

EXPORT COMPETITIVENESS OF CEYLON GREEN TEA: PRE-COVID OPPORTUNITIES AND CHALLENGES

Francis, S.J. and Gunathilaka, A.U.G.C.A.

Department of Economics, University of Colombo, Sri Lanka

Received: August 5, 2024

Revised: November 22, 2024

Accepted: December 23, 2024

Abstract

International trade has opened the doors to many products in the international market for most exporters to mark their dominance on the global level. Green tea, as a value-added tea, is also becoming a demanded product in the market. Only a few countries have increased their competitiveness in that product to a positive trend. In this background, the study aims to identify both competitive and comparative advantages of Ceylon Green Tea in the international market through the competitiveness indexes and insights of experts. This study examines the export competitiveness of Ceylon green tea, focusing on the pre-COVID period. Utilizing secondary data sources, the analysis employs a competitive position framework to evaluate export performance. Key informant interviews (KIIs) were also conducted to gain qualitative insights into market dynamics and strategic challenges. The findings of the descriptive analysis illustrate that Ceylon Green Tea has lost its competitiveness in the past years. Further, identifications of competitive position analysis emphasize that Sri Lanka still has a chance of gaining the comparative advantage of Ceylon Green Tea, especially in terms of the product HS code 090220 of Ceylon Green Tea which has comparatively engaged in the last decade in the global market. The rise of other Asian countries for green tea can also be identified as a reason for declining the export share of green tea. Therefore, Sri Lanka needs to enhance its share in the market to compete with them. The main reasons behind the declining trade value of green tea in Sri Lanka are the issues of exporters and lack of strategic enhancement of the sector as per the experts in the sector. This study also attempted to identify those backdrops and will recommend some steps to be taken for the improvement of the sector.

Keywords: Competitiveness, Comparative Advantage, Export share, Global market

JEL Classification: D41, F10, F14, M3

Corresponding email: joseph@econ.cmb.ac.lk

1 Introduction

Sri Lanka's tea industry has long been a cornerstone of its economy, but in recent years, it has faced significant challenges related to export competitiveness. Despite being the third-largest tea exporter globally, the country's focus on bulk tea exports has resulted in lower trade earnings, highlighting the need for greater value addition and innovation. In 2023, the agriculture sector contributed 7.9% to Sri Lanka's GDP (CBSL, National Account Estimates, 2023). However, the declining competitiveness of plantation-based exports like tea indicated structural issues within the sector. The growing global demand for premium and organic teas, coupled with policy shifts towards organic farming, signaled an opportunity for Sri Lanka to regain its competitive edge. Yet, much work remained to transition from bulk production to value-added exports that could drive higher revenues and a more sustainable future for the tea industry.

Sri Lanka's export competitiveness in agriculture-based products has seen a decline despite its historical success. Agricultural exports in September 2024 totaled USD 977 million, a marginal increase from USD 955 million in 2023 (CBSL, External Sector Performance, 2024). Excluding tea, agricultural exports in December 2022 amounted to USD 95 million, while tea contributed USD 107 million. In comparison, agricultural exports in December 2021 stood at USD 122 million, with tea accounting for USD 111 million (CBSL, External Sector Performance, 2022). Plantation products, particularly tea, continue to show low competitiveness due to their reliance on bulk exports rather than value-added products. Although Sri Lanka is the world's third-largest tea exporter, trade revenues remain low because bulk tea commands lower prices than high-value products. This has resulted in declining trade earnings from tea exports. The experience of East Asian countries demonstrates that export-led growth can drive economic success by leveraging comparative advantages and enhancing export competitiveness (Maheswaranathan, 2023). These nations increased capital inflows, reduced trade deficits, and achieved current account surpluses through robust export policies. (Gimhani & Francis 2016).

Sri Lanka, despite its long-standing position as a major tea exporter, has not replicated this success. The lack of competitiveness and scale in its exports underscores the need for strategic reforms to strengthen its position in the global market. Tea, particularly Ceylon Tea, is one of Sri Lanka's most iconic and identifiable products in the international market. Despite this recognition, Sri Lanka's share in the global tea market remains underwhelming. Tea serves as a critical foreign exchange

earner for the country, contributing almost 2% of GDP, with approximately 12% of global tea exports originating from Sri Lanka (Francis & Ganeshamoorthy, 2017). In 2018, Sri Lanka was the third-highest valued tea exporter globally (Thushara, 2015). However, its current export competitiveness lags behind that of its competitors. The global tea market is segmented into three categories: Black Tea, Green Tea, and Organic Tea. Among these, Black Tea is the most popular and widely exported product from Sri Lanka. While smaller quantities of Green Tea and Organic Tea are also exported, Ceylon Black Tea dominates in terms of demand. In recent years, the global demand for Green Tea has increased significantly due to its recognized health benefits. Reflecting this trend, local consumption of Green Tea in Sri Lanka has also risen.

Sri Lanka produces a significant volume of tea, but its export portfolio consists primarily of bulk tea rather than value-added products. This limits its competitiveness. From 2001 to 2017, Sri Lanka exported 136 times more tea by quantity than Japan, yet its revenue was only 23 times higher. Japan, by focusing on value-added products, earns approximately three times more revenue per unit of tea exported. This disparity highlights the critical need for product innovation in Sri Lanka's tea industry. Shifting toward value-added tea products could significantly enhance export revenues and improve global competitiveness. For tea-producing nations like Sri Lanka, embracing innovation and diversification is essential to strengthening their position in the international market and capturing the full potential of their tea exports (Pilapitiya & de Silva, 2021).

