is privatised housing, which would involve the granting of land rights to estate residents for the housing that they currently occupy. In addition to allowing estate residents to choose to sell their estate housing and relocate, it would also take the financial burden of maintenance of estate communities off of RPCs.

In fact, privatisation of estate housing has already taken place in some estates, including in estates where new housing is being built with assistance from the government of India[79]. Conversations with unions reveal that the government has expressed willingness to grant deeds to all residents of estate housing, although they claim that arrangements have yet to be fully worked out.

[78] https://unhabitat.lk/projects/active-projects/indian-housing-project-in-central-and-uva-provinces-2/
[79] https://www.tri.lk/motorized-selective-tea-harvester/

SOLUTION 6: AUTOMATION OF ESTATE LABOUR

Given the lack of perfect solutions to the labour issue, and the increasing technological advancements that are currently taking place within the tea industry, automation of estate labour is a solution that is frequently discussed. In fact, certain factories have already automated the withering process, and some tasks that used to be performed by human employees at tea factories are now performed by automated machines. The tea industry of Sri Lanka, however, lags far behind the tea industries of other countries when it comes to automating the harvesting process, despite the existence of technology[80]. Conversations with the Tea Research Institute (TRI) reveal that the selective harvester developed by TRI can pluck up to 30 kg of green leaf a day, with no decline in quality. The orthodox branding of the local industry is partly the reason for the delay in adoption, despite innovations by the Tea Research Institute that makes shear harvesting at high elevations possible[81]. Furthermore, workers are said to be reluctant to operate the machine as it requires separate training.

If tea estates effectively automate their plucking activities, it would lead to lower plucking costs, more consistency in the plucking costs, and higher plucking efficiency[82]. Evidence from other countries show that automation not only reduces plucking costs, which make up 35 percent of the cost of production of tea in Sri Lanka, but also increases the efficiency of plucking, because, unlike humans, machines do not get tired[83]. In addition, with automated plucking, any increases in associated costs will be more consistent, because they help employers avoid the wage negotiation process that regularly occurs at RPCs today.

Workers and unions, however, are heavily opposed to the automation of harvesting, because it would lead to job losses within the tea industry for many unskilled workers. While some pluckers may be able to transition into the role of operators for the plucking machines, they will require training in the handling of the machines and associated equipment. Given that not every plucker will be able to transition into a machine operator, it is hard to believe that employers will find it easy to implement large scale automation with respect to harvesting. Tea smallholders are even less likely to adopt automation in the immediate future because of the high costs of transition, which smallholders may not be able to afford.

Stakeholders of the industry, however, have failed to arrive at a unified understanding of the potential for automation of the industry, which signals that no objective investigation of this potential has been conducted. Conversations with stakeholders of the industry reveal that some stakeholders believe that automation could lead to a drop in the auction prices of tea. There is no consensus within the industry as to whether automated plucking would decrease the quality of production, given that it may not be possible to perfectly train machines to pluck only the recommended two leaves and the bud. On the other hand, some stakeholders believe that automated plucking could reverse the perception of the Sri Lankan tea industry as being positively orthodox and traditional, which is partly built on the image of the female tea plucker that is widely used in promotional materials. If such reasons could, in fact, lead to a drop in the premiums for Ceylon tea, then it is important that a comprehensive cost-benefit analysis of automated plucking is conducted before undertaking large-scale automation of the Sri Lankan tea industry.

[80] https://www.tri.lk/motorized-selective-tea-harvester/

[81] The TRI has already come up with several initiatives to develop the technology necessary to introduce large scale shear harvesting to the Sri Lankan tea industry. The TRI has experimented with different forms of automated plucking since the 1940s, and have identified issues unique to Sri Lanka in the use of automated pluckers, including the loss of crop because of the variety of tea shoots present in the terrain geography of local tea estates. See: "Development and Introduction of a Motorized Selective Tea Harvester for Tea Lands in Sri Lanka," Tea Research Institute, https://www.tri.lk/motorized-selective-tea-harvester/

[82] http://192.248.43.153/bitstream/1/1731/2/PGIATAR-15-98.pd

[83] Omuga, George Okoth. "The Influence of Mechanical Plucking Machines on Employee Income in Sotik Tea Companies Limited, Bureti District, Kenya," IIARD International Journal of Economics and Business Management, Vol. 2, No. 1 (2016): 57-73

DISCUSSION PAPER 2

LONG-TERM CAPITAL INVESTMENT IN LAND: REPLANTING AND INFILLING

Long-term capital investments, such as replanting and infilling, are an essential element of sustained land productivity in the tea industry of Sri Lanka; however, neither RPCs, nor smallholders, seem incentivised to undertake investments of this form. This paper establishes an economic framework, based on the Growth Diagnostic Framework by Hausmann, Rodrik, and Velasco (2005), to discern the causes of low levels of long-term capital investments in Sri Lanka's tea estates. The paper finds that to varying degrees, the low rate of returns, uncertainties about the appropriability of returns, and low savings prevent RPCs and smallholders from embarking on long-term capital investments into tea lands. The paper explores the different routes the industry may take, with the help of policymakers and other relevant parties, to overcome these binding constraints to long-term investments, to facilitate the long-term sustenance of the industry.

Unlike China, India, or even Kenya, Sri Lanka does not have an abundant supply of agricultural land that can be freely utilised to produce tea. The limited land extent available for agricultural activities requires that necessary capital investment takes place in the existing tea lands, so that production can be optimised, and even increased over time should the need for substantially higher levels of production arise.

According to the Food and Agriculture Organization (FAO) of the United Nations, the future of the agricultural sector lies in intensified production, not extensive production, particularly as the per capita land extent declines with population growth. As such, making the use of land more productive is paramount to the future sustainability of the agricultural sector, which is only possible through increased investment in land resources[84]. The future of the Sri Lankan tea industry clearly lies in more efficient use of land to extract as much yield as possible from the available tea land extent through sustainable capital investment

FORMS OF LONG-TERM CAPITAL INVESTMENT IN TEA LANDS

There are many forms of long-term capital investment that are available to planters that will improve the productivity of the Sri Lankan tea land, the most important of which include infilling, replanting, and new planting. Infilling refers to the replacement of tea bushes that die prematurely due to various causes. Infilling the vacant spots left by dead tea bushes with new plants is essential to ensuring that a block of tea cultivation has uniform cover, which is a prerequisite for maximising productivity. . Replanting, on the other hand, is the replacement of tea bushes that are past their prime with new bushes, so that the level of yield does not decline. The yield of a mature tea bush declines as it grows older (past 50 to 60 years in high-grown tea, and past 30 to 40 years in low-grown tea[85]),

[84] Yoshinaga, K., "The Benefits of Investments in Land and Water," Food and Agriculture Organization of the United Nations, 2002

[85] The economic life span of low-grown tea bushes is shorter because the climatic conditions in the lower elevations, characterised by higher temperatures and rainfall, lead to the overworking of the tea bush, leading to higher rates of shoot growth. For instance, at higher temperatures, the photosynthetic rate is higher, leading to higher uptake of shoots. Similarly, higher rainfall is also associated with higher uptake of shoots. These factors, along with lower levels of carbon in low-grown tea bushes, lead to faster ageing of the tea bush in the lower elevations, compared to the higher elevations. See: Jayasinghe, Sadeeka, and Lalit Kumar (2021). "Potential Impact of the Current and Future Climate on the Yield, Quality, and Climate Suitability for Tea [Camellia sinensis (L.) O. Kuntze]: A Systematic Review." Agronomy, 11(619).

and the harvest that a tea bush provides sees a substantial drop, which is detrimental to the productivity of a tea estate. New planting, which only begins to matter in terms of productivity once infilling and replanting have taken place, refers to the planting of uncultivated land extents to expand production.

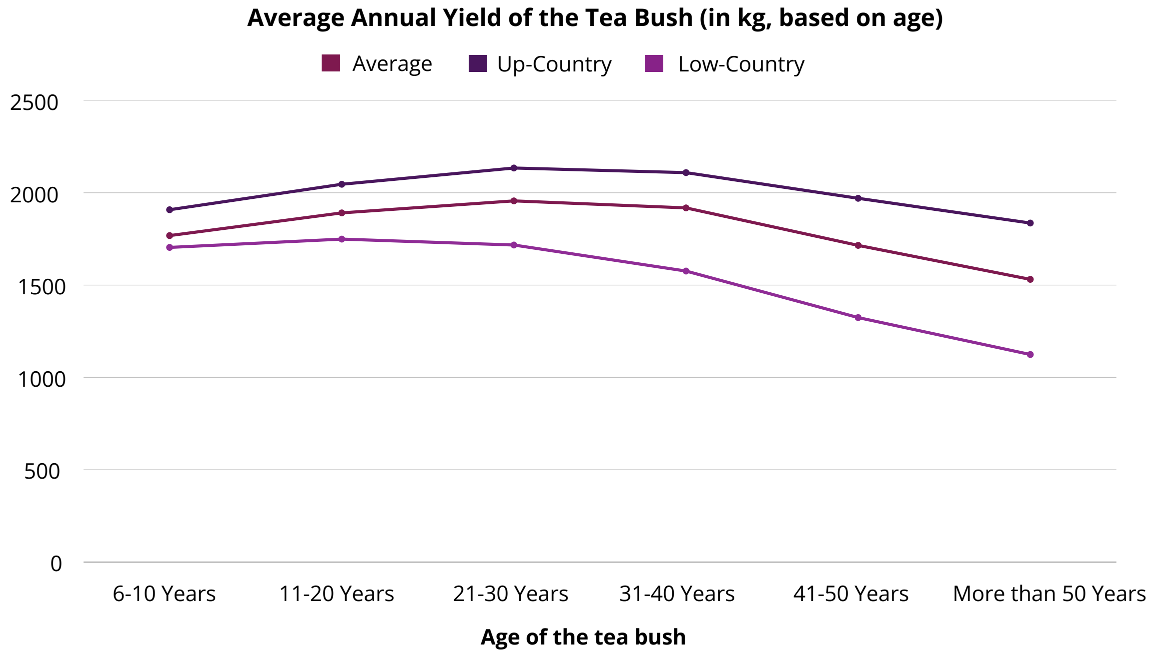


Figure 1 : Economic life cycle of the tea bush (Source: Samansiri, B.A.D., J.C.K. Rajasinghe, and M.A.H. Nishanthi. "Forecasting Productivity of VP Tea Under Varying Rates of Replanting in the Corporate Sector of Sri Lanka." Sri Lanka Journal of Tea Science, 75(2), 2010.)

Manure, pruning, and other regular maintenance activities are all forms of short-term capital investment in land. Conversations with industry stakeholders reveal that, in Sri Lanka, these forms of short-term capital investment generally take place at the desired rate[86]. This discussion paper, therefore, does not concern itself with short-term capital investment. There are valid questions, however, as to whether the necessary long-term capital investment takes place at the desired levels

LONG-TERM CAPITAL INVESTMENTS IN TEA LANDS IN SRI LANKA

Data gathered from RPCs reveal that the rate of replanting in the Sri Lankan tea industry is abysmally low, compared to what is recommended by experts. Experts recommend that two and a half to four percent of a tea cultivation is replanted every year, to ensure that the crop yields are not affected by the continued reliance on tea bushes that are past their prime[87]. However, in recent years, less than one percent of the total tea cultivation at RPCs was replanted. No RPC reached the recommended minimum of 2.5 percent every year, and there are some RPCs that have gone years without conducting any replanting at all.

[86] There may still be room for improvement in the short-term investments in tea land, although the lack of long-term investment is presently a more pressing issue. For instance, slow-release fertiliser and biochar use are examples of short-term improvements to soil quality that plantations could take up at a higher rate to increase the yield. See https://www.sundaytimes.lk/120624/business-times/biochar-can-it-put-the-tea-industry-back-in-the-black-3850.ht ml

[87] Kelegama, Saman, Nisha Arunatilake, Janaka Wijayasiri, Sri Lanka Tea Industry in Transition: 150 Years and Beyond (Colombo: Institute of Policy Studies of Sri Lanka, 2018)

Figure 2 : Seedling vs VP tea (Source: Wickramasinghe, Ananda (2021). "Bold Changes Needed to Salvage the Nation's Tea Plantation Industry." The Sunday Times.)

Replanting is also essential in the RPC sector to replace bushes raised from seed with vegetatively propagated (VP) tea bushes. Historically, the tea bush was planted from seeds. Older estates in Sri Lanka still mostly harvest old tea bushes which have lower yields both because they are past their prime, and also because they have been raised from seed[88]. In comparison to seedling bushes, VP bushes have more uniform cover; this greater uniformity, alongside the higher resistance of VP bushes to pests and diseases, and the ability to clonally develop selected high-yield stems under VP propagation, lead to higher yields from VP bushes[89].

Conversations with RPCs reveal that more than 55 percent of the tea cultivated extent of RPCs consists of VP cover (with an annual average yield of made tea of around 2,500 kg per hectare in ideal conditions, and around 2,000 kg on average, as opposed to an annual average yield of made tea of around 1,250 kg per hectare in ideal conditions, and around 800 kg on average for seedling tea bushes), whereas over 90 percent of the tea bushes in the smallholder sector are VP. The continued reliance on seedling bushes lowers the productivity of RPCs, which can only be enhanced by replanting the seedling bushes with VP bushes.

Year	Rate of Replanting (%)
2013	0.86363636
2014	0.6366322
2015	0.60453649
2016	0.52475248
2017	0.4694182
2018	0.641

Table 1 : Rate of replanting at RPCs between 2013 and 2018 (MoPI 2018)

When it comes to the smallholder sector, given that most smallholders entered the trade in the 1980s or after, most tea bushes are just entering their last years of prime yield or have yet to reach their prime. Accordingly, it is hard to quantify the rate at which replanting should happen or is taking place. However, conversations with stakeholders in the Sri Lankan industry, including smallholders themselves, reveal that replanting is not a top priority for a vast majority of smallholders either.

[88] http://tri.nsf.ac.lk/bitstream/handle/1/445/TQ-29-PT_2_76.pdf?sequence=2&isAllowed=y

[89] The first VP cultivar in Sri Lanka was introduced by the TRI in the 1950s. Since then, the TRI has consistently introduced improved VP cultivars, most notably the TRI 2000, TRI 3000, and TRI 4000 series, with the latter's potential yield under ideal climatic, land, and labour conditions supposedly reaching 5,000 kg per hectare. See:
Muhandiram, M.M.N. and A. Thayarapan (2022). "Factors Associated with Choice of Tea Cultivars in Badulla District of Sri Lanka." Journal of Business Studies, 6(2), 21-38. :

The average tea bush in the low-country reaches its prime in 30 to 40 years, and that it has been roughly an equivalent number of years since tea smallholdings in the low-country began picking up pace. As such, the lack of adequate replanting in the smallholder sector presents the industry with a ticking time bomb that could set off in the form of a sudden drop in yields in the coming years, worsening the green leaf shortage faced by bought-leaf factories. In fact, this situation may have already arised, as Tea Smallholder Factories PLC, a bought-leaf processing company, reports that smallholders in the low-country have already begun to leave the industry as yields have begun to drop.

Unlike replanting, the data on the rate of infilling at RPCs is not available. However, conversations with RPCs reveal that there are some RPCs that have not engaged in any new planting for years, which implies that they have not engaged in any infilling either. Furthermore, between 2007 and 2018, the extent of tea cultivation at RPCs dropped 12,700 hectares, from 212,000 hectares to 200,000 hectares. Some of this loss is probably attributable to low rates of infilling, especially in cases where large blocks of cultivation saw premature deaths of tea bushes due to diseases or other reasons[90]. There is no evidence to believe that infilling happens at an adequate rate in the smallholder sector either.

The primary takeaway here is that the long-term capital investments into the tea lands, and by extension for the future sustenance of the Sri Lankan tea industry, have been consistently low in recent years. During conversations with RPCs, financial infeasibility has been pointed out as the major explanation for the virtual lack of long-term capital investments into the tea lands. RPCs, with or without much coordination among themselves, seem to have all concluded that investing in the Sri Lankan tea industry's long-term capital accumulation would be a bad business decision that they would not be able to justify to their shareholders. A comprehensive framework is necessary to understand the thought process of plantations as they decide to forego replanting and infilling.

The consequences of ignoring the need for long-term capital investment in the tea lands, however, have already manifested. Sri Lanka's average yield is one of the lowest among large tea producing countries, and the lowest among large exporters of black tea, contributing to Sri Lanka's growing cost of production. While the severe labour shortage is in part responsible for the low yield at RPCs, leading to a suboptimal number of plucking rounds per month, the smallholder sector does not experience such an issue. In this context, the low yield of the smallholder sector can only be attributed to the lack of long-term capital investments in the land in terms of replanting and infilling, given that short-term fertiliser is generally provided to smallholders at subsidised rates. The lack of long-term capital investments in the tea lands is therefore negatively impacting the international competitiveness of Ceylon tea, and this impact will only worsen as the need for replanting and infilling remains largely ignored.

[90] "Statistical Information on Plantation Crops 2018," Ministry of Plantation Industries and Export Agriculture, 2020

DETERMINANTS OF YIELD

The yield of tea, generally calculated as the average annual harvest of green leaf in a hectare of cultivation, is an indicator of the productivity of the tea industry of a particular region. Mere comparison of numbers between regions, however, could mask important differences in the land and labour resources that contribute to the average yield. Both in the context of the Sri Lankan tea industry and the global tea industry, the average annual yield is a result of a combination of various factors.

As aforementioned, the age of the tea bushes, and the region in which the tea bushes are planted, are primary determinants of the average annual yield. In the context of Sri Lanka, the tea bush gives higher yields in the up-country sector, and comparatively lower yields in the low-country sector[91]. Short-term investments in the tea land, such as fertilisation, also are a crucial factor that determines the yield of the tea bush, particularly past its prime years of yield.

Region	Average Annual Yeild (KG/hectare)
Up-Country	2,070
Uva	1,700
Mid-Country	1,758
Low-Country	1,630

Source: Samansiri, B.A.D., J.C.K. Rajasinghe, and M.A.H. Nishanthi. “Forecasting Productivity of VP Tea Under Varying Rates of Replanting in the Corporate Sector of Sri Lanka.” Sri Lanka Journal of Tea Science, 75(2), 2010.

The average annual yield is also impacted by the rate of replanting, as higher replanting rates are associated with higher yields. There are two factors driving this scenario; firstly, replanting would replace seedling with VP bushes leading to higher yield potential, and secondly, replanting would also replace senile tea bushes, which provide comparatively lower yields, with younger bushes. Research conducted by the TRI shows that at a 4 percent replanting rate, an average 4 percent improvement in the yield could be expected over a 20 year period, whereas under the present rates of replanting, the RPCs will instead see a 15 percent decline in the yield[92].

None of these factors matter, however, if the potential yields are not realised in actual terms through harvesting. The comparatively lower yields of Sri Lanka’s tea industry today are partly a result of low rates of harvesting, due to the severe shortage of labour in the estates. While a tea field would ideally be harvested once every seven days, due to the shortage of labour, most estates are said to have reduced the number of plucking rounds. Conversations with RPCs reveal that harvesting takes place at an interval of fourteen days at most estates as they do not have the labour resources to harvest the fields every seven days.

[91]Although under ideal conditions, the yield of tea bushes in the lower elevations should be greater than those in the higher elevations given the higher temperatures and higher rates of precipitation in the lower elevations, other confounding factors lead to the realisation of a smaller yield in the lower elevations. The labour shortage in the lower elevations is much higher than the labour shortage in the higher elevations, given the existence of more opportunities for outside employment in the lower elevations, leading to lower plucking rounds. Consequently, more mature leaves are plucked in the lower elevations, sometimes including the mother leaf (which is supposed to nourish new shoots), leading to delays in the growth of new shoots. The substantially higher rate of diseases among tea bushes in the lower elevations, resulting in both less shoot growth and higher vacancy rates, also lowers the yield in the lower elevations. For more on how the higher prevalence of diseases lowers yield in the lower elevations, see: Mahindapala, K.G.J.P. (2018). “Yield Declining and Bush Debilitation in Low-Country Tea Plantations.” Tea Research Institute, Sri Lanka.

[92]Samansiri, B.A.D., J.C.K. Rajasinghe, and M.A.H. Nishanthi. “Forecasting Productivity of VP Tea Under Varying Rates of Replanting in the Corporate Sector of Sri Lanka.” Sri Lanka Journal of Tea Science, 75(2), 2010.

In contrast, the high yield of Kenya and India is a result of both greater labour availability, and higher labour productivity.

Country	Average Yield (Source: International Tea Committee 2022)
China	932
India	2,090
Kenya	1,938
Turkey	3,333
Sri Lanka	1,445

Average Yield (Source: International Tea Committee 2022)

In the international context, there are several other factors that lead to the differences in the yield between countries. The most important of these is the method of conversion of green leaf into made tea. CTC processing gives more made tea per unit of green leaf than orthodox processing, enhancing the yield rates of countries such as Kenya and India, that mainly produce CTC tea. The potential to extract a greater amount of made tea under CTC processing is explained by the fact that under this processing method, every part of the plucked shoot is pulverised into powder. In contrast, stalks, stems and fibres are removed in the refining stage of the orthodox processing method, resulting in a lower amount of made tea. CTC-producing countries are also able to extract larger economies of scale compared to Sri Lanka, given that even their smallholders cultivate land extents that are substantially larger than the average land extent of a smallholder of Sri Lanka. The type of harvesting also plays a role; the higher yield of CTC producing countries is also partly explained by their greater reliance on mechanised plucking.

The low average yields of China, on the other hand, are mostly a result of green tea processing, which requires more green leaf to produce the same amount of made tea compared to black tea. The tea bushes of China are also mostly seedling and senile, further contributing to the country's lower yields.

FRAMEWORK FOR THOUGHT: GROWTH DIAGNOSTICS

The Growth Diagnostic Framework (GDF), introduced in 2005 by Ricardo Hausmann, Dani Rodrik, and Andrés Velasco, investigates the binding constraints to necessary private investment that impede growth in macroeconomic settings[93]. In identifying the binding constraints that limit private investment, the GDF also proposes contextualised reciprocal growth strategies intended to sidestep the binding constraints and lead to renewed growth[94]. While the GDF is originally meant to perform national level exegeses into low private investment, it is nevertheless sufficiently comprehensive to identify deterrents to long-term capital investments into the Sri Lankan tea industry. In fact, given the heavy involvement of the state apparatus in the industry alongside its private stakeholders, the use of the GDF to analyse this question is particularly reasonable.

The GDF categorises the binding constraints to investment into two broad primary groups: low return to economic activity, and high cost of finance. Low return to economic activity could arise from low social returns based on poor geography, low human capital, bad infrastructure, or from low appropriability of returns based on either government failures or market failures. Government failures could arise from either micro risks related to property rights, corruption, or taxes, whereas macro risks could arise from either financial, monetary, or fiscal instabilities. Market failures are a result of either information externalities, or coordination externalities. On the other hand, high cost of finance could be an impediment due to either bad international finance, or situations of bad local finance arising from low domestic savings or poor intermediation.

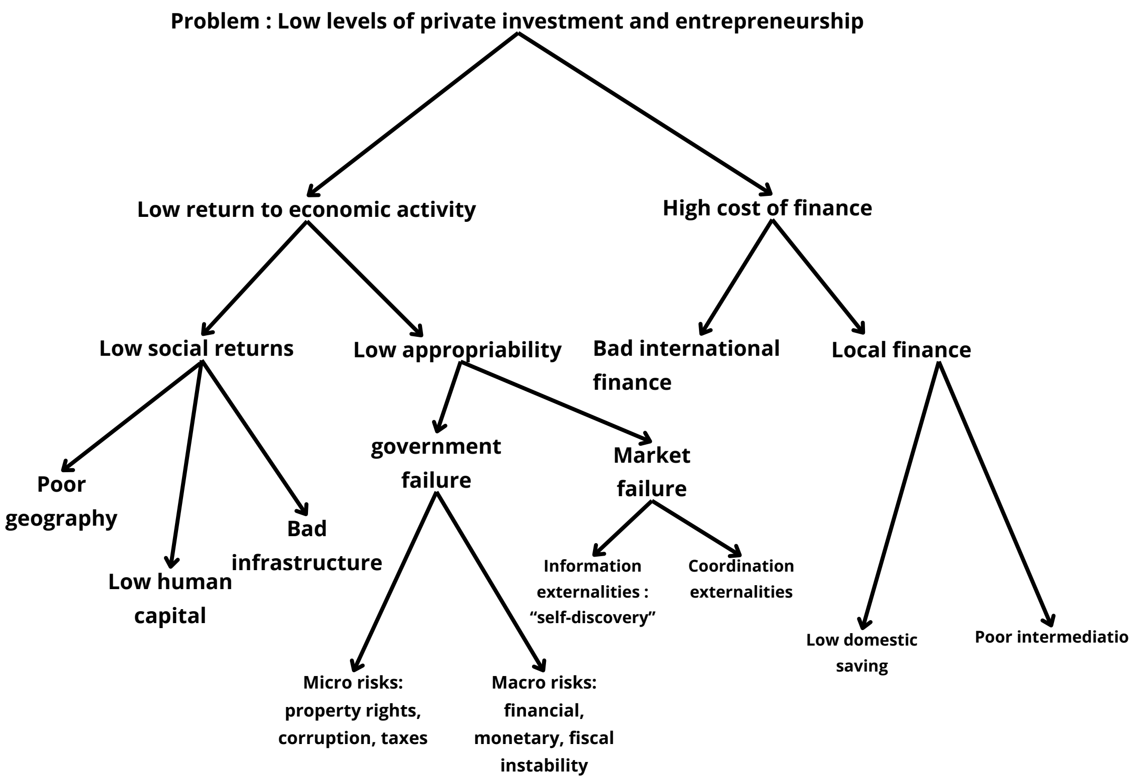


Figure 1: Growth Diagnostic Framework (Hausmann et al. 2005)

[93]Hausmann, R., D. Rodrik, A. Velasco, " Growth Diagnostics," John F. Kennedy School of Government at Harvard University, 2005

[94] Hausmann et al. 2005

BINDING CONSTRAINTS TO THE SRI LANKAN TEA INDUSTRY

A. LOW RETURN TO ECONOMIC ACTIVITY

The first binding constraint to higher long-term capital investment in land in the Sri Lankan tea industry is the low return to economic activity, which primarily arises from the high gestation period of investments in replanting. Once the replanting is completed, planters should ideally wait five years before they begin harvesting, which means until then planters receive zero revenue from the replanted cultivation. Given the economic infeasibility of waiting seven years to harvest the yield of replanted bushes, conversations with planters revealed that harvesting usually begins following the completion of the fifth year since the commencement of the replanting process. Planters expedite the process by two years by reducing the waiting periods between uprooting and planting, and planting and harvesting, by one year each.