Ceylon green tea production started in the 1980s, and the first export was in 1982. Currently, Sri Lanka is exporting Green Tea to several countries, including the Middle East, several countries of the former Soviet Union, North America, and East Asian Countries. The local market demand absorbs some portion of Ceylon Green Tea. In terms of Green Tea, Sri Lanka is one of the finest Green Tea Exporters in the world. From January to September 2024, cumulative tea exports reached 182.36 million kilograms, marking an increase of 0.87 million kilograms compared to the 181.49 million kilograms exported during the same period in 2023 (TEASL, 2024). Sri Lanka, in terms of ranking, holds 10th place, and China, Vietnam, Japan, Germany, Hong Kong, India, Indonesia, United States, and Malaysia rank above Sri Lanka. In 2019, the green tea export from Sri Lanka (period January to December) was 4749MT from the total tea export, out of a total export volume of 292,657MT. According to the Tea Exporters Association, in 2020 totaling 4.7 million kgs was exported in that period. This can be shown as a marginal growth of million kgs 4.6 compared to January to December 2018. Sri Lanka serves only 3% of the global demand for green tea. Eleven manufacturers in

Sri Lanka produce Ceylon green tea across mid-grown and high-grown estates. These producers utilize both Chinese and Japanese techniques to create various green tea types, including Young Hyson (such as Chun Mee), Sou Mei (commonly known as ‘longevity tea’), rolled gunpowder tea, green tea fannings, and Sencha fannings.

In the global tea market dynamics and segments by product type, green tea is expected to show moderate growth from 2020 to 2025, as it is predicted to gain dominance within the global tea market (Imarc, 2020). Tea is gaining the attention of consumers due to its antioxidant qualities that offer numerous health benefits like reducing the prevalence of heart attacks, strokes, and providing weight loss, gains in bone strength, boosting immunity, and enhanced digestion (Francis et al, 2024). Organic tea and other forms of fancy teas which are tea blended with other natural ingredients are gaining popularity worldwide. Green tea provides the base ingredient for all types of blended varieties of tea. The tea marketing research forecast for the period 2020-2027 expects a high growth within the market of green tea. Within the organic tea market, in the five segments of organic tea, the foremost popular segmented tea is organic green tea because of the increase of health benefits from organic tea, which has created a demand all over the world. Therefore, the organic green tea market is expected to grow more in the future (Transparency Market Research, 2020).

1.1 Objective of the Study

The main objective of this study is to identify both competitive and comparative advantages of Ceylon Green Tea in the international market through the use of competitiveness indexes and insights from industry experts. This study aims to provide a comprehensive analysis of the export competitiveness of Ceylon green tea, focusing on the pre-COVID period, and to offer strategic recommendations for enhancing its market position. The second section of this study examines the existing literature on green tea export trends and competitiveness, providing a theoretical framework for the study. The third section details the methodology, including the research design, data collection methods, and analytical tools used, such as the RCA and ECI indexes. The fourth section presents the results and discussion, highlighting key findings from the descriptive analysis and expert interviews, and discussing the implications for Sri Lanka’s green tea export competitiveness. The final section concludes the study, summarizing the main findings and offering recommendations for policy and industry reforms to enhance the competitiveness of Ceylon Green Tea in the global market.

2 Literature Review

Export competitiveness has been paid more attention to develop the export portfolio of countries. To push economic development and to survive within the global competitive market, export competitiveness is a vital component to a country (Kumarasinghe & Sachithra, 2014). The export competitiveness of the commercial sector could be a function of the capacity to sell the product demand in the international marketplace, at the quantity, quality, price, and time required. Competitiveness has become a key indicator of market stability (Francis & Vijayakumar, 2019). It describes the scale as profitability, resource usage efficiency, and productivity of a specific producer in comparison with other producers during a particular market (Weligamage, 2018).

Export competitiveness depends on the main theories of comparative advantage and competitive advantage. The comparative advantage of a country is including the fundamental four advantages which are technological superiority, resource endowments, demand patterns, and commercial policies, and on the other hand, a country is defined if it has a competitive advantage by its success in sustained exports and or foreign investment (Gupta, 2015). Further, in terms of the theory of comparative advantage, countries will reply to increase opportunities to trade by exporting more of these commodities which they'll produce relatively cheaply and import more of those commodities which are expensive to produce at home (Ndayitwayeka & Ndimanya, 2015). With the changing trade patterns, the countries must determine their competitiveness within the global market because the growing competition is influencing their terms of trade (Chaudhry, 2019). In this regard, the Tea market share has become more sophisticated and competitive, as a wide range of tea products continue to be developed and affect consumers' tastes and preferences (Ndayitwayeka & Ndimanya, 2015).

Sri Lanka is one of the leading tea exporting countries in the world. Since the global tea market is very competitive, the tea industry in Sri Lanka has not performed well in the global market, compared to other tea exporting countries like; Kenya, China, and India. During the last decade, the country's relative position in terms of export market share shows a considerable decline (Kumarasinghe & Sachithra, 2014). As the third-largest tea exporter within the world but nearly 60% of its exports are comprised of bulk tea. Bulk tea secures all-time low prices within the world tea market. Sri Lanka earned an average value of US\$4.83 per kilogram from 2014 to 2018 for its tea exports (Pilapitiya & de Silva, 2021).

In 2018, 1.4 billion kilograms of green leaf tea was produced in Sri Lanka on 201,000 hectares of land, making it the second-largest crop thereafter paddy rice. Further in 2018 Sri Lanka couldn't increase its value because comparatively low demand. The export value has decreased to 282.4 million kilograms in 2018, which was 289.0 million kilograms in the 2017 (CBSL, 2018). A firm has to implement a unique and inimitable strategy to reach the worldwide tea market that is increasingly becoming more and more competitive. A salient feature within the global tea market is value-added tea fetches better prices compared with bulk tea. Thus, the exporting of more value-added tea enhances competitiveness. The value-added tea denotes every kind of tea except tea marketed in bulk form. The progress of Sri Lanka was good past years within the tea industry, the value-added products to earn more value if Sri Lanka considers more (Ganewatta & Edwards, 2000).

Global tea production has been increasing and global tea consumption has also been growing. There has been a gentle growth in global tea imports yet. Still, Sri Lankan tea exports are declining. Tea consumption within the world market is changing in favor of tea products like tea bags, instant tea, green tea, and organic tea, replacing bulk tea (Hilal, 2019). Green Tea consumption shows an oversized growth within the UK (Maity & Gosh, 2015). Many independent certification groups accredited to the world's leading organic certification bodies provide the services for organic exporters assuring the specified quality. Also, Fairtrade products like green tea, black tea, herbal teas, spices, coconut products, and traditional rice are exported to several developed countries within the world (Ministry of Agriculture, 2019). Green Tea could be a Superfood that has been consuming all the time. The 'green tea catechins,' has grabbed the world's attention for their health benefits and it's been wont to improved brain function, fat loss, protecting against cancer, lowering the chance of heart disease. Green tea could boost the immune system and will prevent various ailments (Arakelyan, 2020). It is not until recently that the western world has discovered green tea and is reaping lots of health benefits from it. The most determinant for the expansion of the global tea economy is that the demand for the commodity. The analysis of demand for tea was found out by the Secretariat of the IGG on Tea in selected markets indicates that both black and green tea are price inelastic (Chang, 2015). Approximately 600,000 t of green tea is consumed each year within the world. However, the renewed interest in green tea as a health-promoting drink has resulted in increased consumption (Golding, Roach, & Parks, 2009). Some varieties of high-quality tea are to be obtained. As an example, within the Uji area of Kyoto, one of the oldest and most famous green-tea-producing areas in Japan. Tea quality has been affected by global climate change (Ashardiono & Cassim, 2013).

The Quality of tea is a relative parameter that depends on various factors including cultivar, plucking standards, climatic factors, manufacturing practices, processing conditions, and it can be identified as an interconnection of all the physical, chemical, and microbiological characteristics (Balasooriya & Mewan, 2019). About two-thirds of China's tea output is consumed domestically, mostly as green tea, which takes almost half the domestic market share. In addition to that green tea is the main exported tea, and China is that the largest green tea exporter globally. However, the export price of tea is way less than the domestic price because, within the domestic market, premium tea leaves are consumed as branded famous produce with geographical indications (Lei, 2017). Recently, the green tea market has become the foremost lucrative segment within the global tea market with high market potential for investment together with high demand because of the tremendous health benefits of green tea. The highest growth rate for green tea has been recorded in Asia- Pacific, followed by North America (Song, 2018).

Considering tea cultivation, the lower cost of production amongst the smallholders within the studied area could also be because of the utilization of family labor for various activities. In other tea according to the data in 2009, 61% of worldwide production was Black Tea (38% CTC, 23% Orthodox) and 31% was Green Tea (Wekumbura, Mohotti, Frossurd, & Kudagammana, 2017). Black tea is predominantly produced and exported by Kenya and Sri Lanka but green tea is specially grown and consumed in China. However Black tea is far and away the foremost produced and exported tea, production and exports of green tea are rapidly increasing and other major tea types are Oolong, Jasmine, and Pu- erh teas, mostly from China (Grosman, 2011).

Sri Lanka is one of the leading tea exporting countries in the world. Since the world tea market is extremely competitive, the tea industry in Sri Lanka has not performed well in the global market, especially concerning the world market share, compared to other tea exporting countries like; Kenya, China, and India. During the last decade, the country's relative position in terms of export market share shows a substantial decline (Kumarasinghe & Sachithra, 2014). Sri Lanka became the official supplier of tea at the 1980 Moscow Summer Olympic Games, in 1980 and 1982 at the 12th Commonwealth Games in Brisbane, and again in 1987 at Expo 88 in Australia. the import of teas for blending and re-exports was introduced in 1981 and in 1982 to production and export of green tea commenced in Sri Lanka (EDB, 2016). Tourists and export markets are like to have access to famous unorthodox variants and health beverages from Sri Lanka such as green tea, instant tea, bio tea, and flavored tea (Francis et al, 2021). Since the development of Sri Lankan tea exports, it is worth

noticing that Green Tea has acquired a commanding position in the global market. (Francis & Salahudeen, 2022). Currently, Sri Lanka exports green tea to more than 40 countries. The Major buyers are the United Arab Emirates, the Russian Federation, and Jordan (EDB, 2020).