Even with the expedited replanting process, net present value (NPV) calculations reveal that replanting creates a substantial dent in the profitability of tea plantations. Most tea producers in Sri Lanka sell their teas in bulk form at the auction, with minimal value addition. Net present value estimates show that the average annual prices received at the auction for the sale of tea are not nearly enough to sufficiently cover the costs of replanting to make replanting a profitable long-term capital investment. This discussion paper relies on net present value (NPV) analyses, based on data from 2019, to demonstrate that under present conditions, replanting is not a feasible exercise for either RPCs or smallholders, both in the high and low elevations. The labour constraint is an important variable here given the labour intensive nature of replanting. One RPC illustrated this point by stating that the labour hours needed to replant a hectare of tea is equivalent to the labour hour requirement to pluck 360 hectares of tea, at 12 pluckers per hectare. Given the extent of labour shortages faced by estates, the topic of replanting is a non-starter for most RPCs, who believe that labour is more profitably utilised for harvesting the existing tea cover.

In up-country estates, replanting is not feasible given the inability of planters to recover the total costs of replanting under the present land and labour conditions, before replanting is due again. A tea bush in the up-country region reaches senility between 50 to 60 years into its existence, and for the ease of calculations, the NPV analysis assumes that replanting is due again 55 years following the commencement of the replanting process. Based on this analysis, replanting entails an internal rate of return (IRR) of -0.06 percent, which implies that 55 years into replanting, the estates will barely break even, if at all. In contrast, if the estate were to continue harvesting the existing senile tea bushes, at a reduced yield of 1,836 kg per hectare, the estate would make an annual accounting profit of LKR 103,289.74 per hectare, which is a financially more appealing route to the planter than replanting.

A 0.21 percent increase in the net sale average at the auction, or an equivalent increase in the yield, would allow the estate to veer into the territory of positive returns under replanting. The latter would be possible if estates are able to make a slight improvement to the existing labour shortage issue, which would allow for more plucking rounds, and therefore, higher yields.

Even if replanting is technically feasible under higher yields, practically, it is difficult to imagine a scenario where replanting in the up-country region will be viewed favourably by RPCs or smallholders, particularly given the high gestation period. No reasonable entity would undertake an investment endeavour with a gestation period of 55 years, and even if an entity is interested in undertaking this endeavour, it is hard to imagine that they will be able to acquire funding for it from a lender. As such, unless the RPC or smallholder have the necessary liquidity on hand to embark on replanting, it is difficult to imagine that large-scale replanting is a practicable exercise for many planters.

Table 2 : Net Present Value analysis of replanting a hectare of tea land with revenues calculated based on average auction price for up-country tea in 2019, LKR 554.21/kg and replanting costs in 2019. The yield is lower during years of pruning, which occurs at five year intervals (Talawakelle Plantations, DCS)

Year	Main Cost Item	Total Cost (LKR)	Yield (in KG)	Total Revenue (LKR)
Year 1	Uprooting	1,438,907.00	0	0
Year 2	Maintain the uprooted land	594,607.00	0	0
Year 3	Planting	2,648,907.00	0	0
Year 4	Maintain the new cultivation	1,226,107.00	0	0
Year 5	Maintain the new cultivation	1,054,907.00	0	0
Year 6-9	Harvesting and processing	918,559.10	1,908	1,057,432.68
Year 10	Harvesting and processing	880,786.99	1,278[95]	708,479.9
Year 11-14	Harvesting and processing	926,837.72	2,046	1,133,913.66
Year 15	Harvesting and processing	886,333.72	1,371	759,722.15
Year 16-19	Harvesting and processing	926,837.72	2,046	1,133,913.66
Year 20	Harvesting and processing	886,333.67	1,371	759,722.15
Year 21-24	Harvesting and processing	932,116.84	2,134	1,182,684.14
Year 25	Harvesting and processing	889,870.68	1,430	792,398.37
Year 26-29	Harvesting and processing	932,116.84	2,134	1,182,684.14
Year 30	Harvesting and processing	889,870.69	1,430	792,398.37
Years 31-34	Harvesting and processing	930,617.09	2,109	1,168,828.89
Year 35	Harvesting and processing	888,865.85	1,413	783,115.36
Yeas 36-39	Harvesting and processing	930,617.09	2,109	1,168,828.89
Year 40	Harvesting and processing	888,865.85	1,413	783,115.36
Years 41-44	Harvesting and processing	922,278.48	1,970	1,091,793.7
Year 45	Harvesting and processing	883,278.98	1,320	731,501.78
Years 46-49	Harvesting and processing	922,278.48	1,970	1,091,793.7
Year 50	Harvesting and processing	883,278.98	1,320	731,501.78
Years 51-55	Harvesting and processing	914,239.82	1,836	1,017,529.56
Internal rate of return: -0.06 percent				

[95]The yield is ⅓ lower than otherwise during the years when pruning takes place, which happens every five years.

Replanting is even less feasible in low-country estates, given that a tea bush in the low-country region reaches senility between 30 to 40 years into its existence (fixed at 35 years for the NPV analysis). Based on NPV calculations, replanting in the low-country region entails an internal rate of return (IRR) of -4.36 percent, which implies that by the time that replanting is due again, the estate would still not have recovered the costs of replanting in the prior round. In contrast, if the estate was to harvest the existing senile tea bushes, at a reduced yield of 1,576 kg per hectare, it would make an annual accounting profit of LKR 88,201.50, which is again substantially more appealing than the replanting route.

Table 3 : Net Present Value analysis of replanting a hectare of tea land with revenues calculated based on average auction price for low-country tea in 2019, LKR 626.17/kg and replanting costs in 2019. The yield is lower during years of pruning, which occurs at five year intervals (Talawakelle Plantations, DCS)

Year	Main Cost Item	Total Cost (LKR)	Yield (in KG)	Total Revenue (LKR)
Year 1	Uprooting	1,438,907.00	0	0
Year 2	Maintain the uprooted land	594,607.00	0	0
Year 3	Planting	2,648,907.00	0	0
Year 4	Maintain the new cultivation	1,226,107.00	0	0
Year 5	Maintain the new cultivation	1,054,907.00	0	0
Year 6-9	Harvesting and processing	906,321.14	1,704	1,066,993.68
Year 10	Harvesting and processing	872,587.56	1,142	714,885.77
Year 11-14	Harvesting and processing	909,020.69	1,749	1,095,171.33
Year 15	Harvesting and processing	874,396.26	1,172	733,764.79
Year 16-19	Harvesting and processing	909,020.69	1,749	1,095,171.33
Year 20	Harvesting and processing	874,396.26	1,172	733,764.79
Year 21-24	Harvesting and processing	907,101.01	1,717	1,075,133.89
Year 25	Harvesting and processing	906,321.14	1,150	1,066,993.68
Year 26-29	Harvesting and processing	872,587.56	1,717	714,885.77
Year 30	Harvesting and processing	909,020.69	1,150	1,095,171.33
Year 31-34	Harvesting and processing	874,396.26	1,576	733,764.79
Year 35	Harvesting and processing	909,020.69	1,704	1,095,171.33
Internal rate of return : -4.36 percent				

In the low-country region, a 12.55 percent increase in the net sale average at the auction, or a 13.87 percent increase in the average annual yield, would allow the estate to veer into the territory of positive returns. Again, the latter is easily achievable if the constraints arising from the severe labour shortage in the plantations are eased, allowing for more frequent plucking, and therefore, higher yields. These NPV analyses make it clear that under the present circumstances, characterised by the suboptimal plucking rounds due to the severe labour shortage faced by RPCs, replanting is not a feasible undertaking till such time that the labour shortage is addressed. Producers may also attempt to make replanting more feasible by reducing overall costs of production, a majority of which comes from labour costs themselves, for which the strategies outlined in Discussion Paper 1 may be used. The labour market distortions created by the government's imposition of a cost-inflating and productivity-reducing minimum wage model in the tea industry clearly constrains the financial capacity of planters to engage in necessary long-term capital investment in the land.

In essence, the lack of replanting in the RPC sector is not a result of economic constraints, given that replanting is economically feasible under ideal circumstances, but one of physical constraints caused by the shortage of labour. Economic theory predicts that, under normal circumstances, RPCs would increase the labour supply to resolve this physical constraint to replanting by providing incentives to attract more workers, but in the context of RPCs, such moves are easier said than done. When seeking labourers, the catchment area for estates has traditionally been limited to the estate premises itself, as estates have traditionally sourced labour from those living on the estates. As estate residents have largely taken up employment outside of the estates in the recent times, while still residing on the estates, estate managements have been forced to offer various incentives to the workers, in the form of cash benefits, non-cash benefits, contract employment opportunities for retired workers, and alternative wage models, to stop the shrinkage of the workforce and to attempt to expand it. The anecdote from Discussion Paper 1 on the attempts by Somerset Estate of Talawakelle Plantations PLC to retain their workforce demonstrates that even such measures have limited effect, and that estates need to adjust to a future in which a significant share of their residents will be employed outside the estate regardless of the incentives offered by estate management. In this context, estates may find seeking employees from outside the estates to be an option of last resort. Broadening the catchment area in the face of extreme inelasticity in the disinclination among estate residents to join the estate workforce could lead to exponentially high marginal costs to the estates. In this scenario, estates will have to make substantial investments into expanding the housing, healthcare, educational, and childcare services available on-site, making the marginal costs of hiring workers from outside the estates prohibitive

A mere increase in the number of workers, however, cannot be expected to immediately increase the rates of replanting, given the opportunity cost considerations of planters. As RPCs make an initial dent in the labour supply constraints, the marginal cost of plucking would go down compared to the marginal cost of replanting, and this will remain to be the case until there are enough workers to conduct a round of plucking every seven days. At the present severity of the labour shortage, which has resulted in fourteen-day plucking rounds in most estates, under the minimum wage model, the marginal cost of plucking would decline until the present labour force is approximately doubled. Until such time, economics dictate that the increased workforce be more efficiently utilised for plucking, and replanting may only reasonably commence once sufficient labour has been sourced to optimise the number of plucking rounds. Even if RPCs manage to address the labour shortage and bring down their cost of production, hence making replanting more feasible, there are looming questions as to whether the RPCs will be able to extract the positive financial returns, due to their lack of property rights.

B. LACK OF PROPERTY RIGHTS

The lack of property rights for RPCs is another binding constraint because it leaves open questions about the appropriability of the returns from replanted tea bushes once the temporary leases expire in 2045. If the RPCs are to engage in replanting today, their leases will be up long before they can finish reaping all the benefits of replanting, despite having borne all its costs in the gestation period. The government, or another third party which is granted management rights to the RCPs following the expiration of the current leases, will then reap the remainder of the benefits. It is therefore not in the interest of RPCs to promote and pursue replanting right now, without full knowledge of whether they will retain management rights of the RPCs upon the expiry of their existing leases.

C. MICRO RISKS

The lack of property rights is not the only binding constraint that currently prevents the tea industry from making long-term capital investments into the land; the micro risks propelled by the government's frequent intervention in the industry has also put into question the continued appropriability of returns from investments into the tea industry. The Sri Lankan government has, over the years, made various decisions that directly and substantially impact the Sri Lankan tea industry without due consideration of the interests of the industry itself. For instance, the nationalisation of the tea industry in the early 1970s, the introduction of the attendance-based minimum wage for the tea sector in 1995, the ban on the use of glyphosate in 2015, the most recent minimum wage hike, and the short-lived ban on the importation of chemical fertiliser, are all examples of policy decisions that the various governments have taken without consulting the private stakeholders of the industry.

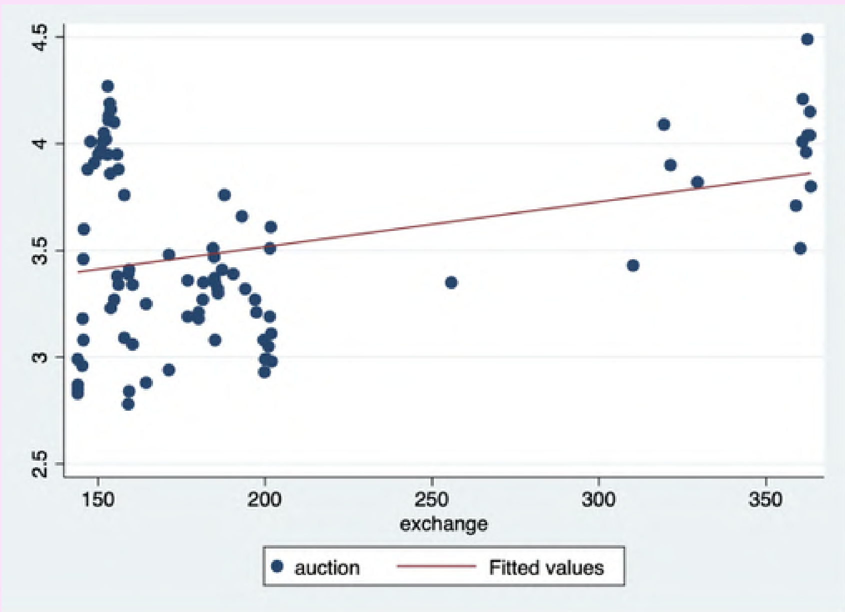
The lack of alignment between the policy interests of the government and what the tea industry requires for its sustainability in the future, has put into question the survivability of the tea industry. With a real possibility of the industry's collapse in sight, the appropriability of the returns of the investments that planters make today is not necessarily clear. Not only have planters therefore shown an unwillingness to make the necessary investments in capital accumulation, including long-term investments into the land resources, but conversations with RPCs reveal that some planters have already begun to prioritise alternative crops such as coffee and cinnamon over tea because of it.

EXCHANGE RATE VOLATILITY

The risks posed by the volatility of the exchange rate of the Sri Lankan rupee are another deterrent of capital investments into the tea industry, including tea lands. Since the onset of the balance of payments crisis in particular, the Sri Lankan rupee has been volatile against the United States dollar at an unprecedented level, which makes predictions about the profitability of the tea industry difficult. While the industry received record profits as the rupee depreciated, the profits have come down following the subsequent appreciation of the rupee.

The profitability, or the lack thereof, of the industry based on movements in the exchange rate is often sensationalised in media reports—again reiterating the unpredictable nature of the return to investment in tea lands. Given that the exchange rate is out of its control, stakeholders always emphasise the dollar price of tea as what merits attention. This perception, however, is somewhat misguided as the exchange rate seems to partially dictate the dollar price that Ceylon tea receives in the international market.

A simple regression analysis of the auction price of Ceylon tea (in United States dollars) against the LKR-USD exchange rate in recent years shows that the auction price is significantly related to the exchange rate. More specifically, Since 2016, a LKR 100 increase in the value of the USD is associated with a USD 0.2 increase in the auction price, and this finding is significant beyond the 99 percent confidence interval. While it is not possible to claim causation, it is clear that either the exchange rate, or other confounding factors influencing the exchange rate, are correlated with the dollar price that Ceylon tea receives at the auction.



One potential explanation of this correlation is that when the rupee depreciates, in expectation of further depreciation of the rupee in the immediate future, producers hold off on supplying tea to the market. Such undersupply of tea could be expected to cause an increase in the average auction price. Conversely, when the rupee appreciates, fearing further appreciation of the rupee in the immediate future, producers may be oversupplying the market with tea, leading to reductions in the average auction price. This hypothesis, however, needs further econometric investigation for its validity to be confirmed.

D. LACK OF HUMAN CAPITAL

Even in instances where planters have prioritised long-term investments into the tea industry, however, the lack of human capital has proven to be another binding constraint that contributes to the overall lack of returns to economic activity from replanting. The labour shortage in plantations has reached unprecedented levels as demonstrated in Discussion Paper 1. Conversations with RPCs reveal that the severe labour shortage has led to the triaging of tasks when assigning labour, which has led to the prioritisation of more regular activities such as plucking, over activities such as replanting, which are arguably less urgent for the day-to-day functioning of tea estates.

E. LOW SAVINGS

Even if planters recognise the importance of long-term capital investment in the land resources and are willing to direct scarce labour resources towards it, the low level of savings makes it virtually impossible for some to bear the initial investment costs. While each RPC has its unique financial capacity that may or may not allow them to be able to bear the costs during the gestation period, tea smallholders across the board do not have the private savings required to make such investments. Most tea smallholders survive on their earnings season to season, and cannot afford to give up part of their yield for five to seven years until they can harvest the replanted tea bushes[96]. A survey of tea smallholders reveals that only 70 percent of smallholders are aware of the reasons as to why replanting is necessary, which means that there are many tea smallholders who, out of ignorance, overlook the need for replanting their cultivations. Even among those who are aware of the necessity to replant, the replanting rate is quite low. The high gestation period holds back 54 percent of smallholders from engaging in replanting[97].

F. POOR INTERMEDIATION

Aware of this issue, the government has, at various points, devised strategies to subsidise long-term capital investment in tea lands, but the last binding constraint, poor intermediation, has prevented the flow of funds from the government to the farmers. When the tea export CESS was increased more than threefold in 2006, the expectation was that the funds collected through the higher export tax would stay within the tea industry, to subsidise activities such as replanting[98]. Conversations with tea exporters, on whom the tea CESS is imposed, reveal broad consensus that the CESS should in fact be used to subsidise activities such as long-term capital investment in the land resources, so that the future sustainability of the tea industry can be ensured.

[96] http://ir.kdu.ac.lk/bitstream/handle/345/5162/23%20Replanting%20Tea%20Lands%20of%20Smallholding.pdf?se quence=1&isAllowed=y

[97] Bandula, G. G., L. M. Abeywickrama, Mangala de Zoysa, “Factors Influencing The Replanting Of Tea Small Holdings In Sri Lanka: A Case Study In The Matara District,” Journal of Advanced in Social Science and Humanities, Vol. 3, No. 6 (2017)

[98] Sirimanna, Bandula, “Finally Tea CESS Funds for Tea Replanting, Factory Upgrading,” The Sunday Times, 13 May 2007

ECONOMIC ARGUMENT AGAINST THE CESS

As any other tax, the CESS is meant to redistribute money towards the plantations from the nominal party upon whom it is levied: the exporters. In order to assess the effectiveness of the CESS as a tax, it is important to understand whether the tax serves its intended purpose.

The tax is levied on the exporters presumably due to the broad perception within and beyond the industry that most profits of the industry are concentrated among exporters. Given the lack of high profits at the green-leaf stage of the industry, on the surface, it is also reasonable to redistribute some of these returns to the plantations. However, there are two questions that need to be asked here: the first is whether the incidence of the CESS actually falls on the exporters, and the second is whether the funds collected from the tax are used for justifiable purposes. A closer look reveals that the answer to both these questions are in the negative.

Given the inelastic nature of the consumption of tea, exporters are able to easily pass the CESS onto consumers in the form of higher prices. Accordingly, in practice, the CESS does not redistribute a share of the returns of the exporters to the plantations as intended by the tax. Given the ability of exporters to transfer the burden of the CESS to the consumer, the amount levied as the export CESS also makes little sense. The government could easily earn higher revenues from the CESS by increasing the levy from its current level of LKR 3 per kilogram of tea exported, without burdening the local industry. As such, it makes economic sense to revise the CESS to a percentage share of the export price, maybe 1 percent, so that the government not only earns more revenue, but also pegs its revenues from the CESS to trends in the price of tea.

Furthermore, using the CESS for replanting activities has no economic justification, as replanting is not a public good. A public good, by nature, is a non-rivalrous and non-excludable good, the use of which by one party does not preclude anyone else from its use. The public provision of public goods, such as national defence and infrastructure, is justified because there is no private market for its effective provision, and its consequent underprovision could lead to market failure. A justified use of the CESS is the promotion of the generic Ceylon tea brand by the SLTB, which is a public good because the potential for free-riding prevents private players in the industry from promoting the generic Ceylon tea brand. The subsidisation of replanting activities, on the other hand, has no economic justification as replanting is a rivalrous and excludable good that entails no risk of free-riding.

Research and development is another public good with high positive externalities, but low private returns, for which the SLTB may justifiably use the CESS revenues. Both the TRI and the SLTB conduct research of various forms relevant to the tea industry. Given that conversations with these agencies reveal that the funding available for their research activities are extremely low, the CESS revenues may be allocated to supplement the research and development activities of these agencies, and even to train their personnel.

Lastly, as explored in Discussion Paper 3, the regulatory mechanism currently in place to monitor the quality of the Sri Lankan tea industry is weakened by poor coordination and funding. As regulation itself is a public good, with high positive externalities but low private returns, the SLTB may also justifiably use the export CESS revenues to strengthen the regulatory mechanism, and guarantee persistent quality monitoring throughout the supply chain.

However, the tea export CESS, instead of remaining in the tea industry, currently goes directly to the consolidated fund at the Treasury Department, rendering no ability to track how the money is spent[99]. Although one may make the argument that appropriations from the consolidated fund are regularly spent on various subsidies to tea farmers, it is still undeniable that the funds collected through the tea export CESS are not earmarked for long-term investments back into the industry as was originally intended.

The poor coordination of funds is also an issue plaguing the Tea Shakthi Fund, which was originally established in 2000 to subsidise replanting and infilling activities by tea smallholders[100]. While the Tea Shakthi Fund is designed to extract money from the smallholder sector itself to fund the replanting and infilling activities within the smallholder sector, conversations with smallholders reveal that timely access to the fund when the need arises is virtually impossible. Red tape and other institutional factors cause lengthy delays of up to 30 months in the provision of subsidies that smallholders claim that paying out-of-pocket instead of relying on subsidies from the Tea Shakthi Fund allows them to see faster returns. In fact, 17 percent of tea smallholders, most of whom do not solely rely on the tea industry to make a living, report using their own funds to replant parts of their tea cultivations[101].

Eliminating these binding constraints from the picture will remove the impediments to long-term capital investment in tea lands, and lead to more resource allocation for replanting and infilling. In fact, proposals already exist for reforms in the Sri Lankan tea industry so that more long-term capital investments in the land resources may take place. These already existing solutions are of two major kinds: first, more immediate solutions that are more practicable in the current context and can be easily achieved, and second, long-term structural reforms that are more difficult to achieve but will have impacts that are more sustainable. The available short-term options begin with the better management of existing funds to subsidise long-term capital investments in tea lands.

[99] Fiscal Management Reports of the Ministry of Finance

[100] Tea Shakthi Fund Act No. 47 of 2000, Parliament of the Democratic Socialist Republic of Sri Lanka

[101] Bandula, G. G., L. M. Abeywickrama, Mangala de Zoysa, “Factors Influencing The Replanting Of Tea Small Holdings In Sri Lanka: A Case Study In The Matara District,” Journal of Advanced in Social Science and Humanities, Vol. 3, No. 6 (2017)

DISCUSSION OF PROPOSED SOLUTIONS

SOLUTION 1: STATE SUBSIDISATION OF REPLANTING AND INFILLING

The government may subsidise long-term capital investments into the tea lands by covering in part, or fully, the additional costs associated with replanting. The high gestation period makes replanting an unprofitable activity for most RPCs and smallholders, and smallholders may additionally not have the savings required to bear the costs of replanting upfront. As such, the government may either funnel funds from the most profitable sections of the tea industry value chain to the planters, or it may oversee a mechanism where the money is commonly pooled from planters themselves to fund replanting activities.

The increased tea export CESS and were originally meant to subsidise replanting and infilling activities by the former and latter means respectively. The tea export CESS, which is paid by exporters, and the Tea Shakthi Fund, which pools funds from regional smallholder collectives, have however not been utilised to the full extent to subsidise replanting activities. The government may still choose to intermediate these existing funds more effectively to more substantially support the replanting and infilling activities undertaken by the RPCs and smallholders.

THE BAD ECONOMICS AND THE MISGUIDED STRATEGY OF CROSS-SUBSIDISATION

The export CESS, which takes a share of the profits of exporters to attenuate the losses of planters, is a textbook example of a cross-subsidy. The cross-subsidisation of the losses from tea cultivation with profits from rubber and other cultivations is another form of cross-subsidisation that regularly occurs at the level of plantations. Given the prevalence of cross-subsidisation in the Sri Lankan tea industry, an important question to ask is whether such cross-subsidisation is economically justified.

As mentioned above, subsidisation by the government is only economically justified in the case of a public good, which plantations are not. Accordingly, the cross-subsidisation of plantations with funds extracted from exporters is not economically justified. Even from an angle of redistribution, it makes little sense to subsidise plantations that are managed by private entities for the ultimate purpose of profit creation. The only justification for cross-subsidisation lies in government's intervention in the labour and land resources of plantations, which are the primary drivers of the high cost of production incurred by estates. With these distortions in place, the only way to keep the plantations afloat may be to subsidise their existence with funds extracted from a more financially stable part of the tea industry value chain: the exporters. A more ethical solution, however, would be for the government to step away from its interventions in the land and labour resources, thereby doing away with the need for cross-subsidisation in the first place.

The long-term cross-subsidisation of tea cultivation with profits from other crops is also bad strategy on the side of RPCs, although their choice in this matter may be limited, again due to state intervention in the land resources. Strategically, diversification is a form of insurance against sudden price volatilities in the short term, and as such, it makes sense that seasonal losses from one crop are subsidised with the seasonal profits from another crop. Cross-subsidisation may also be used in the short-term. However, if a crop persistently incurs losses, it is an indication of persistent oversupply of the loss-making crop.

In this context, replanting some of the existing tea cover with more profitable crops is a strategically more sound move. In fact, most RPCs have opted for this route, with increased cultivation of other crops such as coffee, cinnamon, and rubber. The gestation periods of these crops, however, may be leading to questions about the appropriability of returns from such diversification, given that the renewal of RPC leases has yet to be finalised. The lack of land rights is therefore a deterrent to RPCs moving away from the strategically injudicious cross-subsidisation of loss-making tea cultivation.

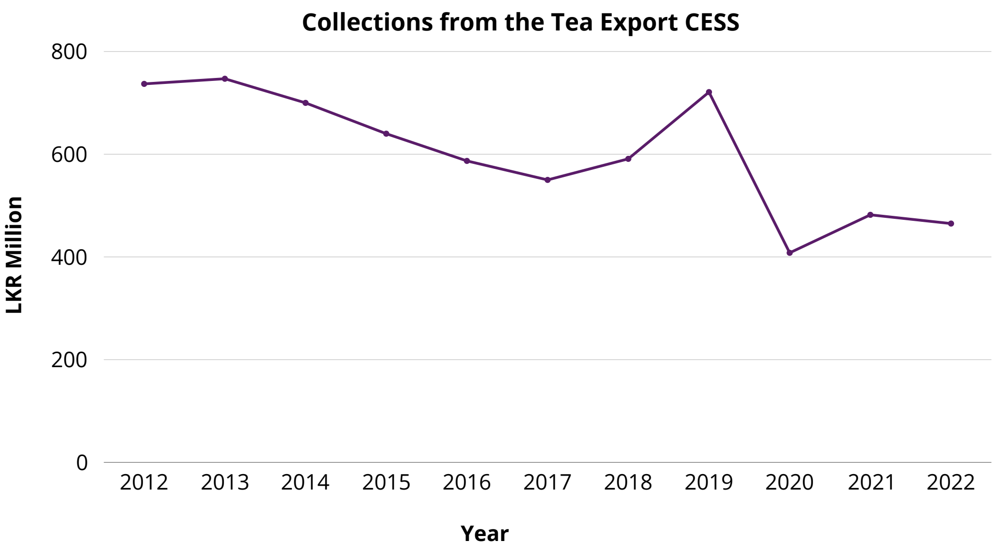


Figure 2 : Revenues generated annually from the tea export CESS (Ministry of Finance Annual Reports)

The government may also use other funds that are earmarked for the Sri Lankan tea industry but are not being effectively used for the designated purposes to subsidise replanting and infilling. An example of an underutilised fund of this nature is the Tea Promotional Levy Fund, which is endowed by a tea promotional levy charged from exporters since 2010.