Today only one world-famous brand in Sri Lanka is owned and that is Dilmah. All the other world-famous brands like Lipton, Brook Bonds, Tetley, Ahmed Tea, Orimi, Mahmood, are all foreign-owned, and the big profits are collected abroad by these companies (Afriha & Francis, 2024). Also, all of these brands were originally born in Sri Lanka using the infrastructure, knowledge, and expertise of Sri Lanka. Sri Lanka should build multinational brands or give multinationals to build brands (Kumarasinghe & Sachithra, 2014). One of the best examples that can be given to that is Lumbini Tea Factory in Sri Lanka. The vision of Lumbini Tea Factory in Sri Lanka was to achieve a worldwide name for the company within five years. Even when the market encountered structural problems, Lumbini Tea Factory continued its growth in demand and they predict that the years to come will be good (Johnson, 2016).

The tea sector is expected to grow, driven by rising demand from Asian and Pacific countries with increasing incomes, younger urban consumers, interest in health benefits, and expanding products like ready-to-drink and premium teas (Brouder, Billing, & Uren). Green tea demand is anticipated to surpass black tea, as consumers shift away from tea bags towards re-brewing methods like the 'Chinese way'. Health-conscious trends are boosting tea consumption, with green tea gaining popularity, especially in the West, due to its perceived health benefits and convenience. Future demand will likely focus on more convenience-oriented products.

3 Methodology

In this research, both qualitative and quantitative methods are utilized to analyze the research problem. Data is gathered from both primary and secondary sources. To evaluate Sri Lanka's export competitiveness, employ export position analysis indexes to identify the export competitiveness of Ceylon green tea and to address the research question of whether Sri Lankan green tea possesses significant export competitiveness. The indexes are RCA (Revealed Comparative Advantage) and ECI (Export Competitiveness Index), which are grounded in the trade theories of comparative and competitive advantages.

To gain deeper insights, expert interviews will be conducted with individuals including tea industry specialists, policymakers, economists, and managers of green tea exporting companies. These interviews aim to understand the current export performance, key factors influencing export outcomes, and the prospects and challenges faced by Ceylon green tea. The analysis focuses on green tea exports using data categorized under the 1996 Harmonized System (HS) with the green tea HS code 090220².

Secondary data is obtained from the Export Development Board of Sri Lanka (Sri Lanka Customs data) to measure the export competitiveness of Sri Lankan green tea. Additional export data from other countries is sourced from the World Integrated Trade System (WITS) and ITC Trade Map (Danthanarayana et al, 2024). Secondary data is also collected from various sources, including websites, books, scholarly articles, research articles, online magazines, newspaper articles, and journal articles. These data are analysed using previous reports and documents published in relation to the study.

3.1 Revealed Comparative Advantage (RCA)

The RCA index is based on revealed comparative advantage which was introduced by Balassa in 1965 and is also known as the Balassa Index. Balassa defines the RCA Index as the ratio of a country's exports in a particular commodity category to its share in total merchandise exports (Balassa & Noland, 1989). Therefore, this is used to analyze the trade performance of a country's commodity with other trading countries.

$$RCA_{ij} = \frac{X_{ij} / X_i}{X_{wj} / X_w} \quad (1)$$

Where, X_{ij} = Export of product j from country i
 X_i = Total export of country i
 X_{wj} = World export of product j
 X_w = Total world export

Once the RCA index is calculated then it will transfer into the RCSA (Revealed Symmetric Comparative Advantage) value and it will limit the index to the value of -1 to 1.

² HS Code 090220=Tea, green; (not fermented), in immediate packings of a content exceeding 3kg

RCSA Value = if positive (product is said to have competitiveness)	
RCSA Value = if negative (product has no competitiveness)	
RCA index	RCA range (0, ∞,1)
	If RCA > 1 - high comparative advantage
	If RCA < 1 - low comparative advantage
	If RCA = 1 - neutral comparative advantage

$$RCSA = \frac{RCA - 1}{RCA + 1} \quad (2)$$

The RCSA value helps to identify that whether the particular product has competitiveness or not then it will illustrate the level of competitiveness of Ceylon green tea means, that Ceylon green has competitiveness or not (Khaliqi, Gurning , Novanda, & Simamora, 2019).

3.2 Export Competitiveness Index (ECI)

$$ECI_{ki} = \frac{(X_{ki} / X_w)_t}{(X_{ki} / X_w)_{t-1}} \quad (3)$$

ECI	ECI Range
	If ECI > 1 = Ceylon green tea has increased competitiveness by following the growth in the international market
	If ECI < 1 = Ceylon green tea has decreased competitiveness and unable to follow the export growth in the international market

(Khaliqi, Gurning , Novanda, & Simamora, 2019)

3.3 Expert Opinion Method³

There are different tasks for the expert opinion method in research such as, create forecasts if the information about the object of the research is not available or it is not exact and creates forecasts if