An example of an underutilised fund of this nature is the Tea Promotional Levy Fund, which is endowed by a tea promotional levy charged from exporters since 2010. From 2010 to 2019, LKR 3.50 was collected from every kilogram of tea that was exported out of Sri Lanka. In 2019, the levy was revised downwards to LKR 3.00 per kilogram of exported tea, and 50 percent of the reduced levy was allocated specifically for replanting.

The fund, which is entrusted to the Sri Lanka Tea Board (SLTB), however, remains largely unspent. Until 2019, even the fraction of the money that was spent from the fund each year went towards indirect promotional activities including the maintenance of the overseas offices of the SLTB. The effectiveness of such promotional activities, however, is a topic that is beyond the scope of this discussion paper. Since 2019, however, some fund money has been spent on planting activities, such as nursery development

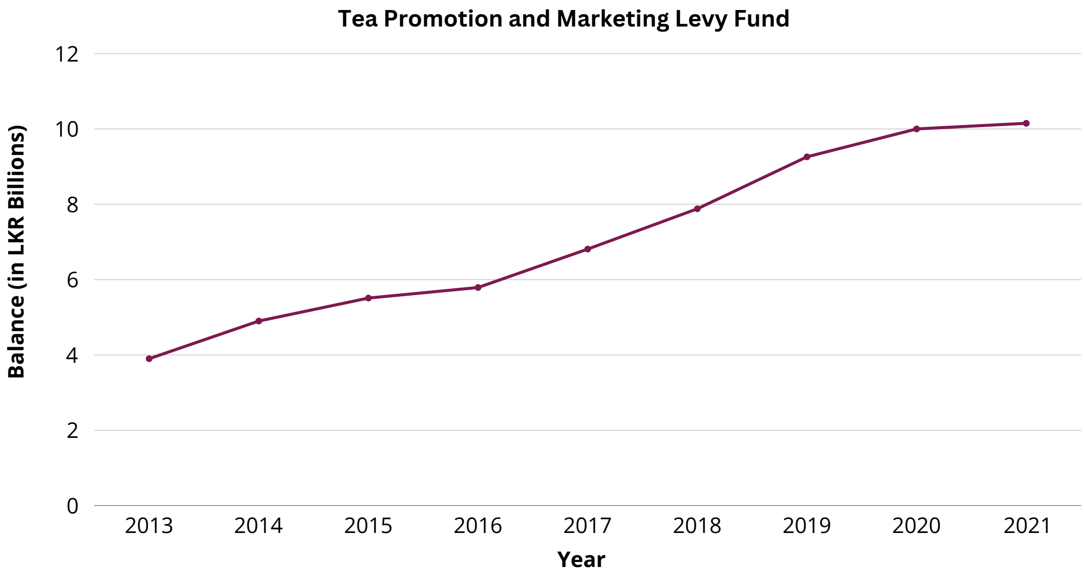


Figure 3 : Balance remaining in the Tea Promotional Levy Fund at the end of each calendar year (SLTB)

As of SLTB's last published annual report from 2021, the Tea Promotional Levy Fund had a balance of almost LKR 10 billion, and the fund has likely grown since then. While the SLTB was not able to legally sponsor replanting and infilling activities before 2019, since then, there is no such restriction on the use of the fund money for this purpose. However, conversations with past and present Chairmen of the SLTB reveal that the fund remains virtually untouched every year because of the lengthy approval process involved with utilisation of the fund money. Given that most Chairmen generally come from the private sector where they are used to having expenses approved at their command, the bureaucratic obstacles associated with having expenses from the fund approved discourage them from fully utilising the fund.

Better intermediating the tea export CESS and the Tea Shakthi Fund, and diverting the accumulated balance in the Tea Promotional Levy Fund towards replanting and infilling, may help the state effectively subsidise long-term capital investments into tea lands. Using these existing funds will mean that the subsidies will come from within the tea industry itself.

Assuming that the existing funds are sufficient to provide adequate subsidies for replanting and infilling, the government will not have to come up with additional revenue-raising mechanisms to fund the subsidies, which will make the legislative process to get the subsidies into the hands of the farmers easier. In the process, the presently under-utilised Tea Shakthi Fund and the Tea Promotional Levy Fund will also be put into effective use, ensuring that the money does not go to waste.

Given the relatively inelastic nature of the demand for tea as discussed in Discussion Paper 1, the costs of the subsidy may be transferred to consumers, particularly if the government primarily relies on the tea export CESS and the tea promotional levy to subsidise replanting. The relative price inelasticity of the demand for tea allows exporters on whom these export tariffs are levied to pass most of the tax burden onto consumers, especially in the more sophisticated markets.

However, the subsidies will not correct the state-induced distortions in the tea industry value chain that make the subsidies necessary in the first place. Under the subsidy scheme, the government levies tariffs on exporters, or ultimately consumers, and directs the tax revenue thus collected towards planters. In other words, the export tariffs help one end of the tea value chain cross-subsidise the other. This cross-subsidisation is necessary because of the many distortions created by government intervention (high cost of production and low productivity) at the green leaf stage. These distortions have made replanting unprofitable to the average planter, at both RPC and smallholder levels, manufacturing a need for state intervention in the value chain to facilitate cross-subsidisation. Yet, cross-subsidisation is a superficial solution that fails to address the root causes of what makes state intervention necessary to begin with.

Even if cross-subsidisation is economically justified, continued state intervention may not be in the best interest of the Sri Lankan tea industry. The government may regulate what it subsidises, leading to a repetitive cycle of reinforced assistance and control. Given that some stakeholders believe that the Sri Lankan tea industry is already constrained by high levels of regulation, it is questionable whether inviting more state regulation via the acceptance of financial assistance from the government is the desired path forward for the Sri Lankan tea industry.

SOLUTION 2: A MARKET-BASED FUNDING MECHANISM TO SUPPORT REPLANTING

Given both the theoretical arguments against using the tea export CESS to fund replanting and the practical difficulties in doing so, a more economically sound and pragmatic solution is to the tea export CESS to fund replanting and the practical difficulties in doing so, a more economically sound and pragmatic solution is to establish a funding mechanism with the participation of an organisation such as the SLTB to devise a credit program to support replanting.

Given the high gestation period of investments in replanting, it is understandable that private financial institutions may be reluctant to fund replanting activities of the estates. As such, the SLTB may be required to play a role in the financing of replanting, but in a more market-based form than mere subsidisation. An obvious option is to provide interest-based loans to RPCs to fund their replanting activities. The built-in market mechanisms would ensure that this solution does not entail the market distortions of cross-subsidisation, while ensuring that the RPCs will have the short-term liquidity needed to successfully engage in replanting activities.

In the smallholder sector, Tea Smallholder Factories PLC, a bought-leaf processing company which works with around 9,000 smallholders in six planting regions, has introduced a loan scheme to incentivise replanting among smallholders. The company reports that since the commencement of the loan scheme, yields in some years have increased to over 2,000 kg of made tea per hectare among participants in this programme, which is a substantially higher yield than today's industry average of 1,445 kg. These numbers should give sufficient incentive to bought-leaf factories, who are already struggling to collect enough green leaf from smallholders in order to keep their factories operational up to capacity, to devise credit-based strategies to encourage replanting among their smallholder suppliers.

SOLUTION 3: DEREGULATION OF THE TEA INDUSTRY

If over-regulation of the industry is what makes long-term capital investments into the tea lands both unprofitable and unappealing, deregulation may be the solution. As discussed above, persistent state intervention in the industry that failed to promote its best interests have left the future sustainability of the industry in question, discouraging investors from making long-term investments into the industry. The best way the state may convince those investors that the industry still has a future is to demonstrate a commitment to align the interests of the state with those of the industry via deregulation.

Deregulation may be two-pronged: backward- and forward-looking. The government may increase investor confidence in the future sustainability of the tea industry by carefully reviewing regulations imposed in the past that still apply today. For instance, the government may choose to eliminate or relax regulations on the use of fertiliser and pesticides, land regulations pertaining to the ownership and management of plantations, as well as labour market regulations pertaining to the plantations sector, all of which increase costs and reduce productivity in the Sri Lankan tea industry. Discussion Paper 3 and 4 also delve in depth into various other deregulatory options the government could pursue that may also increase investor confidence in the future sustainability of the Sri Lankan tea industry.

The forward-looking step of the deregulation process requires that future regulatory decisions that affect the Sri Lankan tea industry are taken only upon consultation with stakeholders of the industry, with the best interests of the industry in mind. Including industry stakeholders in the decision-making process itself sends the signal to investors that the government prioritises the tea industry. It is also important that the government does not make policy decisions in the future that are detrimental to the future prosperity of the industry.

Private stakeholders of the industry cannot ignore its role either, in guiding the government towards adopting a sound deregulatory policy framework. The lobbying arms of the Sri Lankan tea industry today are too balkanized based on the interests of specific parts of the value chain, to the detriment of the common interests of the larger industry. The Colombo Tea Traders' Association, Tea Exporters Association, and the Planters' Association of Ceylon pursue divergent lobbying efforts that often fail to communicate a unified message to the policymakers. While these different groups have their own interests that deserve individualised attention from policymakers, it is important to recognise that the fulfilment of their individual interests depends on the survival of the larger tea industry itself. Unified lobbying efforts by the private stakeholders would help push the larger issues related to overregulation of the Sri Lankan tea industry more vociferously to the attention of policymakers.

SOLUTION 4: BETTER INTERMEDIATION OF KNOWLEDGE AND KNOWHOW AMONG SMALLHOLDERS

A move that will receive virtually no pushback is the formulation of a mechanism to facilitate better flow of knowledge and technology between tea smallholders when it comes to long-term capital investments into the land resources. The government, or private collectives of smallholders, may step in to ensure that the existing institutions are more effectively utilised to share knowledge and technology between smallholders, so that every smallholder is aware of the need to make long-term investments in their tea lands, as well as how to do so. In fact, there is widespread interest among tea smallholders for an initiative of this nature. 71 percent of tea smallholders opine awareness campaigns aimed at tea smallholders about the importance and technical aspects of replanting will be helpful[102].

Several existing government institutions, including the Tea Small Holdings Development Authority and the National Institute of Plantation Management, are already designed to serve the needs of tea smallholders. Additionally, tea smallholders have themselves formed regional collectives and unions for various purposes. The government, or the tea smallholders themselves, may utilise these existing resources to devise strategies and programmes that will provide tea smallholders with a platform to share their knowledge and resources when it comes to replanting and infilling activities. Alternatively, bought leaf factories with whom smallholders maintain instrumental market relationships may be incentivised to disseminate information and resources to smallholders with respect to long-term capital investments into smallholder tea lands. In fact, Tea Smallholder Factories PLC reports that the company provides both agricultural advisory and nursery-raised tea plants to smallholders, in addition to its loan scheme, which potentially explains part of the high yields harvested by participants of the program.

While these proposals are the most practicable recommendations that have been offered to boost long-term investments into land, there are other proposed solutions that may be more difficult to implement in the immediate future, but will provide planters, particularly RPCs, with substantial market incentives towards more replanting and infilling. Such reforms take a more structural form.

[102] Bandula, G. G., L. M. Abeywickrama, Mangala de Zoysa, "Factors Influencing The Replanting Of Tea Small Holdings In Sri Lanka: A Case Study In The Matara District," Journal of Advanced in Social Science and Humanities, Vol. 3, No. 6 (2017)

SOLUTION 5: PRIVATISATION OF RPCS

Given that the temporary leases of RPCs will expire in 2045, private management is reluctant to make expensive investments into the tea lands that are necessary to ensure the long-term sustenance of the RPCs, especially if the returns will not fully materialise by 2045. Under these present conditions, it is difficult to imagine that the necessary long-term capital investments into the tea lands will take place until new management takes over once the existing leases expire.

The government, which presently holds formal ownership of RPCs, may decide to either immediately sell the RPCs to their existing private management, or more preferably, sell them in the open real estate market. Privatisation of the ownership of RCPs will eliminate uncertainties with respect to the appropriability of economic returns from long-term capital investments into tea estates. Permanent ownership of estates would additionally incentivize private owners of estates to make the necessary long-term capital investments into the lands to maximise future yield.

In addition to incentivising long-term capital investments into the tea estates, the privatisation of the ownership of RPCs would additionally improve the efficiency of land use by allowing for the optimal repurposing of existing estate lands. When primarily agricultural economies advance and diversify into other sectors, as has been the case in Sri Lanka, it is natural for the scale of agricultural production to substantially drop, based on the increased market demand for the service sector. Agricultural economies generally respond to this new reality by reducing supply and adopting more sophisticated methods of production[103] ; as Japan moved away from an agricultural economy to a service economy, the scale of agricultural production in Japan declined[104]. Discussion Paper 3 looks at Japan's downscaling of the tea industry, while exponentially increasing its premiums, in more detail.

While Sri Lanka's level of production has also somewhat declined over time, the question remains whether the present structure of land ownership has allowed for the extent of cultivation to drop to the optimal level desired by market forces. RPC management is not allowed to utilise the RPC lands for any other purpose than the cultivation of plantation crops. As such, RPCs have little room to scale down their levels of agricultural production while still utilising the uncultivated lands in other productive activities. Some plantations have responded to this limitation by shifting away from tea production to the production of other agricultural crops such as coffee and cinnamon. However, it is not clear if, were they given the choice, whether RPC managements would continue to engage in agricultural production, including the production of coffee and cinnamon, at a similar scale as now.

The abundance of land designated for the growth of tea (and other plantation crops) reduces the allocative efficiency of production while encouraging the oversupply of tea. In this context, RPCs have little incentive to increase their productive efficiency by making costly investments in replanting and infilling. The privatisation of RPCs will help downscale production and make it more efficient, thereby encouraging more long-term capital investments into the tea lands that survive the process of downsizing.

[103] The reduction in supply is a response to the price incentives, with investments in the service sector promising higher returns. The historical reputation that the country has earned as an agricultural economy, and the higher premiums promised by the more sophisticated markets, incentivize the remaining agricultural producers to move to more sophisticated markets.

[104] Yamashita, Kazuhito, "The Perilous Decline of Japanese Agriculture," The Tokyo Foundation for Policy Research," 2008, https://www.tkfd.or.jp/en/research/detail.php?id=59; FAOStat

Yet the liberalisation of plantation lands is a step that is legislatively extremely difficult to achieve. These legislative constraints led to the compromise policy of temporary privatisation of the management of plantations in 1992, instead of the full privatisation of the ownership of plantations as was recommended by multiple groups who studied the inefficiencies of the plantations[105]. Today, a compromise solution to the issue would be the extension of the leases of the RPCs. A sufficiently long extension of the leases would assure RPC management of their ability to fully appropriate the returns of long-term investments into the plantation lands, incentivising them to invest in replanting and infilling activities.

IS EXTENSION OF LEASES THE RIGHT MOVE?

If the government of Sri Lanka is unwilling to give up its ownership of plantation land, then the next best solution would be to extend the lease period of RPCs. Whether a blind extension of the lease should be granted to every RPC is a question that is under debate, given that some RPCs have performed better than the others.

The differences in the performance of RPCs is attributable to a variety of factors, some of which lie outside of the control of RPC management. The history of the formation of RPCs is relevant in this respect, given that the performance of some RPCs today may be a result of the clustering of estates to the different RPCs. Conversations with those involved in the exercise at the time reveal that each RPC was assigned a combination of highly fertile and less fertile land so as to create a level-playing field between the different RPCs, partly based on five-year performance projections. Given this concerted effort, it is unlikely that some RPCs have preferentially been selected into higher returns. Yet, the potential of the different RPCs might have been different, though not clear at the time. For instance, low-grown teas generally fetch higher prices in the auction, resulting in higher returns to RPCs with a higher concentration of low-grown estates. Some RPCs have a high concentration of diversified estates (for example, Kelani Valley Plantations PLC has a higher concentration of rubber production, given the prominence of the rubber crop in the Kelani Valley region), leading to differential returns in some seasons.

The primary cause of the differential performances between the RPCs may lie in the decisions taken by their management, including diversification. Conversations with those involved reveal that an audit conducted of the RPCs, the reports of which are not in the public domain, revealed that the estates that have taken an active interest in the diversification of their crops, particularly with the cultivation of palm oil, have demonstrated better performance indicators over time.

[105] Kelegama, Saman, Nisha Arunatilake, Janaka Wijayasiri, Sri Lanka Tea Industry in Transition: 150 Years and Beyond (Colombo: Institute of Policy Studies of Sri Lanka, 2018)

Furthermore, the shortage of skilled labour in the plantation sector has led to tight labour market conditions in the recruitment and the training of management personnel, and it is clear that some RPCs have performed better in this regard than the others. Furthermore, creative disruption is also not the forte of every RPC, and in this regard as well, some RPCs have proven to be ahead of the others over time. If leases of RPCs are to be extended, these latter set of differentiators, which are within the control of RPCs, should definitely be considered, although blind extension is better than no extension. Such evaluation would also act as an incentive for better performance for future extensions of the lease.

SOLUTION 6: ALTERNATIVE WAGE MODELS, AND OUTSIDE LABOUR

Even if RPCs are incentivised to make long-term capital investments into the land, the labour shortage in RPCs may hinder any such investments from being made. The alternative wage models introduced in Discussion Paper 1 may help ease the labour shortage by providing better incentives for estate residents to enter and remain in the estate workforce.

Conversations with the management of the New Deniyaya Estate revealed that upon the introduction of the revenue share wage model at the estate, the estate was able to somewhat mitigate the labour shortage. The revenue share model thus enabled the management to assign some of the workers to replanting activities. Infilling, on the other hand, is included in the responsibilities of the block managers themselves, with the estate providing the necessary plants and other resources to the block managers.

While the New Deniyaya estate does not depend on block managers under the revenue share model to take the initiative for replanting, and instead makes the investments themselves, there may be room under the alternative wage models to incentivise workers to take on the responsibilities for replanting and infilling themselves. Given that the earnings of the block managers are a function of the productivity of their assigned block, if the block managers are assured of long-term management rights to the blocks, it only makes sense that they would be willing to make long-term capital investments into their assigned blocks of land, to be assured of sustained levels of high yield.

Estates may also look into enhancing their workforce by hiring from outside the estates, but conversations with RPCs suggest that this would be a move that is both costly, and highly resisted. As discussed before, estates would be expected to provide the same cash and non-cash benefits to workers hired from outside the estates, leading to high upfront costs in the expansion of on-site housing, healthcare, educational, and childcare facilities available to the workers and their families. Moreover, broadening the catchment area in the estate recruitment process could lead to heavy resistance from unions and estate residents, whose bargaining power with estate management may be diluted by the injection of a new group of potential workers to the estate ecosystem.

DISCUSSION PAPER 3

VALUE ADDITION, PRODUCT MARKET LIBERALISATION, AND THE SPECIALTY CONSUMER

Sri Lanka has the highest level of domestic value addition among black tea producing countries, but little is known about the economics of value addition. This discussion paper explores what it means to add value to made tea, what explains the present levels of value addition in the Sri Lankan tea industry, and how profits from value addition are distributed along the value chain. Additionally, the paper establishes an economic framework, based on Porter's competitive advantage theory, to approach value addition from a strategic point of view, with the aim of optimising returns to the local industry. Based on this framework, the paper explores different strategies the industry may pursue, either in the mass market or in the specialty market, to increase the international competitiveness of Ceylon tea, and enhance the returns to the domestic stakeholders.

There is a significant difference between the net sale average at the Colombo Tea Auction, and the average freight-on-board (FOB) price of Ceylon tea. The average price per kilogram of tea sold at the Colombo auction in 2022 was LKR 1270.50, whereas the average FOB price per kilogram was LKR 1643.111[106] . This difference stems primarily from domestic value addition. While exact data on the total value added does not exist, it is safe to presume that the real total value addition is easily higher than the LKR 372.61 difference between the auction and FOB prices of Ceylon tea, given the prevalence of transfer pricing and credit sales in the industry[107].

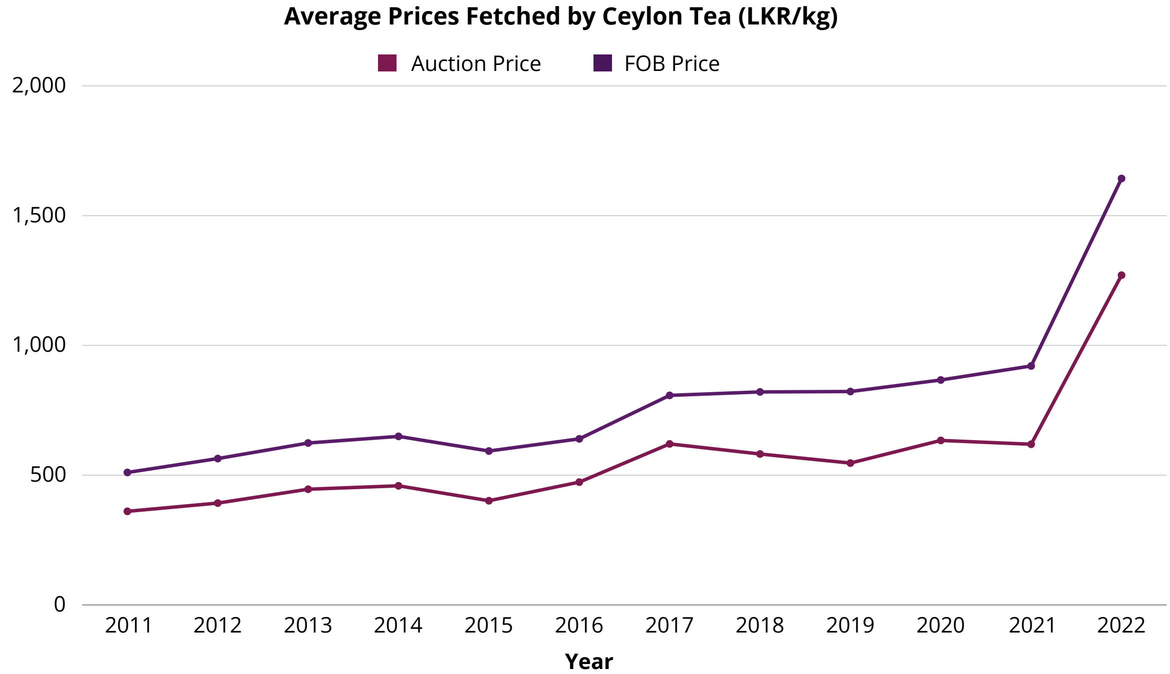


Figure 1 : Comparison of average auction and FOB prices of Ceylon tea (CBSL Annual Reports)

[106] "Annual Report," Central Bank of Sri Lanka, 2022

[107] 'Transfer pricing' refers to the tendency by some exporters to under-report the value of Ceylon tea exported out of Sri Lanka to avoid high CESS payments. In addition, a substantial amount of tea is also sold on a credit basis, making it difficult to quantify the exact value of the tea exported out of Sri Lanka. Conversations with exporters and brokers reveal that per the terms of contract between exporters and credit buyers, it generally takes 45 to 120 days from the date of sale to receive the credit payments. Although the high prevalence of credit sales are generally viewed unfavourably by industry stakeholders due to the risk of default, it is not necessarily a negative phenomenon; more flexible terms of payment are an indication of the high degree of competition between exporters

IS VALUE ADDITION ALWAYS GOOD?

The prevalence of a substantial degree of domestic value addition signals that exporters (and factories conducting direct sales) enjoy higher returns with value addition. However, theoretically, higher value addition on its own does not guarantee higher returns. Profits are a function of the return on invested capital. If the return is negative because costs of value addition are greater than the additional premium earned from value addition, then value addition is not necessarily a sustainable business decision.

With that in mind, this discussion paper sets out to investigate whether the present levels of value addition in the Sri Lankan tea industry are optimal, and explores avenues for and hindrances to greater value addition within the industry. First, however, it is important to understand what exactly is meant by value addition, and what value addition looks like in the context of the tea industry of Sri Lanka.

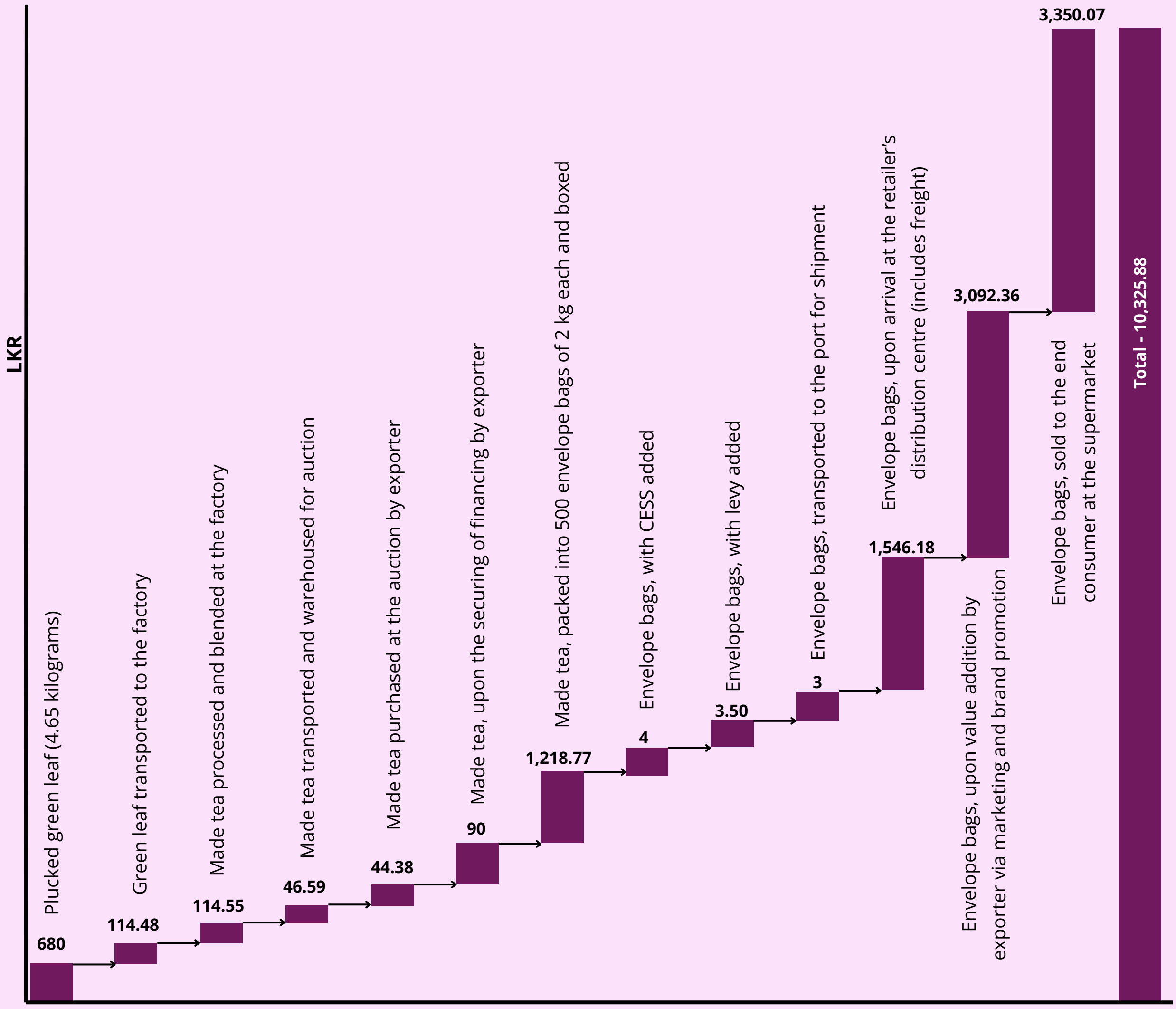
VALUE ADDITION: THE SRI LANKAN TEA INDUSTRY

Each step in the production process of a good adds value by sequentially transforming the raw materials into a product that generates more utility to the end consumer than the raw materials or the intermediate goods can on their own. As such, in a sensible production process, at each step of the value chain, the good holds more value than it did in the preceding step.

Value is added in a variety of steps as tea leaves are transformed into the packets of made tea that the end consumer purchases from a seller, who is more-often-than-not a retailer. First, the plucked leaf is processed into various grades of made tea, which is then often blended with other teas to achieve a certain quality or taste, to fit the needs of the end consumer. The tea is then packed in various forms, including loose leaf tea, tea bags, and instant tea, which the end consumer purchases at the point of sale. There may be additional steps in the process of value addition; for instance, made tea is sometimes packed in bulk before another agent in the value chain re-packs it for retail sales.

HOW VALUE IS ADDED – THE CASE OF THE RETAIL TEA BAG

As aforementioned, value addition is a process that occurs sequentially, as the green leaf moves through the various stages of the value chain, up until the point of purchase by the end consumer, in the form of processed and packaged tea. The following waterfall chart is an attempt at understanding how value addition happens in the case of the traditional tea bag. The chart follows the process of value addition for 1 kg of made tea, from the point of harvest to the point of purchase by the end consumer at a supermarket in Australia, in the form of packaged tea bags.



Here, the value of the plucked green-leaf is calculated based on the formula introduced by the TRI to compensate smallholders, with the assumption that the net sale average of the tea that ends up in the traditional tea bag, usually from the up-country region and of the BOPF grade, is LKR 1,000

A primary driver of value addition is standardisation and quality control. Blending is the primary form of value addition for this purpose, as tea leaves from a single source can rarely provide a consistent taste and quality throughout the year owing to seasonal factors. As such, both factories and exporters engage in blending as a form of standardisation of made tea. Blending is also pursued as a cost advantage strategy by some sellers, which is explored in more detail later in this discussion paper. Blending, and other forms of value addition such as the addition of flavours, is also conducted to provide a superior taste to the consumer.

Another main driver of value addition in today's markets is consumer convenience. For example, the blending and packaging of tea into retail-sized boxes improves the consumer experience in three primary ways. Firstly, smaller packets make tea more affordable to the end consumer, who might not have the ability to purchase bulk quantities of tea at once. Secondly, small packaging preserves the freshness of the tea, as large packets left open for too long could impact the moisture levels of the tea, making it unfit for consumption. Lastly, smaller packets also lend themselves to easy carrying, handling and storing, compared to bulk quantities. Tea bags were an invention that brought more convenience to the end consumer as they cut down on the time the consumer spends measuring tea leaves, straining the tea, and washing extra appliances in the process of brewing a cup of tea.

THE PYRAMID TEA BAG – A CASE STUDY IN VALUE ADDITION

The pyramid tea bag is a case study of how higher convenience and higher quality can both be packed into a single value-added product. The traditional tea bag, made out of paper, limits the quality of the tea that the consumer could consume, as only dust and BOPF grades of tea, which sit at the lower end of Ceylon tea grades, can be brewed in the bag. Most higher grades of orthodox Ceylon tea open up when added to hot water, but as there is no room in the tightly packed paper bags for the leaves to open up, the consumer of tea bags was, for a long time, restricted to a limited experience of Ceylon tea. The premiums that the industry earned from tea bags also was capped in the past by the inability to sell more expensive grades of tea in the traditional paper bag. The pyramid tea bag revolutionised the Sri Lankan industry by allowing greater value addition to higher grades of Ceylon tea. Made generally from silken, pyramid tea bags allow for greater movement of water in and out of the tea bag, allowing for a better brew, and also facilitates the expansion of the tea leaf while steeping.

Paper tea bag (Source: The Spruce Eats)

Pyramid tea bag (Source: Mashed)

Figure 2 : Paper vs pyramid tea bag

However, whether the industry has managed to fully reap the benefits of the invention of the pyramid tea bag is a question to ponder. There are three potential ways in which the market for tea could have been reorganised with the invention of the pyramid tea bag. The first and second concern two existing markets for tea, whereas the third concerns a potential market. Firstly, the pyramid tea bag could have replaced some of the demand for traditional tea bags. Secondly, the pyramid tea bag could have replaced the demand for loose leaf teas of higher grades.

Thirdly, the pyramid tea bag could have attracted a third group of consumers who did not consume tea in the past because they preferred higher tea grades and could not purchase it in the tea bag form. Ideally, a combination of these three would have expanded the market for Ceylon tea, and elevated its status as a specialty supplier.

While exact data does not exist, conversations with industry stakeholders reveal that the pyramid tea bag has not effectively made a substantial dent in either target market. Of the three target markets, it has penetrated the first—the existing market for traditional tea bags—the most, with pyramid tea bags now making up approximately one percent of the total tea bag market. This market penetration comes mostly from the demand for pyramid tea bags from high end cafés, restaurants, and hotels, who already made up a significant share of the tea bag market, and view the pyramid tea bag as an opportunity to provide their patrons with a more luxurious experience. However, stakeholders reveal that the pyramid tea bags have neither made measurable inroads among the consumers of loose leaf tea nor attracted non-consumers of tea to the beverage.

What is also important here to understand is that the pyramid tea bag is an invention that necessarily overrides the value proposition of tea. Pyramid tea bags are priced so high in the market for tea not necessarily because of the tea leaves inside the bag, but because of the unique characteristics of the bag itself. The traditional tea bag itself costs exporters around LKR 900 for a kilogram of bagged tea, and the tea included inside the bag (generally of the BOPF grade) costs exporters around LKR 1,000. As such, the traditional tea bag makes up approximately 47.37 percent of the direct inputs of a kilogram of traditionally bagged tea. On the other hand, the pyramid tea bag alone costs exporters around LKR 6,056 for a kilogram of bagged tea, and the tea included inside the bag (generally of the FBOP grade) costs exporters around LKR 1,600. With the pyramid tea bag making up approximately 79.1 percent of the direct inputs of a kilogram of teas packed in pyramid bags, the pyramid tea bag is clearly the primary driver of the high price of pyramid tea bags in the market.

A necessary component of expanding the demand for teas packed in the pyramid tea bag form is to decrease the cost of the bag. An analogy to this proposition comes from the market for copy paper; the reduced cost of copying following the widespread introduction of the modern copy machine was a primary driver of the growth in the demand for copy paper in the 1980s[108]. Similarly, a decrease in the cost of packing tea in pyramid tea bags, caused by a decline in the cost of the pyramid tea bag to the exporter, could potentially lead to a growth in the demand for Ceylon tea of higher grades such as FBOP. However, conversations with exporters reveal that the cost of the pyramid tea bag to the exporter could only come down with higher scales of production, as the material used in the pyramid tea bag, which the industry presently sources from Japan, is not available in high volumes right now–leading to higher prices for its sourcing. With higher scales of production, exporters argue that the cost of the pyramid tea bag could even decrease below the cost of the paper tea bag. Abaca, the natural fibre material used in the production of the traditional paper tea bag, is itself a costly input, which is only sourced cheaply because of the large scale of production of the traditional tea bag in Sri Lanka. If the cost of the pyramid tea bag to the exporter indeed decreases, potentially from greater use of the input material in related industries such as coffee, there is high potential for increased prices for higher grades of Ceylon tea, and therefore, greater incomes to stakeholders at the green-leaf stage of the Sri Lankan tea industry value chain.

[108] For an analogy of how the reduced cost of copying increased the demand for copy paper, see: Barnett, F. William (1988). “Four Steps to Forecast Total Market Demand.” Harvard Business Review.

STATISTICS ON VALUE ADDITION IN SRI LANKA

The general perception of the Ceylon tea industry, even among some stakeholders, is that Sri Lanka does not perform sufficient value addition. There are two issues with this sentiment; firstly, it presumes that returns can be further optimised through greater addition of value domestically, which may not necessarily be the case as aforementioned, and secondly, Sri Lanka adds substantially more value to its tea than any other large exporter of tea in the world.

Around 39 percent of the tea exported out of Sri Lanka in 2021 was substantially value added (less than 3kg in the form of packets, bags, or instant teas), generating an income of LKR 129 billion, including a value share of 49 percent[109]. For black tea specifically, value addition of such kind stood at 40 percent, with more than 95 percent of it being in the form of packaging[110]. A portion of the rest of the exports also may have had some form of value addition, as even exports of units larger than 3 kg are sometimes shipped in packed form for retail sale in boutique stores. Furthermore, most teas are blended before export, which itself is a form of value addition, even in the case of large bulk exports.

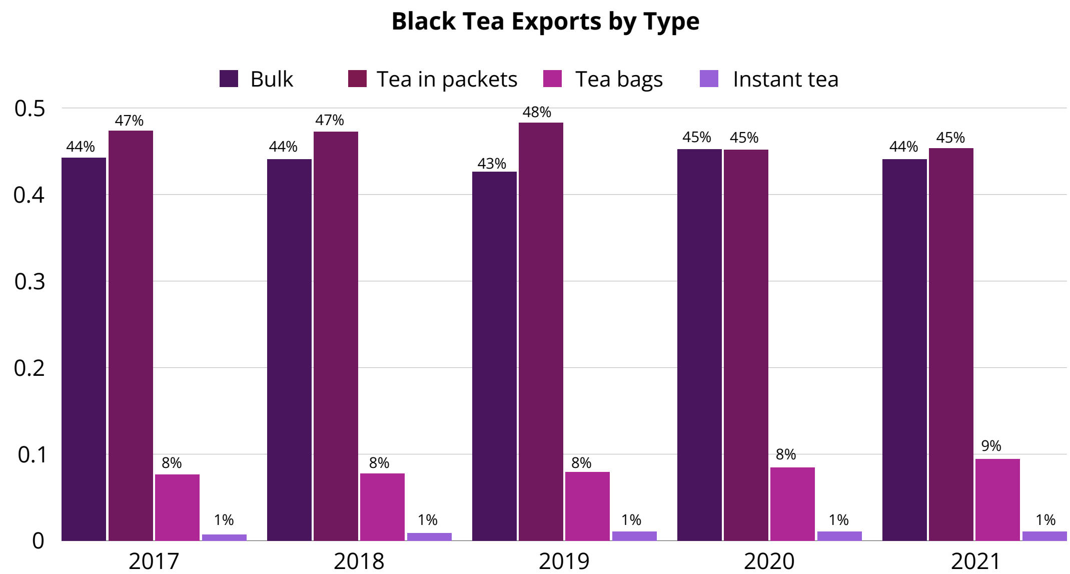


Figure 3 : Composition of black tea exports out of Sri Lanka by type (Sri Lanka Export Development Board)

As aforementioned, Sri Lanka is the global market leader in the export of value added teas, with the country that comes the closest—India—exporting only 10 percent of its teas in value added form[111]. While this is a testament to the market leadership of the local industry, it should not discourage Sri Lanka from seeking to enhance its commitment to value addition, if further value addition is able to increase the returns that the local industry earns. Obviously, the tea that is exported out of Sri Lanka in pure bulk form undergoes value addition in another country, usually Russia, the United Arab Emirates, Turkey or Germany, before they reach the end consumer.

[109] "Annual Report," SLTB, 2021

[110] https://www.srilankabusiness.com/ebooks/industry-capability-report-tea-2021.pdf

[111] https://island.lk/sri-lanka-takes-global-market-lead-in-value-added-tea-exports-report/

Such forms of value addition include blending, packaging, being processed into tea bags or instant teas, or being used as an input in the production process of other consumer goods. When the value addition to Ceylon tea takes place outside of Sri Lanka, whether Sri Lanka loses out on potential domestic returns is a topic of great debate.

RETURNS TO VALUE ADDITION: AN APPROXIMATION

The returns to value addition is a factor of the exact type of value addition, the packaging material, the international market in which the tea is sold, and the exporter's bargaining power against the retailer. Based on these factors, the returns for a unit of made tea processed in the same manner can vary significantly. The following is an attempt to approximate the average returns to different forms value addition, during the period between January to June 2023[112]. The tea exported during this period was plausibly purchased by exporters at the auction during the period between November 2022 to April 2023, as there is generally a two month lapse between the sale of made tea at the auction, and its export out of Sri Lanka. For this period, the net sale average at the auction for all teas was LKR 1,376.17, and the net sale average for high-grown teas specifically was LKR 1,340.69.

In the first six months of 2023, the average FOB price of a kilogram of bulk tea stood at LKR 1,576.20, which is LKR 200.03 above the net sale average. As such, the total value addition to the bulk tea (in terms of blending and packaging) is approximately LKR 200.03. The profit margin to the exporter from the sale of bulk tea is usually in the range of 2 to 3 percent, which translates to a profit of LKR 31.52 to LKR 47.29 per kilogram of bulk tea sold.

For the same period, the average FOB price of a kilogram of tea packets was LKR 1,762.44, which translates to an average value addition of LKR 386.27, given the net sale average of LKR 1,376.17. The margin to the exporter is usually in the range of 3 to 8 percent, which translates to a profit in the range of LKR 52.87 to LKR 141.00 for a kilogram of tea packets sold.

Lastly, the average FOB price for a kilogram of tea bags during the same period was LKR 3,009.45. Given that most tea bags are produced using high-grown teas that fetched a net sale average of LKR 1,340.69, the average value addition here was LKR 1,688.76. The margins for tea bags is usually in the range of 3 to 12 percent, translating to a profit in the range of LKR 90.28 to LKR 361.13 per kilogram of tea bags sold.

These figures demonstrate the theoretical proposition raised earlier, that although greater value addition could result in higher returns to the industry, it may not always be the case. The returns are clearly higher for tea packets compared to bulk tea exports, but it is not necessarily the case for tea bags versus tea packets, given the overlap in the unit profits from tea packets and tea bags. While tea bags have the potential to earn higher returns to the industry, the decision to process tea into bags versus packets is a strategic one that each exporter should make based on the expected returns from each form of value addition.

[112] The data in this section are estimates based on customs data, and approximations of industry profit margins as disclosed by stakeholders.

OTHER FACTORS CONTRIBUTING TO THE PRESENT LEVEL OF VALUE ADDITION

Conversations with exporters and packaging professionals reveal that tea packaging costs are comparatively lower in Sri Lanka, providing exporters with an incentive to package teas domestically. The packaging industry of Sri Lanka is primarily aided by easy geographic access to a broad range of international markets in Asia, Africa and Europe, allowing for the convenient sourcing of cheap inputs to produce packaging material. On the other hand, given that not many countries are involved in the tea trade, the technology for the packing of tea exists in only a limited number of countries, and conversations with industry professionals reveal that Sri Lanka's technology in this respect is high end. The technological advantage that Sri Lanka has cultivated overtime in the packaging of tea allows for more efficient packaging, lowering the cost of domestic packaging of tea.

The only deterrent to domestic packaging is the high freight costs that domestically packaged teas entail, which conversations with industry professionals reveal only applies to lower-end teas shipped out of Sri Lanka at low price points. As the total weight of tea that can be exported out of Sri Lanka in a single shipment is lower with higher levels of packaging, some exporters may be discouraged from packing the teas domestically. However, for exporters that sell higher-quality teas at higher price points, the difference in freight costs is said to be negligibly small, with the benefits of domestic packaging far outweighing the costs.

While Sri Lanka's present levels of value addition are encouraging, the local industry is hindered from achieving higher levels of value addition by a variety of market constraints. Research on these market constraints is limited because of the lack of availability of detailed data on value addition. Conversations with the TRI reveal that the lack of data on this topic has hindered the TRI's ability to conduct serious research into the potential for higher value addition as a market strategy for the Sri Lankan tea industry. Despite limited research, conversations with industry stakeholders suggested that the following three constraints to value addition are the most prevalent.

Firstly, because of the high costs of production of Ceylon tea, Ceylon tea that is sold in the form of private labels in international supermarkets are usually more expensive than teas from other origins, putting Ceylon tea at a natural disadvantage in the international mass market[113]. As such, most Sri Lankan producers and exporters do not find it viable to sell their own value-added products in the international mass market, unless blended with cheaper teas from other origins. However, in the interests of protecting the purity of Ceylon tea, Sri Lanka has banned the import of black orthodox teas from other origins, limiting the extent to which blending for the purpose of lowering consumer prices can take place within Sri Lanka[114].

Secondly, the ability of the local producers and exporters to add value within the island is also limited by the differential import tariff rates that some countries have imposed on value added teas. Countries such as Russia, Iran, and Egypt have imposed higher tariffs on the import of value-added teas to protect the large tea blending, processing, and packaging industries in those countries[115].

[113] Ganewatta, Gaminda, Robert Waschik, Sisira Jayasuriya, Geoff Edwards, "Impact of Protection on Domestic Processing of Primary Commodities for Export Markets: An Example from the Sri Lankan Tea Industry," South Asia Economic Journal, Vol. 7, No. 1 (March 2006): 1-18

[114] Protectionist measures to guarantee origin and authenticity are common among a variety of beverage industries in countries around the world, including the wine industry. See "Pre-Strategy Assessment of the Moldovan Wine Industry," United States Agency for International Development (USAID), 2007.

[115] Intergovernmental Group on Tea, "Tea Market Studie: Egypt, Islamic Republic of Iran, Pakistan and Turkey," Food and Agriculture Organization of the United Nations, May 2005

These differential tariffs on value added tea imports discourage local value addition in Sri Lanka, given that Russia and Iran are two of the largest buyers of Ceylon tea, while Egypt was a large buyer of Ceylon tea until recently[116]. The impact from tariffs in Russia, however, has diminished in the last couple of years, as Russia is no longer able to effectively perform value addition themselves with the onset of economic sanctions following the breakout of the Ukraine-Russia conflict.

Thirdly, the largest tea exporters in Sri Lanka also happen to be the oldest stakeholders in the tea export trade, with most such organisations built in the form of family businesses. Conversations with exporters of such nature reveal that, given the limited sizes of their business organisations, their capacity to approach large-scale value addition overnight is limited. On the other hand, given the lengthy partnerships that these organisations have maintained with international buyers for a long time for the export of bulk teas, seeking opportunities for higher value addition by abandoning their traditional export partners is a risky gamble that some organisations are not willing to take.

On the other hand, younger export companies, most of which were started by those previously employed at multinational companies as those companies dramatically reduced their reliance on Ceylon tea in the late 20th Century, do not have the capital necessary for brand-building. Most such companies were started with substantial loans from the banking industry, and continue to rely on credit from banking institutions to cover their working capital requirements. Conversations with industry experts reveal that most younger exporters do not have the capacity to invest in heavy marketing, which limits their ability to sell value-added products.

These three constraints to value addition, if indeed lowering the returns that Ceylon tea fetches domestically, require three different forms of remedies. The remedy to the latter constraint has more to do with choice than inability, given that businesses of such nature can always make the gamble to increase, at least gradually, their reliance on value addition[117]. The first two constraints, on the other hand, require more strategic approaches that are built on frameworks that are economically sound.

FRAMEWORK FOR THOUGHT: PORTER'S COMPETITIVE ADVANTAGE THEORY

Michael Porter's theories of cost versus differentiation advantage, provide a framework to think about the competitiveness of Ceylon tea in the international market. This theory, applied to the international competitiveness of the Sri Lankan tea industry, suggests that if Sri Lanka is to gain a competitive advantage in the international market, Sri Lanka should lead in either the price or product differentiation frontiers. Leadership in price advantage requires that Sri Lanka reduces its costs of production and sells its value-added teas directly in the international market at the lowest price. Leadership in product differentiation, on the other hand, requires that Sri Lanka differentiates its teas from other origin teas via value addition, and establishes a unique identity for its teas. Under the latter form of market leadership, consumers in the international market would be willing to overlook its higher prices for the unique experience that the consumption of Ceylon tea offers[118],

[116] FAOStat

[117] Conversations with some exporters reveal that the high sunk costs in the form of marketing when entering new international markets, particularly in the context of retail sales being concentrated among few popular multinational brands, is a deterrent to local value addition for private sales in the international retail markets.

[118] 8 Porter, Michael E., "Competitive Advantage: Creating and Sustaining Superior Performance," 1985

The customer value-driven marketing strategy framework by Philip Kotler and Gary Armstrong suggests that these two forms of market leadership serve two entirely different segments of the international tea market [119]. The price leadership strategy would reinvent Ceylon tea as a 'commodified' good that is sold for the cheapest price in the mass market. Under this strategy, Ceylon tea would continue to serve its traditional consumers in the Middle East, North Africa, and Central Asia and the transcontinental countries in Europe and Asia, who represent the price sensitive international mass market. The lower prices under this strategy will allow Sri Lanka to expand into other countries in these regions that also represent the international mass market for tea.

In order to examine the feasibility of a cost leadership strategy for Ceylon tea, it is important to identify its existing and potential sources of cost advantage. Cost advantages may stem from innovative process technology, low-cost access to distribution channels or customers, and superior operating management [120]. As described later, innovative process technology could be a source of cost advantage for Sri Lanka, given the low-cost packaging technology within the island. Sri Lanka may also have a low-cost access to distribution channels and customers in regions where Ceylon tea is already sold, given consumer recognition of Ceylon tea, and the years of business relationships that have been cultivated. However, in regions where Ceylon tea is currently not prominently sold, the reverse may be true. Conversations with industry exporters reveal that, despite high marketing expenses in North America and Europe, Ceylon tea has not been able to significantly penetrate the market for tea in these continents. Lastly, as explored in Discussion Papers 1 and 2, superior operational management is not the forte of the Sri Lankan tea industry, primarily due to government intervention in the land and labour resources.

On the other hand, under the product differentiation strategy, Ceylon tea would be 'premiumised' and sold in the specialty tea market, which is dominated by price-flexible consumers who are willing to overlook price differences for the unique (and scarce) experience that specialty teas offer. The existing markets for Ceylon tea, however, are less representative of such specialty markets, given the price-sensitive consumption patterns of consumers in the markets to which Ceylon tea presently caters. The growing markets for specialty tea in the Western hemisphere, on the other hand, may provide opportunities for Sri Lanka to pursue this strategy, despite the low presence of Ceylon tea in these developed countries presently. (The market for organic goods, for instance, has grown steadily in North America and Europe over the last several years, which has led to an increased global supply of organic teas as well.)

[119] Kotler, Philip, Gary Armstrong, "Principles of Marketing," 1980

[120] CMA Canada. "Value Chain Analysis for Assessing Competitive Advantage." 1992.

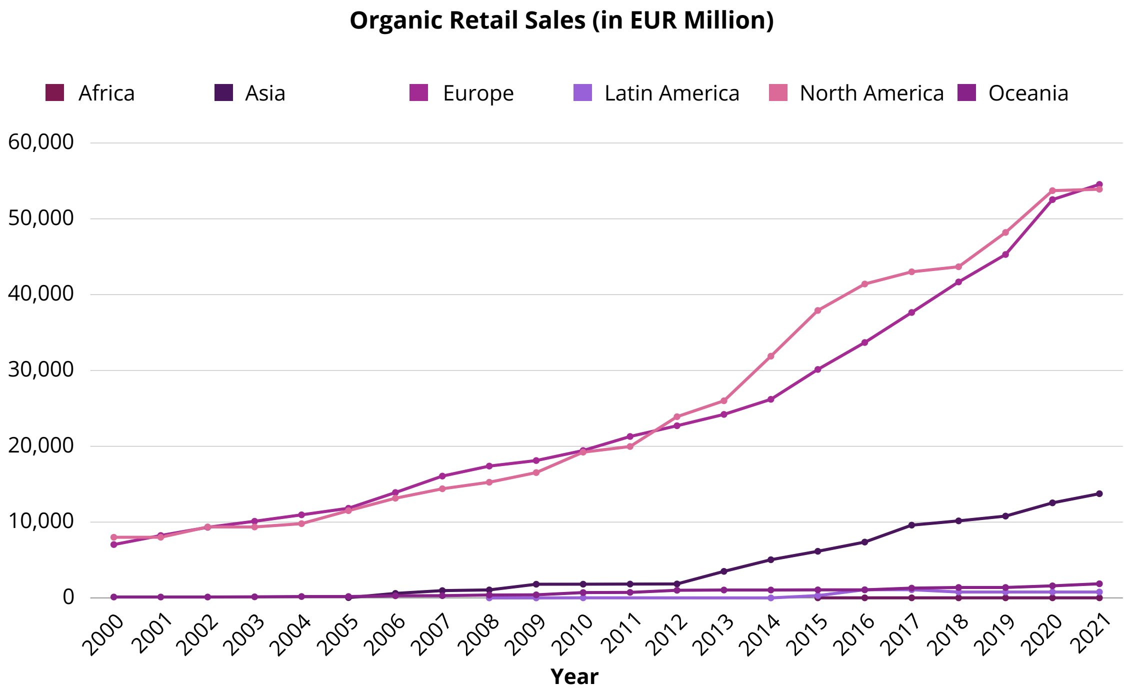


Figure 4 : Retail sales of all organic goods, by region (Research Institute of Organic Agriculture (FiBL))

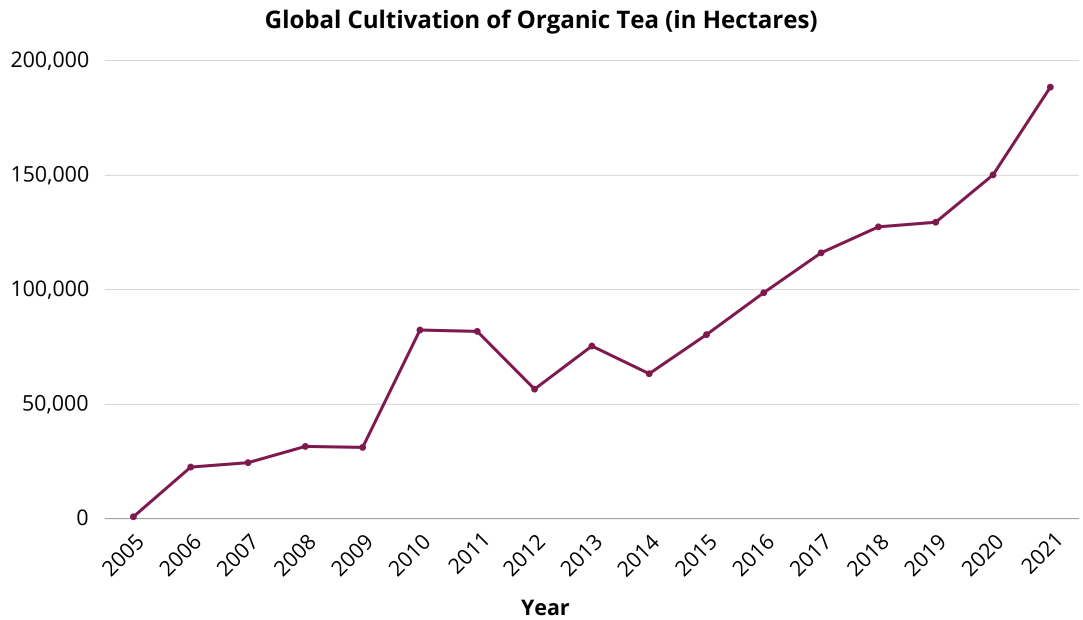
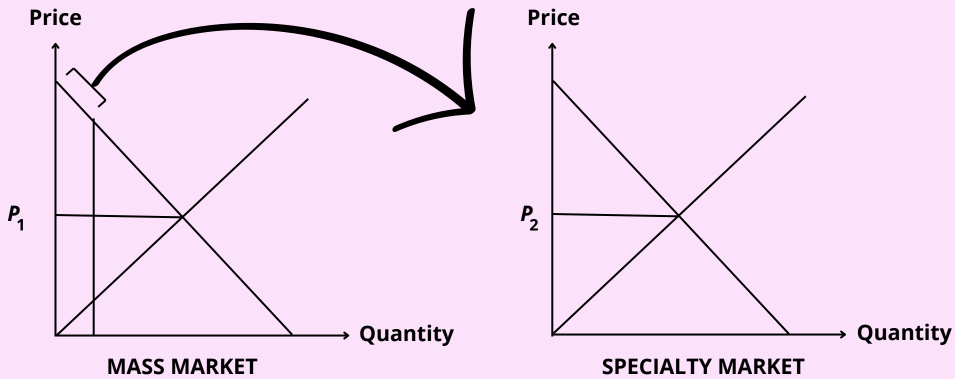


Figure 5 : Global tea extent dedicated to the growth of organic teas, which constitutes an important part of the specialty tea market (FiBL)

Kotler and Armstrong's customer value-driven marketing strategy requires that Ceylon tea chooses a value proposition when entering either of these markets. The value proposition for the price advantage strategy is quite clear, which is making Ceylon tea accessible to every interested consumer by offering the lowest prices in the market. The value proposition for the differentiation strategy, on the other hand, may take the combination of different forms of specialty value addition, given the divergent interests of the specialty market in various value propositions such as health, taste, flavour, colour, historical reputation, and environmental, social and governance (ESG) criteria, as well as corporate social responsibility (CSR).