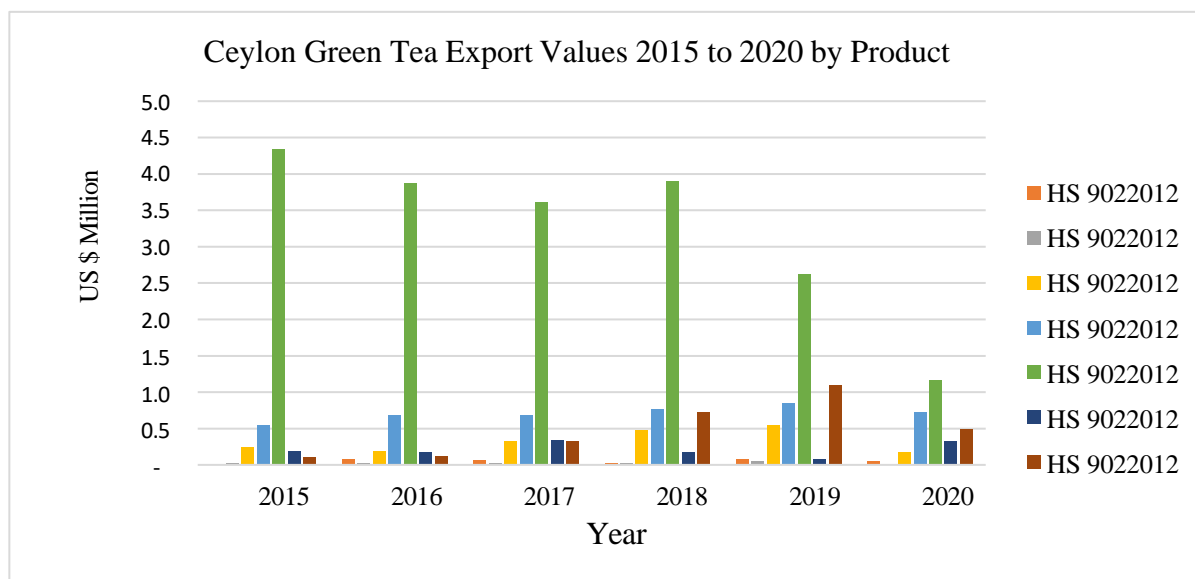
³*Setting up the Technique* - The technique of individual interview technique provides individual inputs to the forecast. An interview can be either structured (with defined questions beforehand), non-structured (with no prior defined questions), or mixed interview (in which some questions are prepared before the interview while other questions are generated during the interview according to the expert talk) (Rabie, 2015). The mixed technique is using for the interview procedure over the phone and for communication purposes via email. As to the technique some questions prepared before the interview while other questions were generated during the interview according to the expert talk.

Reducing bias - Anonymity is the most common bias that arises in the expert opinion method. For reducing that the Individual interviews have been chosen for this research.

the forecasting object is new and there is not any equivalent available. The expert opinion method is needed the most when historical data are insufficient, modeling is difficult, and/or a completely new product is forecasted. In most cases, it is applied when experts in the area under study can be defined and they can contribute create forecasts if the information about the object of the research is not available or it is not exact (Iriste & Katane, 2018). The importance of using this method in this analysis is that Ceylon Green tea is an upcoming export product in Sri Lanka.

4 Results and Discussion

The analysis contains descriptive analysis on green tea export trends and results from export position analysis using RCA and ECI indexes. Additionally, it includes insights derived from the expert opinion method, gathered through interviews with industry experts. This section aims to provide a nuanced understanding of the global green tea market, highlighting key exporters, competitive advantages, and future prospects based on both quantitative data and qualitative insights.

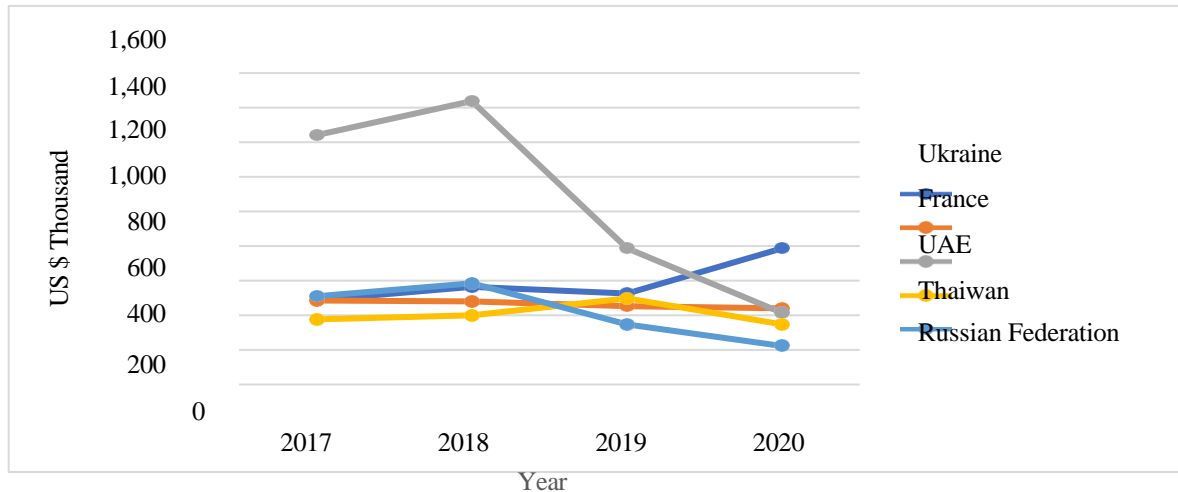


Source: Sri Lanka Customs 2015-2020

Figure 1: Ceylon Green Tea Export Values of 2015 - 2020 by Product Item Codes

Figure 1 shows Sri Lanka exports green tea under the 1966 Harmonized System product code 090220 for green tea. However, there are two main standard green tea groupings at the global level: 090220 and 090110. According to Sri Lanka's customs data, the exports fall under the HS code 090220. The HS code 09022092 is the highest exporting green tea item from Sri Lanka. The main countries importing this green tea include France, Switzerland, the Russian Federation, Germany, and the US

(Appendix 2). Despite global demand, the trade value for this category has declined from 2017 to 2020. In 2015, the trade value of 09022092 was approximately 4,330,816 US dollars, but it gradually declined in 2016 and 2017. There was an increase in 2018, followed by another decline in 2019, with the value dropping to 1,159,011 US dollars in 2020.