NICHE MARKET FOR SPECIALTY TEAS, ECONOMICALLY EXPLAINED

Premiumisation of Ceylon tea would enable the tea industry of Sri Lanka to capture higher margins per unit of tea sold, although at a much lower scale of production, by targeting consumers with higher willingness to pay for products that are perceived to be more luxurious and scarce. In effect, premiumisation is meant to capture high premiums from consumers sitting at the upper end of the demand curve of the general market for tea by moving them to a separate niche market that offers scarce higher-end products.



$$P_1 >>> P_2$$

Although the quantity sold in the specialty market is substantially smaller than the quantity sold in the mass market, owing to the smaller number of consumers in the specialty market, and the scarcity of the differentiated product, the premiums extracted from each unit sold is much higher. As such, there is substantial room in the specialty market to earn higher profit margins, as long as the cost of production is kept in check. Premiumisation would be a sensible strategy for the Sri Lankan tea industry to pursue if the higher profit margins at the lower rate of supply translates to higher total profits compared to lower profit margins at a higher rate of supply in the mass market.

The higher returns in the specialty market is enabled by oligopolistic competition, with each player in the specialty market selling a highly differentiated product, to capture the unique expectations of the high end consumer. The high degree of differentiation makes the producer a price-maker in the market, allowing producers to set unique high prices for each of their teas, which is matched by the consumers' high willingness to pay. In contrast, the mass market is characterised by free competition, with minimal product differentiation between different brands.Theoretically, free competition leads to near-zero profits as producers are price-takers, and the lack of product differentiation drives the price of the tea in the market down to the marginal cost. As such, the profit margins are extremely low in the mass market for tea.

When segmenting the market for specialty tea, however, it is important that the segmentation is not too fine, to allow for the practical considerations of scale. Segmenting the market too finely runs the risk of isolating the demand to a few consumers scattered across the globe in locations distant to each other, making distribution infeasible. While the digital age has provided platforms that bring buyers and sellers together with low search costs, e-commerce, particularly out of Sri Lanka, has not developed to an extent where sellers are able to efficiently deliver retail orders to all parts of the world, unless a critical mass of demand to the particular location is involved.

The challenges of distribution arise for a variety of reasons. Conversations with exporters reveal that delivery expenses out of Sri Lanka usually stand at around USD 30 per order, when a single order is generally substantially below this amount, even in the specialty market. As explained in Discussion Paper 1, tea is the cheapest beverage of its kind in the retail market, and as such, even in the specialty market, the prices of tea do not necessarily justify a delivery charge of around USD 30 to the retail consumer. Additionally, tariffs and customs regulations in the transit and destination countries also complicate the feasibility of domestic value addition.

There are two potential solutions to this problem; one is to pursue a strategy of distribution centres, the other is to partner with delivery networks such as Amazon to access their resources for cheaper delivery to the end consumer. Both these alternatives, however, entail their own challenges, which explains the low uptake of these options by Sri Lankan exporters. Distribution centres with warehousing facilities involve high costs, and unless the critical mass of demand in a particular region is sufficiently large, operating a distribution centre out of that region may not be economically feasible. On the other hand, partnering with existing e-commerce platforms such as Amazon would establish an exporter-distributor relationship that is analogous to the exporter-retailer relationship in the supermarket context, with poor bargaining power on the exporter's end. Conversations with stakeholders reveal that this imbalance in negotiating power has discouraged many exporters from pursuing this option.

Furthermore, given the low price of tea, the potential to make large returns from the delivery of tea is low from the perspective of the distributor as well, leading to minimal interest on the end of delivery platforms also to establish such relationships.

Therefore, as the Sri Lankan tea industry premiumises, it is also important to strike the right balance between the narrowness of the specialty market and distributional feasibility, so that the exercise of premiumisation itself proves both practicable and economically feasible.

The FAO IGT has identified several such factors that drive the demand for tea in the present specialty tea market, which can be a blueprint for Ceylon tea, should it choose to pursue a product differentiation strategy. The IGT identifies a trend among consumers outside of Asia to switch to the consumption of tea, especially green tea, due to the perceived health benefits of it, and the fact that the availability of ready-to-drink teas has made the consumption of tea easier. The IGT also identifies a form of conspicuous consumption associated with teas, including black tea fusions, that are marketed as premium products. Young consumers, in particular, have taken this trend of conspicuous consumption an extra step forward by treating the consumption of gourmet teas at specialty tea shops as a lifestyle enhancement, with a demonstrated interest in learning more about the drink itself. The specialty tea market has also entered the retail sector, with many supermarkets that have traditionally catered to the mass market of tea now offering teas of various varieties from various origins. The greater interest in issues of social justice and environmental sustainability among the modern consumer has also penetrated the specialty tea market, with ethically produced teas receiving more careful attention from price-flexible consumers.[121]

The feasibility of a product differentiation strategy for Ceylon tea hinges on the industry's ability to present itself as a niche market to the specialty consumer. In this respect, product features and image positioning play a major role[122]; while the former plays to the industry's strengths, the opposite may be true for the latter. Ceylon tea, as a consumer goods, has many points of differentiation in comparison to other origin teas, including the taste profile, aroma, infusion, processing method, historical narrative, and ethical standards in the production process. However, the industry has long failed to position its image to highlight these product features in contrast to other origin teas, the best example of which is the industry's failure so far to obtain an internationally recognised geographical indicator (GI) for Ceylon tea[123] . If customer value, and therefore, returns to the local industry, are to be enhanced through a product differentiation approach, how the industry addresses this weakness would play an essential role.

[121] Intergovernmental Group on Tea, "Emerging Trends in Tea Consumption: Informing a Generic Promotion Process," Food and Agriculture Organization of the United Nations, May 2018

[122] CMA Canada. "Value Chain Analysis for Assessing Competitive Advantage." 1992.

[123] For a more detailed explanation of GI in the context of Ceylon tea, refer Discussion Paper 4.

CHALLENGES TO THE EQUITABLE DISTRIBUTION OF RETURNS

Equitable distribution of returns is an important component of a framework meant to configure a way of thought about enhancing returns of the Sri Lankan tea industry through strategic value addition. The present formulation of the tea industry value chain leaves stakeholders at the green-leaf stage with the least bargaining power in the sharing of enhanced returns from value addition, with retailers arguably enjoying the most bargaining power. The high bargaining power of retailers stems from the oligopolistic setup of the industry, with a few supermarket chains controlling a substantial share of the grocery retail market in many countries[124]. With numerous brands competing to supply tea to these few supermarket chains, supermarkets are theoretically able to negotiate a higher cut for themselves from the total sales revenue from tea. In economic theory, higher profits are anyway more likely to arise towards the retail end of the value chain because those closest to the consumer are able to directly extract any available consumer surplus[125] .

Although exporters engage in the most value addition in the tea industry value chain through blending and packaging, supermarkets extract more returns from this final value added product than exporters, owing to the greater bargaining power of supermarkets in the exporter-retailer relationship. This higher bargaining power results in supermarkets retaining around 40 percent of the retail value of each packet of tea sold. The profit margin of the supermarket from the sale of tea is at least 4.86 percent, translating to a profit of at least LKR 127.43 per kilogram of tea sold. In comparison, the exporter earns an average profit of LKR 84.48 from the sale of a kilogram of tea at a supermarket. These profit estimates are explained in more detail later.

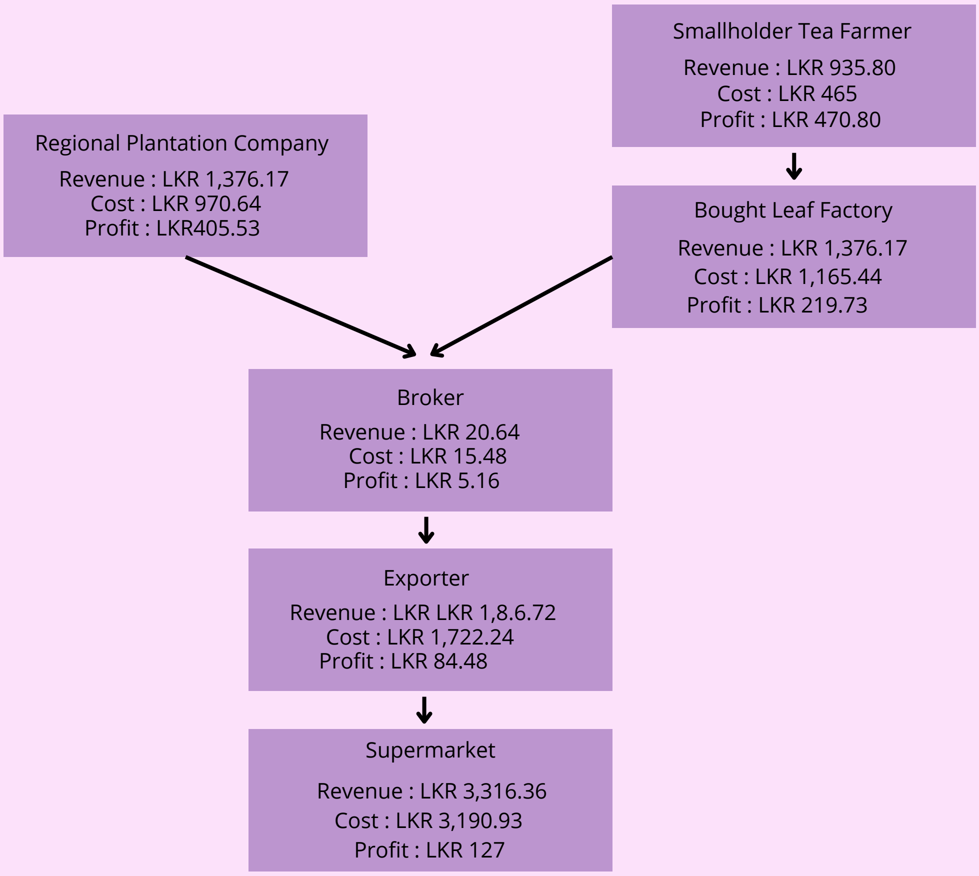
Stakeholders at the green-leaf stage of the value chain of the Sri Lankan tea industry, who arguably represent the backbone of the industry, extract zero additional returns that come from value addition. In the present value chain set-up, returns to value addition do not flow down to the green-leaf stage because those stakeholders depend solely on auction prices, which have no direct relationship with returns to value addition. As such, even if the Sri Lankan tea industry were to increase its profitability by pursuing a cost leadership or premiumisation strategy, there are real questions as to whether the benefits from such approaches would actually flow down to the industry, or whether the returns will be appropriated by a few international retailers and marketing agencies. If the returns are concentrated at the retail end of the value chain, the ability of enhanced returns to better the living conditions of estate workers and smallholders, the economically least privileged participants in the tea industry value chain, may be limited.

PROFIT POOLS OF CEYLON TEA – AN APPROXIMATION OF WHO GETS WHAT

Profit pools denote the total profits earned in an industry at all points of the value chain, and are therefore an insightful indicator of the relative bargaining power of each stakeholder of an industry. The following graph illustrates the profit pools of the Sri Lankan tea industry as 1 kg of made tea moves through the value chain, constructed based on statistics for the first six months of the year 2023.

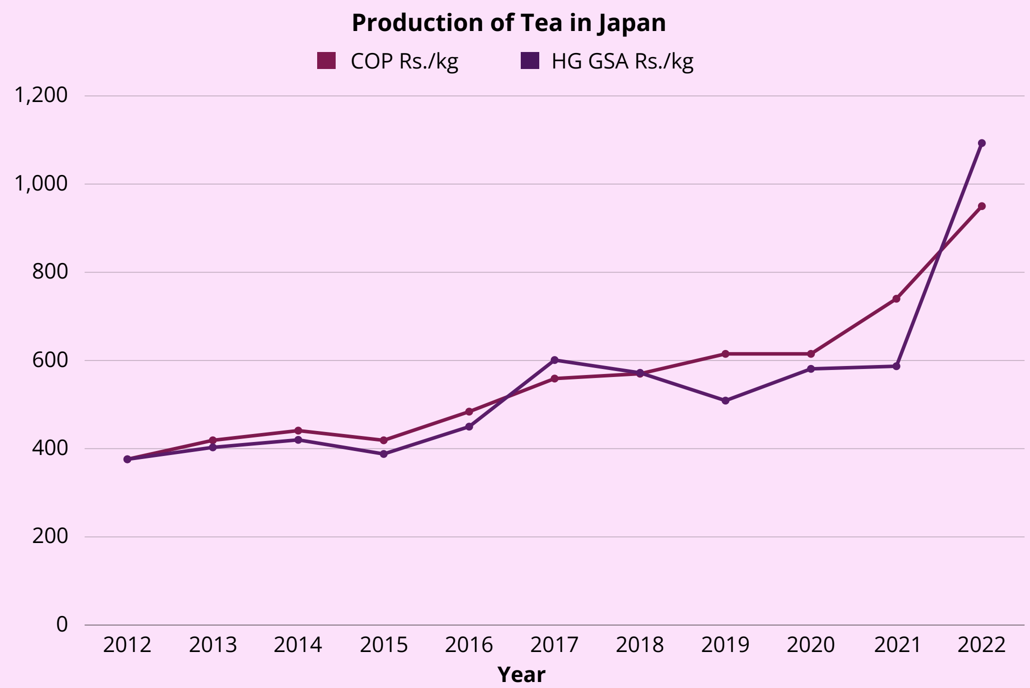
[124] https://www.jstor.org/stable/pdf/2351229.pdf?refreqid=excelsior%3A0ccc7dccbb1d8f8ba8306f92ccb6ecc0&ab_segments=&origin=&initiator=&acceptTC=1
[125] Stuckey, John and David White (1993). "When and When Not to Vertically Integrate." The McKinsey Quarterly No. 3.

Note that these profit pools are based on approximations of accounting profits, as the lack of data on capital costs preclude the calculations of economic profits[126]. The succeeding discussion of the profit pool approximations, however, includes a qualitative evaluation of capital costs at each stage of the value chain.



Given that the rupee earnings of the Sri Lankan tea industry hit record highs in the period between mid 2022 to mid 2023 due to unprecedented depreciation of the Sri Lankan rupee against the United States dollar, the revenues and the accounting profits at the green-leaf stage in this illustration of profit pools is inflated substantially above the general figures. However, based on the net sale average of LKR 1,376.17 from November 2022 to April 2023, and the cost of production of LKR 950 per 1 kg of made tea at an RPC for the corresponding period, RPCs are estimated to have made a gross accounting profit of LKR 426.17 per kilogram of made tea sold at the auction. Deducting the broker fees and other related expenses, estimated to be around 1.5 percent of the net sale average (equivalent to LKR 20.64), the net accounting profit of the RPC is LKR 405.53. However, it is important to note that the net sale average at the auction often hovers near the cost of production in normal times, allowing RPCs to barely break even. The following figure tracks the movement of net sale average against the cost of production in the last decade, to demonstrate this point.

[126] For an explanation of economic profits, see: https://onlinelibrary.wiley.com/doi/abs/10.1111/jofi.12110



Source: Talawakelle Plantations PLC

Similarly, in the smallholder sector, the profits in the first six months were inflated compared to normal times. During this period, bought leaf factories made an estimated average profit of LKR 219.73 per kilogram of tea sold at the auction, after paying 68 percent of the net sale average (equivalent to LKR 935.80) to the smallholders from whom the leaf was sold, 1.5 percent of the net sale average (equivalent to LKR 20.64) in broker fees and other auction-related expenses, and incurring a cost of production of LKR 200 in converting green leaf into made tea. Out of the LKR 935.80 received by the smallholder, the smallholder retained an average of LKR 470.80 as profits, with an average cost of production of LKR 465 per kilogram for 4.65 kg of green-leaf in the smallholder sector, which translates to 1 kg of made tea. It must be noted that this analysis does not take into account the premium paid for green-leaf by some bought leaf factories to smallholders due to the shortage of green leaf in some areas, which industry experts estimate to be around LKR 10 to 15 per kg of green leaf.

Although the accounting profits have been substantial in the first six months of 2023, it is not immediately clear that the same is true in terms of the economic profits of the producers at the green leaf stage. This discussion paper uses the following definition of economic profit from corporate finance, which factors in capital costs of the agent in addition to their operational costs:

Economic Profit = Accounting Profit - Cost of Capital

Depreciation is a primary component of the cost of capital, and therefore, agents with high capital intensity in the production process incur high capital costs. Volatility, defined as the deviation of the realised outcome from the expected outcome, is also a determinant of the cost of capital. High volatility (of random occurrence, not of predictable nature such as seasonal shifts) implies high risk, leading to higher discount rates, thus contributing to high costs of capital in the production process[127].

During the first six months of 2023 alone, due to spontaneous movements in the exchange rate, as well as demand fluctuations, the net sale average at the auction has fluctuated significantly, leading to extremely high volatility in the cash flows to the RPCs and smallholders. High volatility generally translates to high discount rates, which results in high costs of capital to the factories. The cost of capital is also amplified by the high capital intensity at the green leaf stage, with depreciation adding to the capital costs of the factories. Considering all these factors, it is not clear that the accounting profit is a sufficient compensation for the high volatility and the high capital costs borne by the producers at the green leaf stage.

The profit margin of a tea brokerage is thought to be around 20 to 30 percent, depending on the overheads faced by each brokerage. As such, at an average accounting profit margin of 25 percent, a broker earns a profit of LKR 5.16 per kilogram of tea sold at the auction. This number, of course, is only a rough approximation as operational expenses are unique to each brokerage, depending on their scale, and the payroll of the management. The economic profit of the brokers can be presumed to be closer to the accounting profit than it is for the factories, given the low capital intensity of the job of the broker.

From the auction, the made tea moves to the hands of the exporters, who blend and package the tea to be shipped overseas. The revenue of each exporter depends on the exact form of value addition that takes place, and the specific international markets to which they cater, making approximations of their accounting profits extremely difficult. However, as aforementioned, an exporter can be thought to fetch an (unweighted) average revenue of LKR 1,576.20 from the sale of 1 kg of bulk tea, LKR 1,762.44 from the sale of 1 kg of tea packets, and LKR 3,009.45 from the sale of 1 kg of tea bags. The total cost borne by the exporter in each of these sale categories including the financing cost, packing cost, export CESS, promotional levy, transport costs, and other overheads is LKR 1,536.79, LKR 1,665.50, and LKR 2,783.74. Given that bulk tea exports comprised 44.48 percent of total tea exports in the first six months of 2023, and the share of tea packets and tea bags were 45.35 percent and 10.18 percent respectively[128], the weighted average revenue from and the cost of exporting 1 kg of made tea in this period was LKR 1,806.72 and LKR 1,722.24 respectively. As such, the average accounting profit of an exporter of Ceylon tea from the sale of 1 kg of made tea can be estimated to have been around LKR 84.48

[127] https://www.cfainstitute.org/en/research/cfa-digest/2015/04/volatility-the-macroeconomy-and-asset-prices-digest - summary#:~:text=In%20fact%2C%20as%20volatility%20increases,market%27s%20long%2Dterm%20economic%20 growth.

[128] These share calculations exclude instant teas, which makes up only a fraction of exports despite fetching high revenues. Source: Tea Exporters' Association of Sri Lanka.

The final participant in the value chain of the Ceylon tea industry is the retailer, which is generally made up of supermarkets in most advanced economies, a mode of retail that is increasingly becoming popular in other parts of the world as well. Given the lack of data on other forms of retail, this estimation of profit pools looks solely at the accounting profits extracted by supermarkets, which sell both packeted loose leaf teas and tea bags. Dilmah, a Sri Lankan export brand that conducts business with supermarkets in Australia and New Zealand, claims that supermarkets generally retain 40 percent of the price paid by the end consumer for a packet of Ceylon tea. As such, the costs of the supermarket include the 60 percent paid to the exporter, and 36.6 percent[129] in administration, labour, and finance costs as a share of the total revenue, which translates to an estimated profit margin of 3.86 percent from the sale of teas, equivalent to LKR 127.43 per 1 kg of tea sold. This estimated profit margin is highly conservative, however, given that supermarket overheads are calculated based on average overheads for all sales. Given that tea packets are small in size, easy to handle, and not perishable, the operational costs for tea should in reality be below average, leading to a higher actual profit margin.

The economic profits of the retailer are presumably closer to their accounting profits compared to exporters. Similar to factories, the capital costs of exporters can be thought to be high due to the high volatility in the auction prices, as well as the high capital intensity at the export stage, leading to high costs of depreciation. The exporter also bears additional capital costs in the form of a price risk (given that exporters sell in the spot market under transient price contracts), credit risk (given the prevalence of credit sales), and a cost of interest. As such, it becomes clear that the retailer extracts a bulk of the economic profit of the tea industry value chain, whereas other players along the value chain are undercompensated based on low bargaining power and high capital costs.

With the question of equitable appropriation of returns in mind, the following solutions have long been discussed as potential strategies to optimise returns to the local industry through tactical value addition. The Sri Lankan tea industry may refocus its market strategy in either of the following ways to reformulate how it approaches the topic of value addition, and thus enhance the returns to the local stakeholders of the Sri Lankan tea industry.

[129] Cost estimates based on Coles, a large Australian supermarket chain. See: “2022 Annual Report.” Coles Group, 2022.

DISCUSSION OF SOLUTIONS

SOLUTION 1: REMOVAL OF THE IMPORT BAN ON ORTHODOX TEAS OF OTHER ORIGINS

Various beverage industries around the world pursue blending with cheaper alternatives as an option to make otherwise more expensive products more competitive in the mass market. In addition to the accentuation of flavours to achieve a better taste profile, a primary objective of blending in the whiskey and coffee industries is to reduce prices, thus making certain high-end types of whiskey and coffee more affordable to consumers in the mass market[130]. The Sri Lankan tea industry may pursue a similar price reduction strategy by blending Ceylon tea with orthodox teas of other origins. This strategy requires the removal of the government's ban on the importation of orthodox teas of other origins for the purpose of re-export.

By pursuing this strategy, Sri Lanka may carve out a price advantage for its teas in the international mass market, increasing its competitiveness among price-sensitive consumers. This price advantage will encourage more Sri Lankan exporters to enter the international mass market with their own low-priced blends of not-so-pure Ceylon tea, increasing the supply of value-added teas by Sri Lankan exporters. The entrance of more exporters into the mass market will predictably lead to an oversupply of blended orthodox teas packaged in Sri Lanka in the international mass market. The oversupply will ultimately bring the prices of value-added teas from Sri Lanka further down.

Given the long-time disillusionment of some exporters with the Sri Lankan tea industry because of how the import ban on other origin teas limits their ability to add value in the mass market locally, liberalisation of the product market will be positively welcomed by many stakeholders of the industry. Certain well-known brands of Ceylon tea have even set up factories in other tea-producing countries such as Kenya for the purpose of blending Ceylon teas with other origin teas. Liberalisation of the import of other origin teas will prevent such outmigration of knowhow into competitor countries by incentivising stakeholders of the Sri Lankan tea industry who have been unhappy with the import ban to remain in Sri Lanka.

However, there are several risks associated with this strategy that could damage the reputation of Ceylon tea in the international market substantially, the most prominent of which is the dilution of the generic brand of Ceylon tea. Sri Lanka has managed to maintain the highest average auction price for black teas throughout the years partly because of the unique taste profile of Ceylon teas, which has a distinct flavour, aroma, and appearance, compared to other black teas. Blending Ceylon teas with other origin teas for the purpose of re-export could dilute the unique taste profile for which Ceylon teas are known. If the international consumer is no longer able to tell the difference between Ceylon teas and teas of other origins, the premiums that Sri Lanka earns for Ceylon teas could come down substantially.

[130] Smith, Barry, Carole Sester, Jordi Bollester, "The Perceptual Categorisation of Blended and Single Malt Scotch Whiskies," Flavour, Vol. 6, No. 5 (March 2017); Roseberry, William, "The Rise of Yuppie Coffees and the Reimagination of Class in the United States," 1996

Between 1981 to 1989, then government of Sri Lanka lifted the ban on the import of other origin teas as part of its broader commitment to liberalising international trade. The premiums for Ceylon tea, in fact, declined during this period. However, the extent to which the liberalisation of tea imports was responsible for the price decline is not clear. The supply of teas from Sri Lanka also increased during the same period, which some attribute to the concurrent decline in premiums for Ceylon tea[131] . Only an econometric analysis may fully resolve this classic problem of correlation versus causation.