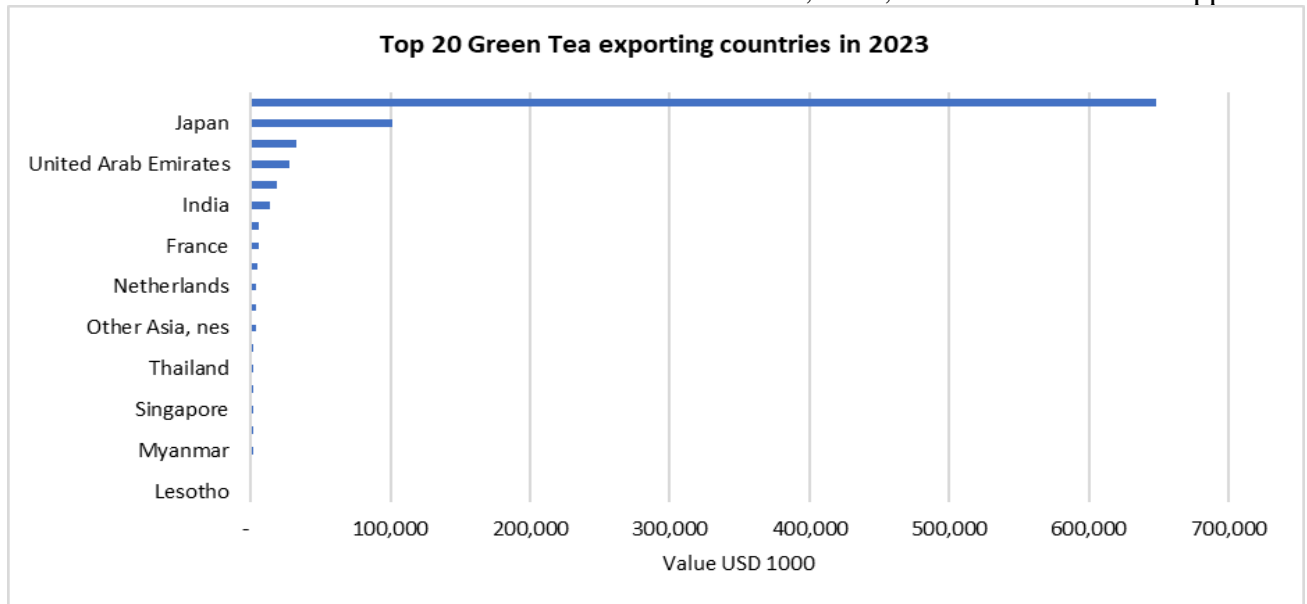


Source: Sri Lanka Custom

Figure 2: Green Tea Export Destinations

Figure 2 shows Sri Lanka exports its green tea products to around 90 countries worldwide. According to 2020 export statistics, Ukraine, France, UAE, Taiwan, and the Russian Federation were the main green tea markets for Sri Lanka. In 2018, Sri Lanka exported green tea worth 1,638,254 USD to the UAE. The UAE was the main market for Sri Lankan green tea in 2017, 2018, and 2019, but it shifted to Ukraine in 2020, with a trade value of 787,160 USD. The Russian Federation was the second-largest market for Ceylon green tea in 2017 and 2018, but in 2019, Ukraine became the second-largest market, and in 2020, France took this position. Analyzing this trend, we can predict that France will be the main market for Sri Lanka in 2021. However, the trade value for France, UAE, Taiwan, and the Russian Federation declined in 2020, while exports to Ukraine increased.

Figure 2 shows In 2023, China led the global green tea exports with a trade value of \$647.92 million, followed by Japan at \$101.57 million. Germany, the United Arab Emirates, and the European Union also featured prominently with trade values of \$32.59 million, \$27.78 million, and \$19.26 million respectively. India, the United States, and France were notable exporters as well, with India exporting green tea worth \$13.43 million. Sri Lanka held a significant position, ranking 11th with a trade value of \$4.31 million. Other key exporters included Indonesia, the Netherlands, and the United Kingdom, among others.



Source: WITS World Bank

Figure 3: Top 20 Green Tea Exporting Countries in the World - 2023

4.1 Export Position Analysis

Measuring a country's export competitiveness for a specific product or industry is crucial for understanding its market performance. It highlights the product's historical competitiveness, assesses its current capabilities, and evaluates its potential for growth in comparison to other countries. In the global market, green tea is categorized under two Harmonized System (HS) codes: HS Code 090210 and HS Code 090220. For the purpose of this study, HS Code 090220 has been selected, as it provides more comprehensive data relevant to Ceylon green tea.