The stakeholders of the Sri Lankan tea industry that are in favour of liberalising the market of tea imports have proposed that mandating a maximum proportion of other origin teas in the teas blended within Sri Lanka will help Ceylon tea retain at least part of its unique identity. The partial retention of the identity of Ceylon tea, they argue, will help Sri Lanka still earn comparatively higher premiums in the international market. Theoretically, this argument is reasonable. However, those opposed to liberalisation question the extent to which such mandated proportions can be enforced, given the potential for fraud and malpractice. Anti-liberalisation stakeholders also argue that, even if sensible mandated proportions are set in the beginning, it does not eliminate potential for slippery slope reforms in the future that will reduce the required proportions for Ceylon teas in the blends to the point that the blends fail to resemble the unique character of Ceylon teas.

Pursuing the mass market more intensely with lower prices also means that the Sri Lankan tea industry will continue to rely on developing markets with unstable economic and political conditions to sustain itself. The volatilities in these developing markets have the potential to affect the sustainability of the Sri Lankan tea industry in the long term, as discussed in the introductory section to this report. The future profitability of players in the international mass market is anyway in question right now, given the extremely low returns that mass market players earn. Unilever's sale of Lipton, PG Tips and other tea labels it held in 2021 was a result of the lack of returns in the international mass market for tea, to which Unilever famously catered with regular discount pricing[132].

This disadvantage faced by Ceylon tea in the international mass market is clear in the minimal presence of Ceylon tea in Western supermarket chains. The only exception to this trend is the high visibility of Dilmah in supermarkets in Australia and New Zealand, to maintain which, the company has struggled beyond what many exporters of Ceylon tea are willing to endure. Conversations with the company reveal that supermarkets consistently demand that the price of Dilmah teas be discounted to match the prices of large multinational brands, which is not possible for Ceylon tea brands given the high costs of production. The supermarket model is fast gaining popularity in the Middle Eastern and North African nations to which Ceylon tea predominantly caters. As such, the commodification of tea in the retail market could soon prove to be a great challenge in the present export markets of Ceylon tea, lowering the premiums that the local industry is able to extract. Continued reliance on the mass market with a cost advantage strategy, therefore, could compromise the bargaining power of Ceylon tea in the long run.

[131] Kelegama, Saman, Nisha Arunatilake, Janaka Wijayasiri, Sri Lanka Tea Industry in Transition: 150 Years and Beyond (Colombo: Institute of Policy Studies of Sri Lanka, 2018)

[132] Even if Sri Lanka manages to sufficiently lowers its costs of production to be able to compete in the international mass market, the commoditisation of tea in the international supermarkets will continue to undermine the returns to the local industry. The supermarket model, particularly in the West, encourages discount pricing, and prioritises lower prices over the quality of the goods they sell, to attract the price-conscious mass market consumer. As such, the business strategy of multinational brands of tea such as Lipton, PG Tips and Twinings to sell higher volumes at lower price points has long been aided by the business model of supermarkets, leaving higher priced tea variants, such as tea, at a disadvantage. See: Buckley, Thomas, “Unilever Mulls Sale of $3 Billion Tea Unit With Coffee on Rise,” Bloomberg, 29 January 2020; https://www.bloomberg.com/news/articles/2020-01-30/unilever-reviews-tea-business-after-slowest-growth-in-a-d ecade; https://www.reuters.com/business/unilever-strikes-5-bln-deal-with-cvc-tea-business-ft-2021-11-18/

Lastly, the liberalisation of the product market prior to liberalising the factor market may pose serious threats to both the revenue streams of plantations, and the livelihoods of tea sector workers. Liberalisation of tea imports will lead to a substantial decline in the demand for teas produced in Sri Lanka, as other origin teas will replace a share of the Ceylon tea that is currently exported out of Sri Lanka. Depending on the extent to which the demand for locally produced teas declines, the profitability of the RPCs may also come down. Given that the land supply for tea production under the RCP structure is fixed, and that state intervention in the labour market has made workers over-reliant on the RPCs for their day-to-day survival, issues related to large-scale inefficiencies in production, and the socioeconomic security of estate populations, could arise.

SOLUTION 2: FACTOR MARKET LIBERALISATION FOLLOWED BY PRODUCT MARKET LIBERALISATION

The concern that liberalising the product market prior to the liberalisation of the factor market may prove to be too large a shock to the existing set up of the Sri Lankan tea industry around RPCs may lead some to advise against the liberalisation of the product market. Truth is, the state has intervened in the factor market in a way that is so distortionary that to prevent the crumbling of the factor market, additional distortions in the product market in the form of trade protectionism are necessary. This way of thinking, however, hinges on the idea that two market distortions could correct the effects of one distortion. While such thinking may be more pragmatically feasible in the present context of the Sri Lankan tea industry, eliminating both distortions may lead to more efficient economy-wide market outcomes in the long run.

To ensure that product market liberalisation of tea does not upset the relationships that the state has propped up between factors of production through heavy interventions in the factor market, the state may liberalise the factor market of the tea industry prior to liberalising the product market. Liberalising the factor market by unleashing the land and labour resources that are currently tied up to the Sri Lankan tea industry to the free market, however, is not a process that is legislatively easy, as discussed in Discussion Papers 1 and 2.

If the factor market is liberalised prior to the product market, however, as the relevance of locally produced teas dwindles with the importation of teas of other origins, the market forces may efficiently reallocate the excess land and labour resources elsewhere in the economy. This theory, however, assumes that the labour resources presently used in the production of tea are of productive use in other industries, which is reasonable given that many former tea estate workers have already demonstrated the ability to find employment opportunities in apparel and other industries.

SOLUTION 3: COMPLETE SWITCH OVER TO CTC TEAS

If the tea industry's ultimate objective in pursuing a price leadership strategy with blended teas packed in Sri Lanka is to carve out a larger share of the mass market, however, continued loyalty to the production and export of orthodox teas might not be the best option. Even if blended with orthodox teas of other origins, Ceylon orthodox teas will still be less competitive than CTC teas that are substantially cheaper to produce, because the production of CTC is a relatively faster process.

Although the mass market consumers in the countries to which Sri Lanka already exports its teas have traditionally consumed orthodox tea, the mass market beyond orthodox teas may provide substantially larger opportunities for the Sri Lankan tea industry to expand. Given the general indifference of the mass market consumer between orthodox and CTC teas, and the generally lower production costs of CTC teas, countries such as Kenya that produce CTC teas are more competitive in the international mass market. Abandoning the loyalty of the Sri Lankan tea industry to the orthodox method of production would thus help Sri Lanka garner a larger share of the international mass market.

However, practically, a complete switch over to CTC production is not possible in the short run, because the industry is presently not geared towards the needs for CTCs production. For instance, CTC requires a different leaf standard compared to orthodox processing, which the tea industry of Sri Lanka does not presently cultivate in a large volume. On the other hand, CTC also requires larger volumes of green leaf production as the cost advantage in the production process can only be acquired with the continuous running of the processing machines. Conversations with planters reveal that the present production volumes of green leaf in the Sri Lankan tea industry are insufficient to meet this demand.

In addition to the transitional costs that will require large investments from producers in the initial phase of switching over to the production of CTC teas, abandoning the black orthodox tea market will have various market implications for the Sri Lankan tea industry. As a CTC producer, Sri Lanka will no longer dominate the export market for orthodox black teas, and thus lose the unique reputation that it has built over time as a market leader in black orthodox tea. Under this strategy, Sri Lanka will become just another player in the international mass market for CTC, and be expected to consistently maintain low prices in order to remain competitive in the market. If Sri Lanka loses this gamble and fails to maintain attractive prices, however, the ability of the Sri Lankan tea industry to move back to the orthodox market may be limited. The moment Sri Lanka abandons the orthodox market to pursue the CTC market, other competitors of Sri Lanka in the orthodox market will presumably capture the markets in countries to which Sri Lanka currently exports.

SOLUTION 4: COST REDUCTION VIA INCREASED PRODUCTIVITY

Given the substantial risks involved with pursuing the route of product market liberalisation and entering the CTC market, the Sri Lankan tea industry may still seek a price advantage in the international market by just focusing on strategies of cost reduction in its current production process. Increasing the productivity of the labour and land resources employed in the Sri Lankan tea industry based on the proposed solutions in Discussion Papers 1 and 2 may help the Sri Lankan tea industry lower its costs of production.

If the Sri Lankan tea industry in fact manages to lower its costs of production in this manner, Ceylon tea may gain a competitive advantage in the international mass market without dilution of the generic brand of Ceylon tea. However, the Sri Lankan tea industry has long attempted to lower its costs of production without much success, which means that the likelihood of this strategy being viable is not very high.

However, price leadership is not the only strategy that could give the Sri Lankan tea industry a competitive edge in the international market; despite its high costs of production, the Sri Lankan tea industry remains somewhat competitive in the international market because of how Ceylon tea has effectively differentiated itself among teas of other origins. However, the present focus of the Sri Lankan tea industry on the mass market limits its ability to differentiate itself and extract high premiums, given the price sensitivity of mass market consumers. Instead, Sri Lanka may more substantially focus its attention on the growing price-flexible specialty tea markets by capitalising more aggressively on the unique historical narrative, reputation, and taste profile of Ceylon black orthodox teas.

SOLUTION 5: PURSUIT OF SOPHISTICATED MARKETS BY EMBRACING PRICE DIFFERENTIALS

As agricultural economies advance, it is common to run into the issues that the Sri Lankan tea industry is facing right now, such as higher costs of production and a shortage of agricultural labour. However, there might still be a demand for the agricultural products from said country, especially if the country has established a historical reputation for itself in a particular agricultural industry. The case with Ceylon tea today is similar; despite the high costs of production, the industry persists because of the high premiums that it fetches in the export market based partly on its unique historical narrative, reputation, and taste profile.

JAPAN'S SHIFT INTO THE HIGH-PREMIUM SPECIALTY TEA MARKET

As the Japanese economy developed, the share of agriculture in Japan's total production fell between 1960 and 2005, from 9.0% to 1.0%. Agriculture's share of the working population also declined during this period from 26.6 percent to 4 percent, as the number of workers employed in agriculture declined from 11.96 million to 2.52 million[133]. The scale of tea production in Japan also began to drop, starting around the 1980s, following this larger trend in agriculture[134].

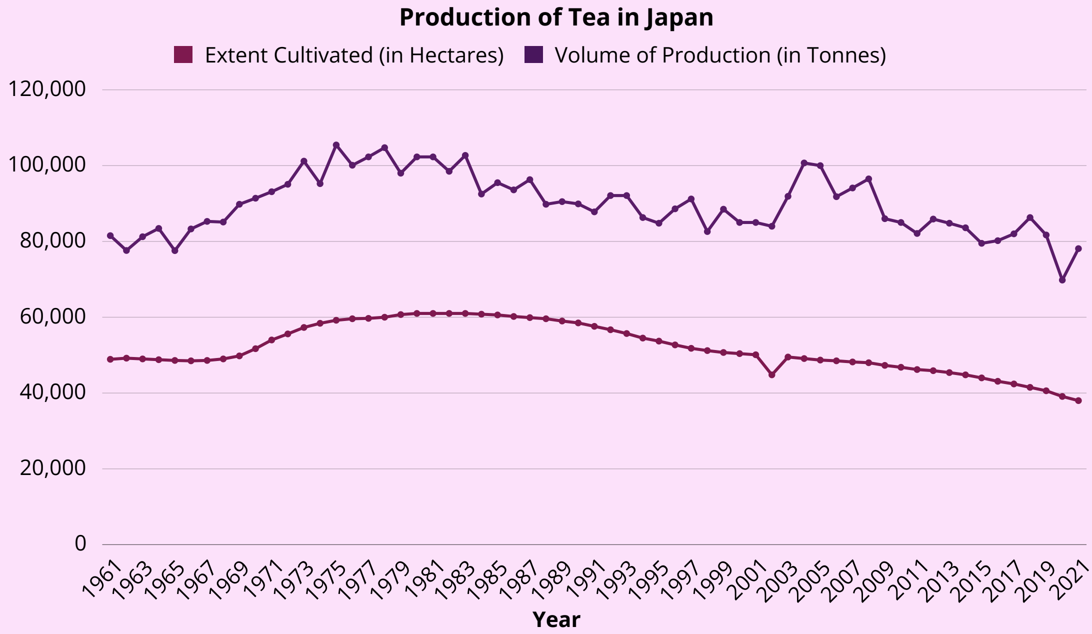


Figure 6 : Production of tea in Japan (FAOStat)

This decline in tea production in Japan coincides with an exponential increase in the premiums received by Japanese teas in the export market. While Sri Lanka's level of production has also somewhat declined over time, the premiums that Sri Lanka receives for its teas have not increased at the same pace. Part of the reason for the exponential increase in the premiums received by Japanese teas is the scarcity created by the reduced supply. However, more importantly, Japan's increased reliance on the production of specialty teas that fetch high prices, such as matcha, shizuoka and kagoshima, also played a role in this dramatic rise in the premiums for Japanese teas[135].

133 Yamashita, Kazuhito, "The Perilous Decline of Japanese Agriculture," The Tokyo Foundation for Policy Research," 2008, https://www.tkfd.or.jp/en/research/detail.php?id=59

134 FAOStat

135 Pilapitiya, Chamila, Saliya de Silva, Hideyo Miyazaki, "Innovative Value Addition in Tea Industry: Sri Lanka vs. Japan," ResearchSquare, 2020

Figure 7 : Comparison of average FOB prices fetched by countries for tea (FAOStat)

However, with persistently rising costs of production and a labour shortage that is becoming more severe by the day, the Sri Lankan tea industry today faces a crucial question: How long would the industry be able to sustain on its high premiums, as the profitability and the sustainability of the industry gradually declines? Rebranding Ceylon tea as a specialty tea by capitalising more assertively on its unique profile, and seeking even higher premiums by gradually disassociating Ceylon tea away from the mass market, is a way out of this predicament. Alongside its entrance into the specialty market, the Sri Lankan tea industry will be able to reduce its production capacity while expanding its margins, which would also help overcome the increasing labour shortage issues in the industry.

Strategically moving to the specialty tea market is beneficial to the Sri Lankan tea industry for a variety of reasons, including the fact that consumers in the specialty market are less price sensitive. Demand for black tea is relatively more inelastic in sophisticated markets such as the United States and the United Kingdom, which are also countries that represent the bulk of the growing specialty market for tea. On the other hand, increasing reliance on these advanced economies would allow Sri Lanka to gradually depend less on uber-volatile developing markets in the Middle East, Africa, and transcontinental countries of Asia and Europe.

The specialty market will also allow Sri Lanka to take control of the narrative of its tea industry, and receive more substantial premiums for the island's historical relationship with the global tea industry. Right now, the narrative of the Sri Lankan tea industry is being controlled by the price sensitive mass market that places little value on the significant historical relationship between Sri Lanka and the tea crop, and therefore is unwilling to pay it the high premiums that the century-old industry deserves. On the other hand, the age-old association of Ceylon tea with the hand plucking of tea leaves and orthodox rolling in the eyes of the sophisticated international consumer will allow the Sri Lankan tea industry to position itself at the high end of the specialty tea market.

Given that more than 95 percent of the value addition that happens in the Sri Lankan tea industry is mere packaging, there is substantial room for greater value addition in order to penetrate the specialty market for tea. The following are some of the obvious ways in which greater value addition may be performed.

1. GREATER ATTENTION TO SINGLE-ESTATE MARKETING:

Single-estate tea is an instrumental segment of the specialty tea market; yet, there are questions as to whether the industry capitalises on the opportunity to market made tea from well-known estates in the single-estate form. Most teas from well-known estates are sold in the auction, and subsequently packed and sold as single-estate teas by international sellers. This business model deprives Sri Lanka of the high premiums that the local industry could have earned had it performed the final sale directly to the consumer. Given that a majority of shares in most RPCs are owned by well-established corporate conglomerates, there may be room for higher levels of direct or private sales of single-estate teas to the end consumer. In the wine industry, vineyards maximise their returns by 'estate-bottling' their wines, which means that the single-estate wines are bottled at the estate itself, to earn a higher profit in the specialty market [136].

This strategy would also help the future sustenance of the green-leaf stage of the industry by increasing the profit pools that the green-leaf stage. Presently, most profits in the industry are concentrated in the latter-stages as the high cost of production prevents estates from recording much profits. This imbalance in the profit pool distribution may be rethought through value addition at the green-leaf stage itself, through strategies such as 'estate-packing'.

[136] https://www.jstor.org/stable/pdf/3069395.pdf?refreqid=excelsior%3A1805916f037f2be63373697a0e9d41ba&ab_segments=&origin=&initiator=&acceptTC=1

THE AUCTION'S CONSTRAINTS ON PREMIUMISATION

The Colombo Tea Auction, plays an immensely valuable role in the trade of Ceylon tea by introducing buyers, both large and small, to sellers, again large and small. In fact, the auction system enhances free competition in the trade by facilitating a higher symmetry of information between buyers and sellers than would otherwise have existed in the market. There are, however, several aspects of the auction system in its present set-up that disincentivise premiumisation of the industry by discouraging private and direct sales by factories.

Firstly, the SLTB requires that all Ceylon tea be sold through the auction system, with exceptions only allowed on an invoice-by-invoice basis. As such, factories engaging in private and direct sales are required to seek consent from the Tea Commissioner's Department of the SLTB before the transactions are allowed to take place. This bureaucratic inconvenience faced by factories when conducting private transactions with buyers presumably discourages some factories from actively pursuing direct and private sales, given the additional costs incurred in the process. Relaxing this law, on the other hand, would enhance the ease of conducting direct and private sales, which is how most specialty teas are sold.

Furthermore, the present set-up of the auction system also endorses scale over premiumisation, by requiring minimum quantities for a product to be catalogued for sale at the auction. Given that most specialty teas, particularly when they are first being introduced to the market, are produced in small quantities, factories are not able to leverage the information advantages of the auction system to familiarise buyers with specialty teas that are manufactured at a small scale. Accordingly, the auction system incentivises factories to prioritise high-scale production, which is not necessarily a favourable environment for the premiumisation of the Sri Lankan tea industry.

Lastly, stakeholders at the green-leaf stage point to the opposition to the dollarisation of the auction by exporters as an impediment to ensuring higher profitability at the green-leaf stage. The former argues that dollarisation of the auction would help reduce the volatility at the green-leaf stage of the value chain, thereby increasing the profit pools at the green-leaf stage. It is however not clear that the dollarisation of the auction would result in lower volatility, as in addition to the agricultural volatility that the green leaf producer presently faces, dollarisation would also expose the green leaf producer to currency volatility.

There are various second- and third-order effects of dollarisation that also need to be studied before the tea auction is dollarised. Firstly, the dollarisation of the tea auction could lead to substantial dollarisation of the Sri Lankan economy, as it would provide the producers of other commodities also with a reason to seek dollarisation of their respective trades.

Furthermore, how dollarisation would impact the access of smaller producers to capital, and how dollarisation would impact the prices of teas sold domestically are also concerns that need to be factored into this decision. Dollarisation could also prevent the entrance of new exporters to the market who do not possess the initial dollars necessary to engage in a dollarised auction, thereby limiting competition, and the bargaining power of the sellers, at the auction. As such, dollarising the auction does not seem to be an economically sound solution to the woes of green leaf producers in the Sri Lankan tea industry.

2. MORE FOCUS ON RADICAL INNOVATIONS

More than 80 percent of large tea exporting firms, and more than 50 percent of small and medium firms, are estimated to engage in incremental innovations to value addition, through means such as pyramid tea bags[137] . More radical innovations, which allow for greater profit enhancements, are rarer, and are overwhelmingly the forte of small and medium firms. While over 60 percent of small and medium firms are estimated to have engaged in radical innovation, less than 30 percent of large firms have successfully taken similar risks.

According to Pilapitiya and de Silva (2021), despite the existence of a strong base of raw materials and convenient access to research, technology, education, and quality institutes, the lack of links between tea-related agencies with the industry is primarily attributable to the lack of radical innovations. The authors argue that revising the tea-related curriculum in the existing botanical and agricultural degree programs, and establishing a more effective mechanism to absorb these graduates to the industry may facilitate more radical innovations in terms of value addition.

In contrast, in Japan, radical innovations in the ready-to-drink segment of the tea industry, followed by incremental innovations in packaging have captured changing consumer preferences more effectively[138]. This has allowed the Japanese tea sector to not only sustain its relevance among newer generations, but also substantially increase the overall returns of the industry.

Moving to the specialty tea market, however, is not a shift that can take place overnight, which means that the approach that the Sri Lankan tea industry takes towards it needs to be gradual, with an acute understanding of the potential for failure. Just as most Sri Lankan exporters have not so far shown acumen in being able to penetrate the value-added export market, some exporters might not be successful in their attempts to shift towards the specialty tea market. By making sure that the Sri Lankan tea industry does not abandon its mass market consumers all too suddenly, the industry may ensure that those who fail to succeed in the specialty tea market will continue to have a place in the mass market in which they have already established themselves.

[137] Pilapitiya and de Silva (2021)

[138] Pilapitiya and de Silva (2021)

THE ORGANIC AGRICULTURE DEBACLE – HOW NOT TO ENTER THE SPECIALTY MARKET

The blanket ban on the use of agrochemical fertilisers by the government of Sri Lanka in 2021 was a short-lived experiment that the island had with how not to approach the specialty market for agricultural produce, including tea. While the Sri Lankan tea industry should definitely attempt to make inroads in the global market for organic teas, this failed experiment reiterates that government intervention is not the way forward in this regard.

The ban on the use of agrochemical fertiliser was misguided on several fronts. Firstly, a mere ban on the use of agrochemical fertiliser does not make agricultural produce 'organic', which additionally involves the obtaining of certification to that effect. The certification can be obtained from certifiers in either the United States or the European Union, each of whom have their own standards separately stipulated[139]. Therefore, even if Sri Lanka managed to successfully produce tea and other agricultural produce without the use of agrochemical fertiliser, that does not automatically guarantee organic-level premiums for the produce thus harvested.

Even if Sri Lanka was to obtain organic certification, it is unlikely that Ceylon tea would be able to fetch the premiums that organic tea currently earns in the international market. The price of organic produce, as in any other case, is decided by the market forces of demand and supply. By oversaturating the international market with organic tea given the island's production capacity, the Sri Lankan tea industry would have substantially driven down the prices of organic tea, and failed to earn as much of a premium as expected in the international market.

None of these arguments, however, matter given that Sri Lanka had neither the ability to exclusively cultivate organic teas. Firstly, organic production requires organic fertiliser; however, news reports from the time made it clear that Sri Lanka did not have a sufficient stock of organic fertiliser to be used by every RPC and smallholder. Even if sufficient stock of fertiliser was available, given that the soil and tea bushes in Sri Lanka are used to agrochemical fertiliser, there are questions as to how efficient the use of organic fertiliser would have been. The decline in the production of tea in late 2021 and early 2022 is evidence that a permanent switch to organic fertiliser would have made the Sri Lankan tea industry more inefficient than it generally is.

Lastly, given that Sri Lanka did not already have a pre-existing market for organic tea exports, the sudden shift to organic agriculture ran the risk of driving the Sri Lankan tea industry into irrelevance in the international market. As Sri Lanka lacked organic certification, it was impossible for Sri Lanka to promote and sell its 'organic' teas in the advanced economies where the organic tea market is concentrated. On the other hand, given the skyrocketing price of Ceylon tea in the international market,it was no longer affordable to the traditional buyers of Ceylon tea in the developing world.

[139] https://www.ams.usda.gov/sites/default/files/media/US_EUQAs.pdf

As mentioned in the introductory section, traditional buyers of Ceylon tea were briefly seen shopping around in other markets during this period as a result.

All this evidence points to the need to have a more market-based approach to moving to the specialty market. The market for specialty teas such as organic teas is on the rise, but it does not mean that the Ceylon tea industry can make the shift towards it overnight. Given that there are some producers of Ceylon tea already successfully catering to the organic market with no government intervention in the matter, it is clear that allowing the free market to gradually increase Sri Lanka's share of organic tea production is the most sensible, and profitable, way forward [140].

Accordingly, even in cases where the majority shareholder of an RPC, which is usually a large conglomerate, owns a brand of tea, the brand sources made tea from the auction, and not from the estate managed by its parent company. Favourable treatment of estates managed by the parent company would be an unsound strategy to pursue given the ability to source teas at different price points from the auction, particularly if the target consumer markets of the estates and the tea brands are different.

A limitation to the potential for exporter's success in the specialty market may be a lack of the financial capital that is necessary to establish a new brand in the market. Such exporters may seek assistance from the state, or financial intermediaries, to raise the financial capital that is necessary to make the move to the specialty market. Seeking such assistance, especially from the state apparatus, is not a new phenomenon; in fact, when Dilmah first entered the Australian market, it did so with financial assistance from the SLTB and the Sri Lanka Export Development Board, which is arguably an investment that paid off [141]. If exporters seek such assistance from the SLTB, the SLTB needs to have the capacity to conduct its own research into the market prospects of such projects, before deciding to extend assistance. Presently, there is no mechanism in place for the SLTB to inform itself of market trends, via outside research organisations, or a business research arm of its own, without which it would be a gamble for the SLTB to move forward with such assistance programs.

There have been proposals in the past for the establishment of an organisation dedicated to market research under the SLTB, the Tea Research Institute (TRI), or as a standalone organisation to accomplish this objective.[142] These proposals are not entirely novel, given that the SLTB already has its promotional and marketing arm, and that the TRI employs two research economists in its agricultural economics division for the same purpose. While the establishment of a separate organisation dedicated solely for this purpose would certainly be a positive move towards recognizing the importance of business research to the wider industry, the organisational capacity necessary to run such an institution could overtax an already exhausted state structure.

[140] https://www.uwu.ac.lk/wp-content/uploads/2019/2-Dharmadasa-et-al.21-29.pdf

[141] Fonseka, D. C., "Visionary Leadership and the Case of Dilmah," Sri Lankan Journal of Management, Vol. 14, No. 2 (2008): 1-17

[142] Dilmah has also proposed the establishment of a 'Tea Authority' to formulate and implement a ten year action plan to rehabilitate the Sri Lankan tea industry. See "Annual Report 2018/19", Dilmah, 2019

This overburdening is already seen in the TRI in its present form, with the institute's agricultural economics department struggling to recruit professionals and fund its research given the limited funding the institute receives from the government. A solution to this could be increased funding to the SLTB to pay for good quality market research conducted by outside organisations.

Furthermore, if the Sri Lankan tea industry is to capitalise on the unique reputation of Ceylon tea to enter the specialty tea market with the intention of earning higher premiums, it is important that the reputation of the Ceylon tea brand is protected. As such, the industry may not be able to afford any dilutions to the Ceylon tea brand by stakeholders in the industry who wish to blend Ceylon teas with teas of other origins to be more competitive in the international mass market. For the Sri Lankan tea industry to succeed, the state may need to maintain its import restrictions on teas of other origins for the purpose of re-export. A drawback of this strategy is that, under it, the industry will continue to see the outmigration of local stakeholders of the industry whose business interests include the blending of Ceylon teas with teas of other origins for the mass market.

SOLUTION 6: ADDITIONAL DIFFERENTIATION WITH ESG AND CSR

Sophisticated consumers in the specialty tea market are additionally interested in social justice issues including corporate welfare. Some even treat ethical consumerism as a form of conspicuous consumption. In fact, such consumers are willing to pay an additional price for teas that are associated with strong ESG and CSR initiatives. Therefore, while exporters focus on the exploration of more sophisticated markets where Ceylon teas can fetch higher premiums with forms of value additions that are focused on the specialty market, producers may more substantially integrate ESG and CSR initiatives to the production process.