Table 1: Calculated Competitiveness Index values for Ceylon Green Tea – HS 090220

Index	Values	Value Range
RCA	5.14	5.14>1
RSCA	0.67	positive
ECI	0.80	0.80<1

Source: Calculated by the author using WITS and ITC data

In the initial step, the Revealed Comparative Advantage (RCA) value for Ceylon green tea was calculated, followed by the conversion into the Revealed Symmetric Comparative Advantage (RSCA) value to assess its competitiveness. The RCA value for Ceylon green tea in 2019 was 5.14, indicating that Sri Lanka holds a comparative advantage in the global green tea market.

This suggests that, despite the decline in trade value, Sri Lanka can still compete in the global green tea market. The RSCA value further clarifies the competitiveness of Ceylon green tea. With a positive value of 0.67 for 2019, it indicates that Sri Lanka retains competitiveness for HS code 090220, despite the decline in trade value over the period from 2015 to 2020. A recent analysis by Khaliqi, Gurning, Novandar, and Simamora (2019) highlights that the RSCA value for Sri Lanka's HS code 090220 has fluctuated between negative and positive values. Following 2005, the RSCA value became positive, indicating that the product had competitiveness. However, the calculated RSCA value for 2019 shows a negative shift, suggesting a decline in competitiveness during this period.



Source: Calculated by the author using WITS and ITC data

Figure 4: RSCA Values of Different Countries

The Economic Complexity Index (ECI) measures whether a product possesses a competitive advantage and tracks changes in its competitiveness from one year to the next. For Ceylon green tea, the ECI index for 2019 (t) compared to 2018 (t-1) stands at 0.80, which is below 1. This indicates a decline in competitiveness from 2018 to 2019. Despite Sri Lanka's RSCA value suggesting that the country maintains a comparative advantage in the green tea market, the ECI index highlights a reduction in competitiveness between these two years.

The ECI value further suggests that, although Ceylon green tea has a comparative advantage, it has not fully capitalized on global market opportunities. This decline in competitiveness points to challenges in the product's ability to leverage its comparative advantage effectively. Therefore, while Ceylon green tea continues to hold a comparative advantage, it lacks a competitive advantage in terms of export competitiveness. To better contextualize this, a comparison with the ECI values of selected countries can offer a clearer understanding of Sri Lanka's standing in the global green tea market.

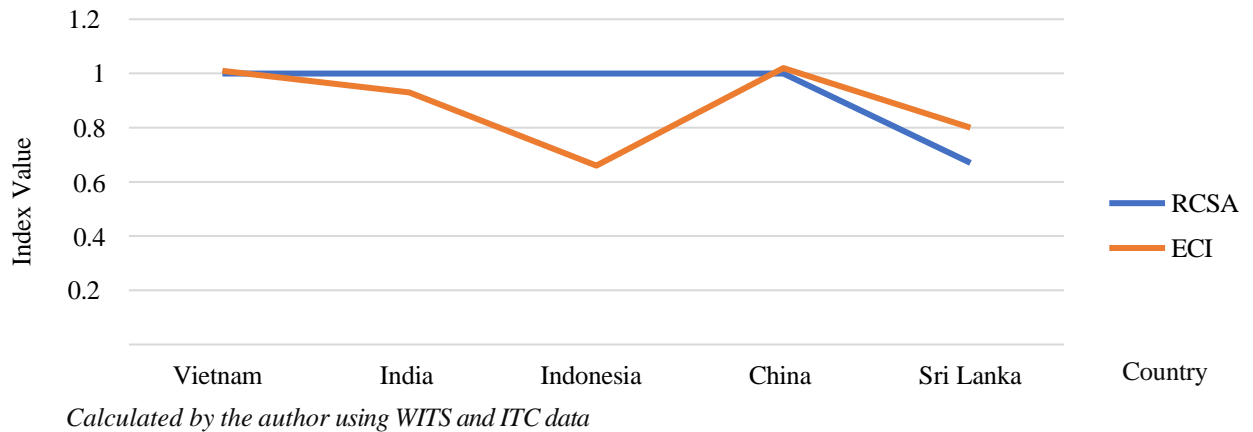


Figure 5: RSCA and ECI Values of Different Countries in 2019

Sri Lanka faces competition from other Asian countries in the green tea market. An analysis of the RSCA and ECI values for key Asian green tea exporters—Vietnam, India, and China—reveals interesting trends. The RSCA values for all these countries, including Sri Lanka, show a positive index, indicating that their green tea products under HS 090220 are competitive in the global market. However, the ECI index presents a different picture. Only China and Vietnam have ECI values greater than 1, signifying an increase in their competitiveness and alignment with global market growth. In contrast, Sri Lanka, India, and Indonesia have ECI values below 1, indicating that these countries have not been able to adapt to the evolving market trends and are experiencing a decline in their competitiveness. This suggests that while Sri Lanka holds a competitive position in the green tea market, it is not keeping pace with the growth and evolving demands of the global market in the same way as China and Vietnam.