Discussion Paper 4 delves more deeply into the different forms in which the Sri Lankan tea industry may utilise ESG and CSR initiatives to differentiate itself from its competitors, and earn higher premiums in the international market.

SOLUTION 7: AN E-COMMERCE PLATFORM FOR SPECIALTY TEAS

As aforementioned, the small-scale of the specialty tea market is a key driver of the feasibility deterrents to premiumisation of the Sri Lankan tea industry at present. Under the current scale of demand for specialty teas, it is not possible to run a profitable distributional operation, given the high costs of establishing and maintaining delivery networks, as well as the high cost of warehousing.

Specialty tea exporters may be able to address the scale issue to some extent by building a shared e-commerce platform for the distribution of specialty teas. Given the presumably low private returns to such an investment given the high costs of warehousing and setting up distribution networks, and the potential for free-riding, the industry may even approach this platform as a public good, and make the case for the financial involvement of the SLTB. In fact, as discussed in Discussion Paper 2, the tea export CESS may justifiably be used for building and maintaining an e-commerce platform of this nature, allowing exporters to experiment more with the specialty tea market, setting the industry up for premiumisation in the future.

Even if the SLTB does not directly fund such a platform, it is important to explore whether the international resources of the SLTB can be used to minimise the current distributional inefficiencies in the specialty tea market. Given that the SLTB presently operates a network of promotional offices in several key markets of Ceylon tea, the ability to utilise this network to facilitate distribution should be investigated.

SOLUTION 8: TWO-PRONGED STRATEGY WITH LIMITED BLENDING

The debate over the liberalisation of the product market of tea predates a lot of other contentious debates in the Sri Lankan tea industry because of the irreconcilably divergent views of stakeholders on the matter. Therefore, a strategy that is exclusively focused on either mass market domination or expansion into the specialty tea market will see its fair share of dissent. If the industry is to address this debate more definitively with more consensus, a compromise solution may be necessary. The allowing of limited blending at an export processing zone with strict monitoring is one such solution.

The current makeup of the international blending industry, and Sri Lanka's waning relevance in its networks, provides a convincing argument in favour of Sri Lanka's experimentation with the domestic facilitation of international teas with Ceylon tea. The United Arab Emirates, Germany, and the United Kingdom are examples of countries that do not produce tea leaves of their own, but run large-scale blending operations of tea sourced from producers of tea leaves, including Sri Lanka. It has been argued that facilitating the blending of internationally sourced teas in Sri Lanka, including Ceylon tea, could increase the demand for Ceylon tea in international blends, and thereby raise the premiums of Ceylon tea, particularly at the low-end, which are anyway mostly used as fillers in international blends upon leaving the borders of Sri Lanka[143] . Given that Sri Lanka presently contributes only 4.6 percent of the world supply of tea, increased demand for Ceylon tea in international blends could help Sri Lanka expand its global market share, and earn higher returns through the increased supply levels as well [144] . The lower packaging costs in Sri Lanka, and the concentration of technical expertise in Sri Lanka (which can be seen in the recruitment of professionals of the Sri Lankan tea industry by international blending companies), would allow for a cost-efficient blending operation within Sri Lanka, which would attract many blending companies to the island.

This strategy requires that the authorities, in consultation with private stakeholders of the industry, stipulate a maximum quantity of blended Ceylon teas that may be exported out of Sri Lanka, as well as a maximum proportion of teas of other origins that may be present in a blend. As was done in the 1980s when the product market was temporarily liberalised, the government may also stipulate strict requirements for the packaging of such blends so that consumers know that blend is not hundred percent pure Ceylon tea[145].

While such regulations would certainly limit the dilution of the Ceylon tea brand, it could still have some impact on the reputation of Ceylon tea in the specialty market, leading to lower premiums than otherwise. To mitigate the extent to which the Ceylon tea brand is diluted, it is important to have robust regulatory and supervisory mechanisms, the failure of which could permanently jeopardise the integrity of the Ceylon tea industry.

[143] https://srilanka.growthlab.cid.harvard.edu/files/sri-lanka/files/2020-01-gl-sri-lanka-research-note-tea.pdf

[144] "Annual Bulletin of Statistics," International Tea Committee, 2021.

[145] Kelegama, Saman, Nisha Arunatilake, Janaka Wijayasiri, Sri Lanka Tea Industry in Transition: 150 Years and Beyond (Colombo: Institute of Policy Studies of Sri Lanka, 2018)

Despite these risks, the two-pronged approach that encourages a shift to the specialty market while also allowing limited blending with teas of other origins for the mass market would retain the stakeholders interested in the mass market strategy within the Sri Lankan tea industry. Prevention of the outmigration of expertise in the Sri Lankan tea industry through such a two-pronged approach may prove to be a win for the Sri Lankan tea industry in the long-term by helping keep competitors of Ceylon tea at bay.

Regardless of whether the Sri Lankan tea industry pursues a price leadership or product differentiation strategy to increase the extent of value addition that takes place within Sri Lanka, exogenous market disincentives to value addition could impede the successful pursuit of such strategies. As much as the Sri Lankan tea industry focuses on the endogenous hindrances to value addition, it is also important that the industry counters exogenous hindrances such as higher import tariffs on value added teas in consumer countries.

THE LOGISTICS OF DOMESTIC BLENDING AND VALUE ADDITION

The ability of countries such as the United Arab Emirates, Germany, and the United Kingdom to set up tea blending hubs, despite producing no green leaf of their own, is facilitated by the negligible costs associated with the international freight of tea. To illustrate, the following table presents the approximate freight rates in 2023 to ship a kilogram of BOPF tea in bulk form (in paper bag packages of 55 kg each, totalling 23,000 kg in a 40 feet high cube container) to several primary destinations of Ceylon tea[146].

Destination	Freight Cost Per KG of Bulk Tea (in USD)
Jabel Ali, Dubai	0.03
Mersin, Turkey	0.05
Melbourne, Australia	0.08
New York, United States	0.09
Moscow, Russia	0.25
Tokyo, Japan	0.02

[146] Freight insurance additionally costs around 0.075 to 0.1 percent.

In fact, it costs less than LKR 10 to ship a kilogram of tea from Sri Lanka to the United Arab Emirates for blending purposes, which is a negligible share of the final retail price of the tea in the international market. These low shipping costs explain the extent to which the blending of tea takes place in countries that do not produce any tea of their own. If Sri Lanka wishes to attract more international blending towards its shores, relaxing import restrictions should easily pave the way towards higher levels of blending domestically, given that Sri Lanka already possesses a significant share of the global human expertise on the tea industry.

The only context in which freight rates may be playing a decisive role, on the other hand, is the decision by domestic exporters to add value domestically. Presently, it costs USD 5,800 to ship 23,000 kg of BOPF tea in bulk packets of 55 kg to Russia in a 40 feet high cube container. If the same weight of tea is to be shipped in the form of tea bags, the tea cannot be transported in one shipment, as the 40 feet high cube container can only fit tea bag packets amounting to 8,900 kg at most. As such, upon value addition in the form of tea bags, it would cost the exporter approximately USD 14,988.76, which is USD 9,188.76 higher than for bulk, to ship the same amount of tea to Russia. Unless the potential cost savings, if any, from domestic value addition are less than USD 9,188.76, it may not make economic sense for the exporter to add value domestically, if they also have the option of value addition available at the country of destination. This concern is particularly true for exporters catering to the international mass market, given the low margins at the retail level. For exporters selling higher cost products with higher margins, on the other hand, the difference in the freight costs may be insignificant enough for it to not enter the calculus of production decisions, given that it only amounts to around USD 0.34 per kilogram anyway.

SOLUTION 9: VERTICAL INTEGRATION OF THE VALUE CHAIN

Vertical integration of the tea industry value chain could theoretically ensure that returns from the sale of Ceylon tea flows back to the stakeholders at the green leaf stage, who, as aforementioned, have the least bargaining power in the industry’s present set-up. Vertical integration would ensure that at least part of the returns extracted by exporters and retailers would flow towards the betterment of the quality of life of estate workers and smallholders, who are presently the least economically privileged participants of the tea industry value chain. Furthermore, vertical integration would financially help economically struggling RPCs recover some of their losses from the tea trade, bringing greater financial sustainability to the green leaf end of the tea industry value chain. Additionally, vertical integration would reduce intermediary costs in the production process, by cutting down on overlapping expenses between different parts of the value chain, and eliminating middleman expenses such as those paid to the brokers.

In the Sri Lankan context, only a few small estates which exclusively conduct direct and private sales, comprising less than one percent of the total tea production, have fully vertically integrated the production process. Theoretically, the tea industry of Sri Lanka should lend itself to greater levels of vertical integration, although full vertical integration is discouraged by unique characteristics of the production process, and further deterred by government intervention in the factor markets. Only a few prestigious estates that have sufficient recognition to market single-estate teas would strategically be able to vertically integrate, although practically, this is hindered by the state ownership of tea lands.

The high asset specificity and the high transaction frequency between the plantation companies (including estate factories), brokers and exporters should theoretically promote higher levels of vertical integration between these parties in the local tea industry[147]. There is high asset specificity between plantation companies, brokers, and exporters because of the high degree of human capital specificity among them. A planter is trained in the processing, blending and tasting of tea, which are important skills in the management of estate factories. Brokers also train their employees in these skills given the essential nature of these skills in the performance of day-do-day activities at a brokerage. These same skills are also acquired by those in the tea export trade, for the same reason. Additionally, there is a high degree of transactions between planters, brokers, and exporters, as manifested in the number of daily transactions at the Colombo Tea Auction. As such, theoretically, it makes sense to vertically integrate production and export, and eliminate the role of the broker, to optimise returns to both planters and exporters.

The case for vertical integration is further strengthened by the high transaction costs in the present set-up of the tea industry, caused by the information asymmetry between the different participants along the value chain. For instance, the information asymmetry between sellers and buyers at the auction, for instance, leads to high transaction costs in the form of quality verification and standardisation on the part of the buyers. Theoretically, such costs should lend the industry towards a higher degree of vertical integration.

The fact that the market still functions in the absence of significant vertical integration implies that the transaction costs, though restrictive, are not high enough to completely prohibit market interactions between the different participants of the value chain. Especially given that the market clears at the auction (meaning that no sample of tea goes unsold), vertical integration has not proven essential to the continued functioning of the market. Part of the reason for this phenomenon may be the role played by brokers in reducing transaction costs, both by easily introducing buyers to the sellers, and by acting as a trustworthy guarantor of quality through meticulously taken notes on the taste of tea samples. The brokers' need for long-term survival in the market ensures that they maintain high integrity throughout the auction process, so that both buyers and sellers will be willing to transact with them in the future. However, given the existence of any transaction costs at all, vertical integration could help improve the returns of agents in the market by fully eliminating the transaction costs.

[147] Stuckey, John and David White (1993). "When and When Not to Vertically Integrate." The McKinsey Quarterly No. 3.

Characteristics unique to the tea industry, however, discourages such vertical integration. Given the role that blending plays in the processing of teas, it is important that exporters have access to a broad selection of teas from as many estates as possible, to make optimal decisions on blending. Full vertical integration of the production process will restrict the choice of teas available for blending to the limited number of estates that a company manages, leading to suboptimal blends, in terms of profitability, quality, and taste. Furthermore, if estate factories are able to sell their teas to buyers who offer higher prices, it is economically and strategically unsound to sell the tea under in-house brand names that will fetch lower prices in the consumer market.

The exception to this rule may be the market for single-estate teas, where there is zero need for blending. Tea from popular estates such as Lovers' Leap, Kenilworth, and Loolecondera are sold by both local and international brands in the single-estate form, and it is plausible that there may be some demand by these brands to acquire the estates, and vertically integrate the production process. The ownership of estate lands by the government, however, prohibits such vertical integration. In this context, the only option for the exporter is to acquire majority shares in the RPCs that manage these estates, which would not be a sensible move given the number and variety of estates that fall under a single RPC.

DISCUSSION PAPER 4:

ASYMMETRIC INFORMATION, QUALITY CONTROL, AND STANDARDISATION

Quality is an important determinant of the premium that Ceylon tea fetches in the international market. In the absence of symmetric information between the buyers and sellers of Ceylon tea, high quality sellers receive lower prices than they deserve, which both drives them out of the market, and lowers the overall price and quality of Ceylon tea. This paper establishes an economic framework, based on Akerlof's theory of adverse selection and the theoretical foundations of economics of trust, to understand how asymmetric information on quality negatively impacts the market for Ceylon tea. The paper also explores several strategies, both regulatory and incentive-based, that policymakers and industry stakeholders may pursue to eliminate asymmetric information from the market for Ceylon tea, in order to enhance the premiums that the industry receives.

The premiums that Ceylon teas receive in the international market are as much a function of its quality as taste profile, historical recognition, and value addition. If Sri Lanka is to make strides towards value addition with the intention of expanding substantially into the specialty tea markets that offer high premiums, however, the mere fulfilment of the various metrics of quality is not sufficient. It is also important that the Sri Lankan tea industry effectively conveys the extent to which it meets the quality expectations of its consumers.

Before venturing into an analysis of quality communication in the presence of adverse selection, however, it is important to understand what exactly is meant by quality in the context of tea. This need arises partly from the lack of established parameters of an objective nature to quantify the quality of a sample of tea within the local, and even international, tea industry. The following section is an attempt at defining the quality of tea, based on both subjective and objective parameters that are considered important by both producers and consumers of tea.

QUALITY OF TEA: A DEFINITION

The term 'quality' itself can refer to a multiplicity of concepts, and as such, be measured using different metrics. Quality may be defined based on both consumer experience stemming from product characteristics, both subjective and objective, as well as compliance with certain predetermined standards. The subjective metrics of quality based on product characteristics are reflected in the job performed by tea tasters, who take meticulous notes on the flavour profile, aroma, colour, and infusion of teas. Product characteristics also lend themselves to more objective judgments of quality, primarily based on the extent of value addition; for instance, a consumer may determine pyramid tea bags to be an indicator of higher quality compared to bulk-packed loose leaf tea.

On the other hand, quality may also be viewed as compliance with predetermined standards in the production process. Some of these standards are purely scientific; for example, the level of caffeine, gluten, or sugar in the made tea are an indicator of the quality of the tea. Some other standards relate to manufacturing practices that purely concern the tea, such as food safety practices, and adulteration. As of late, ethical practices in terms of labour rights, environmental preservation, and corporate social responsibility are also increasingly recognised as indicators of quality.

A VALUE CHAIN LOOK AT THE QUALITY OF TEA

From the point of cultivation of a tea bush itself, the quality of a cup of tea is determined by several factors. First of all, the agro-climatic environment in which a tea bush grows impacts the taste profile, flavour, aroma, infusion, and the colour of the brewed tea. Agro-climactically, the production of tea requires annual precipitation between 1,500 and 2,500 mm, acidic soil, and temperatures between 15 to 27 degrees Celsius, and different combinations of these factors lead to different characteristics in the made tea. Also important at the cultivation stage, particularly in Sri Lankan estates that have been used for tea cultivation for over a century, is fertilisation, to improve the nutrient profile of the soil.

The harvesting process is also a crucial determinant of the quality of a cup of tea. The industry-wide rule-of-thumb is that the plucker should harvest only the ‘two leaves and the bud’ sitting atop a stem. The higher the share of mature leaves and stalks in the harvest, the lower the quality of the made tea. The presence of stalks in particular, which can be seen as light brown pieces in the made tea, increases the percentage of refuse tea at the processing stage. Conventionally, the share of refuse tea under good quality conditions is estimated to be around 3 percent. The presence of mature leaves and stalks in the harvest could increase the share of refuse tea substantially.

Upon being processed, the made tea is blended with other made teas, in part as a means of delivering to the end consumer a consistent quality standard. As discussed in Discussion Paper 3, while some blending takes place for purposes of cost reduction, blending is also conducted to maintain a specific standard of made tea year round, as leaves from the same tea bush could give different flavours across seasons. The blending may take place at the factory itself, or upon purchase by the exporter.

Once blended, the storage conditions in transit, warehouses and on the supermarket shelves also impact the quality of the tea that reaches the end consumer, with light, temperature and humidity playing an important role in the shelf life of made tea. Made tea should be kept under humidity levels of 10 to 45 percent for optimum shelf life, with minimal exposure to light[148] . Non-compliance with these requirements during storage and transportation could lead to high moisture contents (greater than 6 percent), both diluting the flavour of the tea and reducing its shelf life[149].

[148] http://dl.nsf.ac.lk/bitstream/handle/1/13502/TQ-51(4)-185.pdf?sequence=2; http://viduketha.nsf.gov.lk:8080/pdfs/TQ-44(4)/TQ-44(4)-164.pdf

[149] http://tri.nsf.ac.lk/bitstream/handle/1/603/TQ-5_54.pdf?sequence=2

Deviation from the aforementioned requirements at any point along the value chain could lead to compromises in the quality of the tea that reaches the end consumer. Given the multiplicity of quality control requirements at each stage of the value chain, the room for quality compromise is substantially high, necessitating meticulous care and integrity on the part of industry stakeholders to ensure that the highest possible quality is delivered to the consumer.

FRAMEWORK FOR THOUGHT: ADVERSE SELECTION

George Akerlof's famous theory of adverse selection provides a basic framework to think about the importance of conveying metrics of quality. Adverse selection occurs in the tea industry when the seller has more information than the buyer about the quality of the tea that is being sold, in a market with teas of both good and bad quality. In the absence of a mechanism to convey that a specific seller's teas belong to the good quality kind, the consumer may only be willing to pay a price that is equivalent to the expected value of the tea, which is the weighted average value of all good and bad teas. As such, under adverse selection, producers of good quality teas receive a lower premium than they deserve, whereas producers of bad quality teas receive a higher premium than they deserve[150].

AKERLOF'S "MARKET FOR LEMONS", SUMMARISED:

In the automobiles market, there is quite a difference in the prices of brand new cars, and used cars that just left the store. This difference in price stems from uncertainties related to the quality of used cars.

The used car market is rife with bad automobiles, called 'lemons' in the United States. The likelihood that a buyer in the secondhand market ends up with a lemon is quite high, if the market is infiltrated with lemons. The seller often has a good idea about the quality of the car, because they have used it previously. The buyer, however, does not, and it is not in the best interest of sellers of lemons to tell the buyers the truth about the quality of car that they are selling.

The ability of the sellers of good quality cars to show that their cars are of good quality is also limited. Buyers will not merely trust verbal assurances of quality, given that they know the tendency of sellers of lemons to lie about the quality of their cars.

If the proportion of used cars of good quality and lemons in the second-hand market are q and $(1 - q)$, and the value of a good quality car and a lemon are P and p respectively, the buyer will therefore only be willing to pay $qP + (1 - q)p$ for a used car. If the car is indeed of good quality, the seller receives $(P - p)(1 - q)$ less than they would under perfect information, whereas if the car is a lemon, the seller receives $q(P - p)$ more than they

[150] Akerlof, George A. "The Market for "Lemons": Quality Uncertainty and the Market Mechanism," The Quarterly Journal of Economics, Vol. 84, No. 3, (August 1970): 488-500

would under perfect information. Accordingly, imperfect information drives high-quality players away from the market by undercompensating them, and overtime, drives down the prices of the entire market towards the value of the low-quality version of the good.

When it comes to the Sri Lankan tea industry, adverse selection manifests in both intra-industry and inter-industry contexts. Under the former, higher quality producers of Ceylon tea are undercompensated in comparison to lower quality producers in cases where the buyers are unable to correctly determine the quality at the point of purchase. This scenario is relevant to exporters purchasing at the auction from factories, consumers purchasing from retailers, as well as consumers purchasing directly from factories. Furthermore, in the inter-industry context, if the consumer is not able to tell the generic quality difference between Ceylon teas and teas of other origins, then, Ceylon teas will inevitably be compared to the likes of lower-quality teas, giving low-quality competitors of the Sri Lankan industry a share of the premiums that Sri Lanka should ideally receive.

The high average auction prices at the Colombo tea auction imply that Ceylon tea is generally of high quality, quality being a function of both objective metrics such as the compliance to certain expected standards of production, and subjective metrics such as taste, aroma, and flavour, as defined above. If Ceylon tea is indeed of high quality, it is important that the Sri Lankan tea industry makes sure that asymmetric information on the quality of Ceylon teas between the producer and the consumer does not stand in the way of it earning the high premiums that it deserves. However, conversations with stakeholders of the Sri Lankan tea industry reveal that information about the quality of tea that is produced in Sri Lanka is not always effectively conveyed to the buyers, sometimes denying Ceylon tea of the high premiums that it deserves, and at other times bringing in higher premiums than it deserves.

CONTRIBUTING FACTORS TO ADVERSE SELECTION IN CEYLON TEA

A. HIGH COSTS, MULTIPLICITY, AND INEFFECTIVENESS OF CERTIFICATIONS

The high costs, multiplicity, and perceptions of ineffectiveness associated with quality certifications discourage some producers of Ceylon tea from having the quality of their teas certified. Right now, Good Agricultural Practices (GAP), Good Manufacturing Practices (GMPs), and ISO 3720 are the only mandatory certifications in the Sri Lankan tea industry, all of which are issued by the government of Sri Lanka. Other popular certifications that are also state-issued, such as ISO9001, HACCP, ISO22000, Ceylon Quality Certificate (CQC-QMS), and the SLSI-SLTB Product Certification Programme, are all voluntary, alongside well-known privately managed certifications such as FairTrade, Ethical Trade Partnership, and Rainforest Alliance[151].

Some of these certifications such as Rainforest Alliance, although voluntary, are virtually mandatory to ensure the marketability of teas in some segments of the international market.

[151] Wijayasiri, Janaka. “Food Standards and Governance in the Tea Industry in Sri Lanka: A Value Chain Analysis,” Monash University, 2013

Even if it is not strictly expected that the other certifications are obtained, doing so could further increase the marketability of tea. This increased marketability comes from the ability of sellers to use the certifications to distinguish their quality standards and production conditions from those of their competitors, both in the local and international markets. Even in instances where certifications have not proven to increase the marketability of teas, some producers have seen improved efficiencies in the production process following certification because of how some certifications lead to the better maintenance of land, treatment of labour, and enhancement of technology used in the production process[152].

Despite these benefits that the voluntary certifications carry, some producers have shown reluctance to adopt them because of the significant costs associated with compliance. Once a certification is obtained, the regular renewal of it requires the recruitment of personnel to ensure compliance and conduct audits. Some producers are not willing or able to source the immense human and financial capital that is necessary to put in place a supervisory operation of that nature. Given that the compliance requirements across certifications are sometimes inconsistent, complying with multiple certifications simultaneously can be complicated, further discouraging producers from pursuing some certificates.

The reluctance of some producers to invest the necessary human and financial capital into the certification process comes from a perceived lack of economic benefits from certification, to which there may be some truth. Given Sri Lanka's over-reliance on the mass market in the Middle East, Africa, and the transcontinental countries of Europe and Asia, where price takes priority over quality, certifications may not yield as high additional premiums as they do in the more sophisticated markets, where the consumer better values quality. On the other hand, if the market becomes saturated with a specific certificate as more and more producers obtain it, the ability of a single producer to distinguish their product based on the quality certificate diminishes, lowering the additional return that the certificate provides[153]. At this point, the certificate becomes more of a permit to continue to operate in the market than a generator of additional premiums.

B. PROLIFERATION OF FACTORIES IN THE TEA SMALLHOLDER SECTOR

Bought-leaf factories in the tea smallholder sector may also fail to convey the quality of their products because of both the inconsistency and the exogeneity of the quality of the tea that they produce, as well as some of their personal interest in concealing the truth on quality. The quality of the teas produced in the smallholder sector is a function of the bargaining position of bought leaf factories against tea smallholders, because bought-leaf factories depend wholly on tea smallholders for the supply of green leaf. The inconsistencies in the quality of production in bought-leaf factories stem from the fact that bought-leaf factories usually do not have much control over the quality of the green leaf that they receive from the tea smallholders.

[152] Wijayasiri, Janaka. "Food Standards and Governance in the Tea Industry in Sri Lanka: A Value Chain Analysis," Monash University, 2013

[153] Wijayasiri, Janaka, Suwendrani Jayaratne, "Implications of Agri-Food Standards for Sri Lanka: Case Studies of Tea and Fisheries Export Industries," Institute of Policy Studies, 2007

The proliferation of bought-leaf factories over the years, faster than the proliferation of tea smallholders, has led to an excess of bought-leaf factories in the market. Given the shortage of green leaf that arises from the excess demand from factories, tea smallholders find themselves in an enviably strong bargaining position against bought-leaf factories when it comes to the sale of green leaf. This power imbalance has led to a general situation where bought leaf factories are willing to source green leaf of any quality from tea smallholders at very high prices (above the 68-32 formula), as long as they have sufficient green leaf to continue to operate the factories. To meet their production capacities and targets, bought-leaf factories usually find themselves sourcing green leaf of extremely poor quality, with large shares of mature leaf and stalks, which results in higher percentages of refuse tea in the made tea.

In a free market economy, the issue of proliferated factories would be resolved by the closure of inefficient factories that are therefore performing poorly. However, conversations reveal that the political economy surrounding the tea smallholder sector of Sri Lanka has prevented the free market from sufficiently readjusting the number of bought leaf factories in the market. Both tea smallholders and bought leaf factories exercise substantial influence in the political economies surrounding tea-planting regions, because of each of their popular and financial influence in the political process respectively. Neither factory owners, nor tea smallholders, wish to see the elimination of inefficient factories from the market, the former because it would impact their personal finances, and the latter because it would bring an end to their disproportionate bargaining power over factories in the sale of green leaf. As such, inefficient factories have been able to rely on state assistance to keep operating, preventing the free market from deciding the optimal number of bought-leaf factories that should operate in the market.

Conversations with bought-leaf factories reveal that even if some bought-leaf factories attempt to source only good quality leaf to earn higher premiums at the auction, the regular supply of good quality leaf is not always guaranteed. The inconsistency of the quality of teas processed by bought-leaf factories prevents bought-leaf factories from effectively communicating the quality of their production to the consumers, even if they attempt to prioritise quality in the production process as the quality is often outside of their control.

The hesitancy to effectively report the quality of production among bought-leaf factories may also arise from some of their own strategies to overcome the low premium effects of bad quality tea. Especially when the green leaf includes mature leaf and stalks that increase the percentage of refuse tea in the made tea, some factories are said to resort to means of adulteration to artificially enhance the appearance and the flavour of the tea, so that it may still be sold for higher prices at the auction[154]. In fact, this method of adulteration is so prevalent among bought leaf factories that, in 2018, the SLTB conducted a series of covert raids that resulted in the suspension of licences of several offending factories[155]. The SLTB still conducts similar raids, although the frequency has reduced over the years. In conversations with those involved in the smallholder sector, it was also alleged that these raids are not entirely incorruptible.

[154] Wedagedara, H.M., Guwath Wanigasuriya, S. P. Nissanka, Anoma Janaki Mohotti, “Detection of Sugar Adulteration in Black Tea and Its Impact on Quality Parameters,” Peradeniya University International Research Sessions, 2019

[155] Gamage, Bingun Menaka, Tharindu Jayewardene, “Sugar Puts Tea Industry in a Dilemma,” Daily Mirror, 23 May 2018, https://www.dailymirror.lk/expose/Sugar-puts-Tea-industry-in-a-dilemma/333-150251

C. WEAK REGULATORY FRAMEWORK

Weak regulation within the industry also prevents the Sri Lankan tea industry from effectively conveying to the international market the true quality of Ceylon tea. A robust regulatory framework provides the assurance of good quality to buyers, increasing buyer confidence in the quality of the product. However, the SLTB, which is the statutory body that is formally entrusted with the regulation of the Sri Lankan tea industry, has failed to implement a robust regulatory mechanism that guarantees the quality of Ceylon tea to its potential buyers.

Some contend, with reason, that the dual mandate of the SLTB to both promote and regulate the Sri Lankan tea industry has prevented the SLTB from formulating a rigorous regulatory framework for the Sri Lankan tea industry, although the present management of the SLTB does not agree with this assessment[156]. The argument here stems from the idea that promotion and regulation are two mutually exclusive goals. With the SLTB's prioritisation of the promotion of the industry, some allege that the regulatory responsibilities of the SLTB have taken a backseat over the years, with little done to bring the regulatory capacity of the SLTB on par with the regulatory capacity of other countries that produce or import tea.

The institutional failures of the SLTB aggravate the consequences of its structural failures. Limited financial resources have restricted the activities of the SLTB for decades, but that is not the only factor that contributes to its institutional failures. The management of the SLTB itself has, at times, commented on how disincentivised personnel and overreaching state oversight lead to administrative inefficiencies at the SLTB, rendering it incapable of meeting the demands of the industry [157]. The personnel issues at the SLTB arise from both the politicisation of the recruitment process, and the lack of funding to pay competitive market-rate salaries to attract consummate professionals from the industry. The SLTB has thus failed to be a reliable partner of the industry when it comes to regulatory control.

D. ILL-INFORMED REGULATION ENCOURAGING BLACK MARKET ACTIVITY

The lack of a robust regulatory framework for the Sri Lankan tea industry, on the other hand, has given legislators almost arbitrary power to impose regulations on the Sri Lankan tea industry, which have often not only been ill-informed, but also detrimental to the quality of Ceylon tea. Ill-informed regulations that fail to consider how the market would consequently respond through resorting to black market activities have expanded the presence of the informal economy in the local industry, casting further shadows on the quality of tea produced in Sri Lanka.

The blanket ban on the use of the glyphosate is one such instance where short-sighted regulation interfered with the quality of tea production in Sri Lanka. In October 2015, the government of Sri Lanka banned the use of glyphosate in agricultural activities due to its ill-effects on human health, and cancelled the licences issued to weedicides which contained the active ingredient. The glyphosate ban increased the presence of weeds in tea estates, making the process of harvesting dangerous for workers.

[156] Sri Lanka Tea Board Law No. 14 of 1975, National State Assembly of Sri Lanka

[157] "Annual Report," Sri Lanka Tea Board, 2016

Farmers responded to this crisis by either resorting to the black market to purchase banned chemicals, or using alternative weedicides that are used in other industries. One such alternative was MCPA, which is used in paddy fields, and, if applied improperly, may be more harmful to human health than glyphosate [158]. In 2017, Japan detected the presence of MCPA in Ceylon tea above the accepted levels, and imposed a temporary ban, which led to a substantial loss of Sri Lanka's market share in Japan in the succeeding years[159].

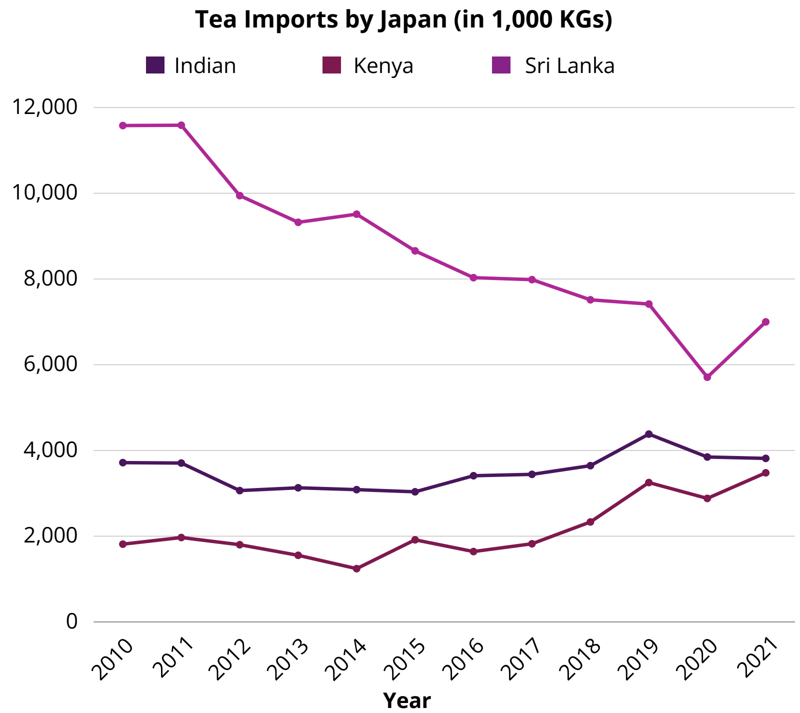


Figure 1: Japan's growing reliance on tea from Kenya and India accelerated following the detection of MCPA in Ceylon tea in 2017 (FAOStat)

E. WEAK EXECUTION OF FRAMEWORKS FOR QUALITY STANDARDISATION

Even where the basic quality parameters have been established, the Sri Lankan tea industry has failed to implement them effectively, further contributing to the blurred perspectives of the quality of Ceylon tea. The failure of the Sri Lankan tea industry, particularly the SLTB, to assume the ownership of the Ceylon tea brand despite repeated emphasis of its importance provides an ideal example of this phenomenon.

Presently, the Sri Lankan tea industry, led by the generic promotion activities of the SLTB, relies on the lion logo, and the 'Ceylon tea' brand name, to formally distinguish tea that is produced in Sri Lanka from teas that are produced in other parts of the world. However, the industry has failed to effectively gate-keep these brand identifiers, leading to large confusions and malpractices in the international market. The lion logo, along with the 'Ceylon tea' name, are registered trademarks owned by the SLTB, which may legally only be used for the promotion of tea made in Sri Lanka. However, because the SLTB does not have the financial and human resources to take legal action against those who misuse these trademarks, the international market is rife with teas produced in other countries that nevertheless carry the lion logo, or the 'Ceylon tea' name, or both[160].

[158] Kogan, M. andG. Hernández, "Localised applications of MCPA and glyphosate to young kiwifruit plants," New Zealand Journal of Crop and Horticultural Science, Vol. 19, No. 4 (January 2012): 345-8

[159] "Marambe, Buddhi, and Swarna Herath, "Banning of herbicides and the impact on agriculture: the case of glyphosate in Sri Lanka," Weed Science, Vol. 68, No. 3 (November 2019): 246-52

[160] De Alwis, Hasitha, "Ceylon Tea: Sri Lanka's Best Known Geographical Indication," Worldwide Symposium on Geographical Indications, March 2013

Conversations with a leading exporter revealed that the company spends around USD 250,000 in legal fees every year to challenge the counterfeiting of its brand name in the international market.

While a 'Geographical Indication' (GI) for Ceylon tea would guard against misuse and malpractices more proactively by prohibiting the trade of teas that imitate the 'Ceylon tea' brand, the version of GI that currently exists for Ceylon tea includes too many loopholes to be effective[161]. Unlike the GI frameworks in most other countries, the system of GI in Sri Lanka does not provide a mechanism for the registration of GIs, limiting the ability of Ceylon tea, or tea from the six sub-regions of Sri Lanka that produce tea, to be officially recognised as a GI. The SLTB has renewed its efforts to obtain a more comprehensive GI coverage for Ceylon tea in the international market with the appointment of a new committee. Conversations with industry stakeholders reveal that the committee is presently consulting international experts with prior experience on this topic to guide the local industry in obtaining the GI certification.

LAWS GOVERNING GI IN SRI LANKA[162]

There is currently no legislation that comprehensively provides for the awarding of GIs to local industries. However, a local industry may still apply for a collective trademark or a certification trademark, and assume a GI upholding the industry. Two existing pieces of legislation, the Intellectual Property Act of 2003, and the Consumer Affairs Authority Act of 2003, as well as precedence from the common law, based on the decision in Reckit & Coleman v Borden (1990), may protect GIs established in Sri Lanka from misuse. The lack of exclusive rights for the use of GIs obtained under these laws would still allow some third parties to use the trademark, limiting the extent to which the GI may be upheld. However, any GIs obtained under the existing legal framework need to be periodically renewed, and are subject to arbitrary revisions by administrators. Because GIs in Sri Lanka are formally registered as trademarks, and not as GIs themselves, the extent to which a local GI may be able to seek judicial recourse internationally in the case of an infringement may be limited.

F. LACK OF EFFICIENT TECHNOLOGY TO MONITOR QUALITY

Another deterrent to symmetric information in the tea industry of Sri Lanka on the quality of made tea is the lack of efficient technology to monitor the quality of the tea at each step of the value chain. According to industry experts, the high costs associated with using existing technology prohibits value chain participants from conducting quality checks as the tea moves from factories to the hands of exporters via the auction. Even if the costs were not an issue, industry stakeholders claim that the time that it presently takes to test the quality of a single sample of tea at each stop along the value chain makes it impossible to efficiently conduct quality monitoring. As such, presently, all quality checks are performed in the form of quality tests of random samples, which leaves high room for the possibility that teas that fail to meet the minimum expectations of quality are exported out of the country without inspection.

[161] A GI is the generic reference to a good that is used by producers that belong to a particular geographical region to convey the idea that the good has a special character, quality, or reputation because of its place of origin (Eg: Ceylon tea, Ceylon cinnamon, Dimbula tea)

[162] Kamaradeen, Naazima, "The Potentials, and Current Challenges, of Protecting Geographical Indications in Sri Lanka," Geographical Indications at the Crossroads of Trade, Development, and Culture: Focus on Asia-Pacific, Edited by Irene Calboli, Wee Loon Ng-Loy (Cambridge University Press, June 2017: 409-36)

IMPLICATIONS OF ADVERSE SELECTION: FROM THE POINT OF VIEW OF ECONOMICS OF TRUST

In an economy with symmetric information, and therefore no adverse selection, issues of trust do not interfere with transactions between buyers and sellers. Asymmetric information, however, leads to the emergence of mistrust between economic agents, as opportunism may impel the agents with greater information to exploit the ignorance of their counterparts[163]. This kind of mistrust is expensive to both the buyer and the high-quality seller, as additional transaction costs are incurred in “obtaining relevant information, the cost of bargaining and making decisions, and finally the costs of policing and enforcing contracts” between the economic agents[164].

These additional transaction costs entail significant implications to the future prospects of the economic agents within the market. Particularly if the costs outweigh the benefits of a one-time or infrequent transaction, the agents will proceed without conducting the transaction, as there is no other economically rational strategy to pursue in this case. If the transaction is however expected to recur frequently, the economic costs to establish a governing structure that is meant to restore trust can be outweighed by the benefits of the transaction actually being conducted[165].

In the context of the Sri Lankan tea industry, consumer mistrust of Ceylon tea stemming from asymmetric information on the quality of Ceylon tea, arising from the various factors explained above, significantly reduces the market prospects for the Sri Lankan tea industry. In some cases, this reduction in market prospects may manifest in the form of low prices for good quality Ceylon tea, and in other cases, it may manifest in the form of decisions by prospective consumers to not purchase the product altogether. Given that the international market for tea is characterised by a high frequency of transactions, the establishment of a governing structure that is meant to restore trust in the Ceylon tea brand is the economically sound strategy to pursue. Given that some form of governing structure, though inadequate, already exists, the costs of enhancing the effectiveness of this existing governing structure should be substantially less than redesigning a new governance structure altogether. With this assumption in mind, the following section discusses several options available to both industry stakeholders and policymakers to restore trust in the Ceylon tea brand, and hence enhance the competitiveness of the Sri Lankan tea industry in the international market.

[163] Williamson, O. 1975, Markets and Hierarchies: Analysis and Antitrust Implications, New York: Free Press

[164] https://www.ids.ac.uk/download.php?file=files/Wp35.pdf

[165] https://www.ids.ac.uk/download.php?file=files/Wp35.pdf

DISCUSSION OF SOLUTIONS

SOLUTION 1: BETTER STRATEGIC USE OF CERTIFICATION

The high costs associated with having quality standards certified, and the lack of additional premiums caused by the market saturation of the most sought-after certifications, pose an opportunity for the Sri Lankan tea industry to be more intentional and creative in its approach to labels. By targeting specific export markets, and sticking to only the certifications that are required or marketable in those markets, producers may be able to reduce the costs and complications that compliance with multiple certifications may bring about. Optimally minimising the number of quality certificates that a producer complies with based on their intended export market is, however, only possible if the producer has a clear idea of who the buyer will be, which is not the case with teas produced specifically for the auction. Producers that are heavily involved in value addition, and therefore engage in direct and private sales, on the other hand, may easily pursue this strategy so that the producer must only bear the costs for the certifications required to stay competitive in the specific export market that the buyer represents.

If market saturation prevents producers from earning additional premiums for the certificates that they hold, producers may introduce their own quality standards to differentiate themselves in the market. Here, the producer re-approaches quality certificates as an opportunity to ensure to the consumer that their products fulfil a specific promise that their competitors do not. The Body Shop, a pioneer of fair trade in the beauty industry, is a company that has successfully pursued this strategy since 1987. By introducing their own 'Community Trade' label that goes beyond the compliance standards of FairTrade, The Body Shop has managed to carve out a more competitive lane of its own in a market that is otherwise saturated with the FairTrade label[166]. To elevate the credibility of this label, The Body Shop has partnered up with ECOCERT, an independent program, to audit the compliance of The Body Shop with the label.

If producers and exporters of tea take a similar initiative to introduce their own quality standards, they may not only manage to extract higher premiums via additional differentiation, but may also help elevate the quality standards of the entire tea industry in the long run. Especially if the individual quality standards include environmental and social justice considerations, the initiatives will have substantial effects beyond merely the sustainability of the global tea industry.

Creating one's own quality certificate, however, is a risky strategy that requires enormous investments of time, effort, and financial capital at the outset. Its success also requires a strong promotional campaign and skilfully manipulated perceptions of trustworthiness on the part of the seller. The substantial negative returns in case the seller fails to pull this strategy off successfully could deter sellers from even attempting it.

[166] "The Body Shop and Community Trade: 22 Years of Trading Fairly with Smallholders," Oxfam, 2009

SOLUTION 2: COMPLEMENT CERTIFICATIONS WITH ESG AND CSR CAMPAIGNS

Sophisticated consumers in advanced economies may not just be satisfied with labels of quality certifications; they may also wish to know what specific steps companies take to give back to the communities that make the production of tea possible. Effective communication around ESG and CSR initiatives undertaken by producers and exporters may help convey this information to the buyers.

Talawakelle Plantations, which primarily produces Ceylon tea, and Dilmah, which primarily exports Ceylon tea, are examples of two local companies that lead on this front. The sustainability efforts by the Great Western Estate of Talawakelle Plantations have even been internationally recognized through awards such as the award for Asia's Best Integrated Report[167] . Dilmah, on the other hand, has made its community development work a cornerstone of the marketing strategy of the company[168]. It is reasonable to think that part of the premiums that these organisations receive for the tea that they sell is attributable to their sustainability initiatives.

Consumers are sometimes sceptical of communication campaigns by corporations about their community development initiatives, because of how inauthentic communication has propelled further adverse selection in the past[169]. However, because of the way in which the tea industry of Sri Lanka is structured, with family businesses dominating the line-up of exporters, the Sri Lankan tea industry has a unique opportunity to approach such communication with a better perception of authenticity. Dilmah, again, has successfully used this strategy with the inclusion of the face and signature of Merrill J. Fernando in its packaging and promotional material to shrink the distance between the buyer and the seller[170].

In addition to bringing in higher returns, effects campaigns centred around ESG and CSR initiatives will also act as an accountability tool for exporters and producers themselves, to ensure that their business practices are truly sustainable and community-friendly. If, however, the ground reality happens to contrast substantially from what is advertised, this strategy could invite negative public relations, limiting the marketability of products.

SOLUTION 3: A MORE ROBUST GI FRAMEWORK FOR CEYLON TEA

The impact of any certification-based or other attempts to elevate the quality perceptions of Ceylon tea may be limited if other origin teas illegally assuming the identity of Ceylon tea are allowed to keep infiltrating the international market. A more robust framework to register and protect the Ceylon tea industry, and its sub-regional varieties, as GIs would give the Sri Lankan tea industry more legitimacy and leverage to deal with the frequent infringement of trademark rights of Ceylon tea.

[167] "Great Western Estate," Talawakelle Tea Estates, Presentation

[168] "Annual Report 2019/20,", Dilmah, 2020

[169] O'Leary, Michael, and Warren Valdmanis, "An ESG Reckoning is Coming," Harvard Business Review, 04 March 2021, https://hbr.org/2021/03/an-esg-reckoning-is-coming

[170] Fonseka, D. C., "Visionary Leadership and the Case of Dilmah," Sri Lankan Journal of Management, Vol. 14, No. 2 (2008): 1-17

Direct legislation passed in the Parliament of Sri Lanka that provides for the registration and protection of GIs, like India's the Geographical Indications of Goods (Registration and Protection) Act of 1999, would grant better protections for the Ceylon tea industry in global trade[171]. Firstly, such legislation would allow Ceylon tea to be registered formally as a GI, with no need for periodic renewal, and therefore no potential revisions to its scope, unless the legislation itself is amended.

There are, however, various costs associated with the effective enforcement of GIs, and without funds to bear these expenses, the efficacy of GI protection may be limited. Although GIs offer stronger protections than trademarks based on more universal recognition and additional restrictions on the trade of counterfeit products, infringements may still occur. Any infringement of GI rights may need to be challenged in judicial systems of other countries, which requires immense personnel and financial resources. Furthermore, the successful enforcement of a GI also requires consumer awareness of the brand's unique status, which means that if Sri Lanka is to implement a GI for Ceylon tea, a costly marketing campaign that creates awareness among consumers may be necessary. Lastly, a strong regulatory framework is also necessary to ensure that the GI is only used by products of Ceylon tea that are of an acceptable minimum quality, so as to not tarnish the reputation of Ceylon tea in the international market.

SOLUTION 4: BETTER MARKET INCENTIVES TO INCREASE QUALITY IN THE SMALLHOLDER SECTOR

Presently, the weight-based payment model for pluckers in the smallholder system incentivises quantity over quality. Alternative payment models that provide more incentives to increase the quality of the green leaf plucked and supplied to the bought leaf factories would help upgrade the quality of production in the tea smallholder sector.

Green leaf pluckers may be paid based on a mechanism like the bought leaf formula, making the remuneration of pluckers depend at least partly on the net sale average of made tea at the auction. Such a remuneration model would put pluckers more in charge of how well they earn, leading them to be more mindful to pluck only good-quality green leaf. Alternatively, tea smallholders may continue to pay pluckers based on the weight of the green leaf, but introduce a method of deductions if the plucked green leaf includes an excess amount of mature leaf and stalks.

Tea smallholders themselves have an incentive to encourage pluckers to pluck only good quality green leaf because the earnings of tea smallholders themselves ultimately depend on the quality of the made tea. While pluckers may first show resistance to changing the existing weight-based model, if they are also convinced that better quality tea would ultimately provide them with higher incomes, they may also be brought on board easily. Unions representing the pluckers, however, may prove more difficult to convince, which could be a major hindrance to introducing market-based incentives to the plucking process to increase the quality of production in the tea smallholder sector of Sri Lanka.

[171] Geographical Indications of Goods (Registration and Protection) Act of 1999, Parliament of India

SOLUTION 5: TECHNOLOGICAL INNOVATIONS FOR MORE EFFICIENT QUALITY MONITORING

Given the insufficiency of the existing technology, based on both high costs and time demands of existing sample testing methodology, the tea industry of Sri Lanka would benefit from more investments into research and development programmes for new technologies for this purpose. Ideally, quality monitoring should be incorporated into each step of the production process, so that quality can be guaranteed at each stop along the value chain. Government agencies with a vested interest in the tea trade, such as the TRI and the SLTB have both the mandate and a responsibility to support such research, so that the asymmetry in the information flow between the producer and the consumer can be bridged.

Conversations with industry professionals reveal that a preliminary device aimed at facilitating instant and low-cost quality control along each stop on the value chain with the help of AI technology is presently being trialled by SpectrifyAI, with the support of the TRI and the SLTB. While this is a step in the right direction, it remains to be seen whether such innovations could fill the missing market in the Sri Lankan tea industry today, for efficient and wide-spread quality monitoring. The room for other potential players to enter this market with their own technological innovations should also be studied, underpinned by the understanding that more competition between innovators would lead to the creation of higher quality monitoring systems.

Technological innovations are only as successful as their take-up rate, and the same would hold true for innovations on this front. If a wide spectrum of industry stakeholders refuse to adopt quality monitoring in their production processes—either because they do not see the benefits to it as substantial enough, or because they thrive under the system of asymmetric information presently dominating the tea industry of Sri Lanka—the larger benefits to the industry from such innovation would be minimal, failing to justify the costs of innovation, particularly if public funds are involved. As such, it is important that policy-makers formulate a combination of evidence-based market incentives and command-and-control regulatory demands to encourage the take-up of quality monitoring at each stage of the value chain, so that returns to Ceylon tea in the international market can be optimised.

SOLUTION 6: REFORMS TO THE SLTB

The lack of sufficient financial and human resources has been a major barrier to the SLTB’s ability to introduce and enforce a robust regulatory framework for the Sri Lankan tea industry. The government may substantially increase its funding for the regulatory activities of the SLTB so that the SLTB may invest on more human capital to formulate more effective regulatory policies, more staffers to inspect and investigate factories, and better technology to detect banned substances in the tea exported out of Sri Lanka. In other words, more funding that allows the SLTB to conduct its present activities more effectively would greatly enhance the regulatory capacity of the industry.

While increased funding would increase the capacity of the SLTB to regulate the Sri Lankan Tea Industry more proactively, it would not solve the various structural shortcomings of the organisation, which requires the provision of better incentives for industry regulation. Some stakeholders of the industry argue that the dual mandate of the SLTB to both promote and regulate the Sri Lankan tea industry has resulted in the prioritisation of promotion over regulation. This issue may be overcome by bestowing the responsibilities of promotion and regulation in two distinct state bodies. Under this proposal, the SLTB would no longer exist in its present form, but would be split into two agencies that pursue their own promotional and regulatory strategies without any conflicts of interest, or dual loyalties, getting in the way. This way, quality control will receive more singular attention from state officials responsible for the regulation of the Sri Lankan tea industry.

Some stakeholders of the industry, however, believe that separating the regulatory responsibilities of the SLTB from its promotional responsibilities would still not go far enough in addressing the institutional failures of the present system to effectively regulate the Sri Lankan tea industry. The view of these stakeholders is that the inherent limitations associated with state management limit the capacity of the state to effectively regulate the tea industry of Sri Lanka. Non-meritocratic political appointments, inability to attract qualified professionals with market-rate wages, corruption, and poor finances, all of which have weakened the ability of the SLTB to effectively regulate the Sri Lankan tea industry over the years, directly stem from the state-run nature of the SLTB.

The calls for the privatisation of the regulatory duties of the SLTB, therefore, deserve serious attention. While the exact form in which a private regulatory body will approach regulation remains to be clarified, proponents of this measure believe that an already existing stakeholder collective, such as the Colombo Tea Traders' Association, or a newly established private body, may be able to successfully perform the role of the industry regulator.

How willing a private collective of stakeholders will be to hold those among their own ranks accountable for malpractices is not necessarily clear. However, the incentive does exist for genuine private actors to report and reprimand the bad private actors among them, given that actions of bad actors could tarnish the image of the whole Sri Lankan tea industry, leading to lower returns across the board. Genuine private actors will only be willing to do so if the assurance exists that once reported, offenders will in fact be held accountable for their bad actions. Privatisation may indeed promote meritocratic recruitment and financial integrity within the regulatory body, increasing the likelihood that bad actors that are brought to its attention are indeed dealt with in an appropriate manner. Private regulation, however, will limit the ability of the government to impose its own regulatory will on the Sri Lankan tea industry, which may include national quality standards.

SOLUTION 7: FREE MARKET TAKEOVER

Even if the private stakeholders are put in charge of the regulatory oversight of the Sri Lankan tea industry with effective state participation in the process, the ability of command-and-control regulations to properly ensure quality control without inviting increased presence of the black market may be limited. Furthermore, the extent to which a regulatory body may be willing and able to regulate the sustainability of the industry, in addition to basic quality oversight, is not clear. In this context, relying on the free market itself to regulate the Sri Lankan tea industry alongside formal regulatory bodies may prove to be an effective strategy. In many other industries, consumers have already demonstrated a willingness to play the role of regulator, and the tea industry may also benefit from this increased willingness of consumers to use their financial agency to steer the future direction of organisations and industries.

Corporations such as Nike have come under increased pressure in the recent years by consumers to not only improve the quality of their production process, but also to use their influence to advance socio-political conversations around various topics[172]. The threat of boycotts seems to be an effective tool to regulate the actions of a corporation. For instance, Nike now publishes community impact reports that details the corporation's involvement in issue areas such as public policy advocacy, environmental sustainability, consumer transparency, and diversity, to elevate the consumer perceptions of its own business practices, as well as its issue leadership[173].

Such forms of consumer-driven regulation may be more effective than command-and-control regulations imposed by a state body or a private sector equivalent, because, unlike the latter, the former does not distort the operations of the free market in the process. The former, in fact, depends on the market forces to adjust the industry for the better. Free market regulation also puts the onus of proof of good business practices on the businesses themselves, relieving the state regulator, or a private equivalent, from the responsibility of inspection and monitoring. The state may thus save a substantial sum of money in this process.

However, for a free market-led regulatory mechanism to be successful, consumers should be willing and able to play the role of regulator, which necessarily precludes the international mass market for tea from effectively playing such a role. Consumers in the tea mass market, as previously discussed, are primarily interested in low prices, unlike consumers in the specialty market, who may be more willing to hold producers and sellers accountable for their business practices. Therefore, until such time as the Sri Lankan tea industry successfully shifts to the specialty market, the ability of the industry to depend on the free market to regulate the industry is limited.

On the other hand, the ability of the consumer to regulate the business practices of a seller is a function of the size of the seller's business operation. As most producers and sellers of Ceylon tea are mid-sized businesses that do not have a sufficiently large operation to be household names that every consumer recognizes, the ability of the free market to successfully organise boycotts is limited. Therefore, the Sri Lankan tea industry, and especially its stakeholders, need to substantially expand in size, if it is to reasonably expect the free market to help regulate it.

[172] Fernandes, Daniel, "Politics at the Mall: The Moral Foundations of Boycotts," Journal of Public Policy & Marketing, Vol. 39, No. 4 (2020): 494-513

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