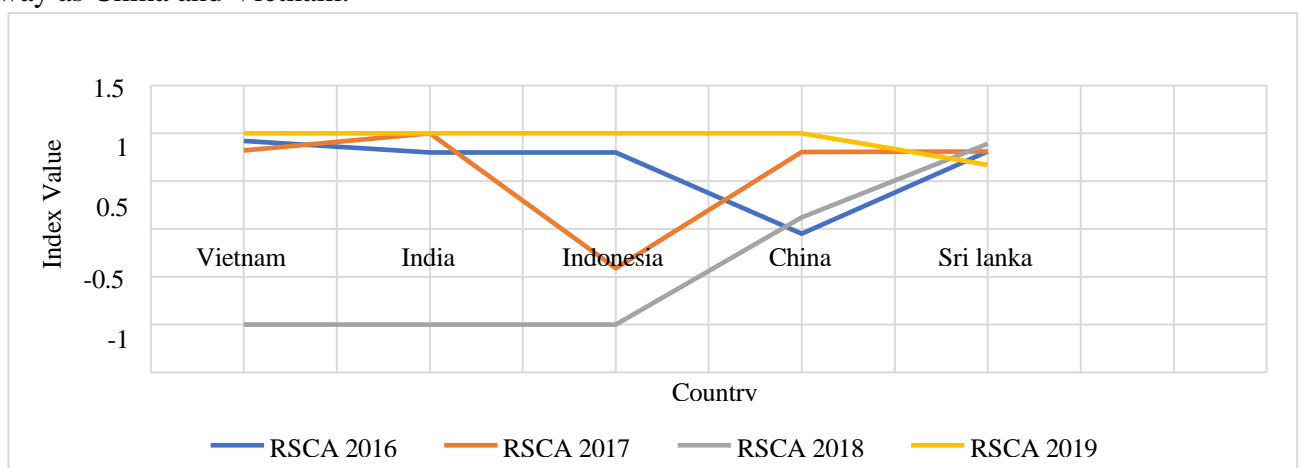


Figure 6: RSCA Values for Different Countries from 2016 to 2019

Between 2016 and 2019, Sri Lanka consistently recorded a positive RSCA index, demonstrating its competitiveness in the green tea market during this period. In contrast, other countries experienced fluctuating trends. In 2016, China had a negative RSCA value, indicating a lack of competitiveness, while India, Indonesia, and Vietnam showed positive values. By 2017, Indonesia's RSCA value turned negative, but the other countries, including Sri Lanka, maintained positive values. Notably, in 2018, Sri Lanka was the only country with a positive RSCA value, while China, India, Indonesia, and Vietnam all recorded negative values, indicating that Sri Lanka had a competitive edge that year. However, in 2019, all the countries, including China, India, Indonesia, Vietnam, and Sri Lanka, achieved positive RSCA values, suggesting that the competition among these countries intensified, with Sri Lanka no longer holding an exclusive advantage.

4.2 Expert Opinion Analysis

The export performance of Ceylon green tea is influenced by a range of factors, as highlighted by industry experts. These insights underline the challenges, opportunities, and strategies for improving Sri Lanka's competitiveness in the global market.

Expert 1: The decline in Ceylon green tea's export share can be attributed to multiple factors. Notably, global exports decreased in 2020 due to the pandemic, impacting green tea exports as well. However, shifting the focus to value-added products like green tea rather than bulk tea presents a significant opportunity. Value-added tea exports generate higher foreign exchange earnings, as exemplified by successful brands such as Dilmah, which compete effectively despite lower export volumes due to their premium positioning. A key challenge, however, is that countries in the Middle East and Europe often import Sri Lankan tea, add value to it, and re-export it, capturing greater market value.

Challenges:

- Competitiveness in the global market.
- Limited availability of land for tea cultivation.

Prospects:

- Growing global demand for green tea due to health-conscious consumers.
- Favorable environmental and climatic conditions for green tea production.

In summary, while Ceylon green tea currently exhibits low competitiveness, it has the potential to compete in the global market through strategic interventions.

Expert 2: The Sri Lankan government has provided significant support to green tea exporters, including granting manufacturing and importation rights and introducing subsidy schemes for machinery. However, quality maintenance remains a pressing challenge. For instance, exports to Saudi Arabia were recently banned due to non-compliance with pesticide residue standards. The government's administrative processes, including authorization, sampling, and licensing, play a critical role in maintaining export quality.

Challenges:

- Ensuring consistent quality to meet international standards.

In summary, Government support is robust, enabling green tea exporters to perform well in international markets.

Expert 3: The primary export markets for Ceylon green tea include the USA, Russia, the UK, the Middle East, and Europe. Despite experiencing growth in export capacity, Sri Lanka faces significant challenges due to limited production volumes and high prices, which reduce competitiveness. The limited supply results in low export volumes, and addressing this issue requires greater government involvement in promoting research and development for green tea.

Challenges:

- Limited production capacity and high production costs.

In summary, enhancing production is crucial to achieving competitive pricing and improving export volumes.

Expert 4: Quality control is a critical factor in maintaining the competitiveness of Ceylon green tea. This includes ensuring proper packaging, weight control, tea tasting, moisture regulation, and pesticide testing. However, government support for green tea exporters is currently on par with other export sectors, with no specialized provisions.

In summary, to enhance the export competitiveness of Ceylon green tea, increased and targeted government support is essential.

The insights provided by the experts underscore the multifaceted nature of challenges and opportunities facing Ceylon green tea exports. While the industry faces limitations such as land

availability, production capacity, quality issues, and high costs, the growing global demand for green tea and the potential for value addition present promising avenues for growth. Strategic interventions, including enhanced government support, quality assurance measures, and production expansion, are imperative to improve the competitiveness of Ceylon green tea in the global market.

5 Conclusion

The global demand for tea, particularly value-added green tea, is on the rise, with China currently dominating the global green tea market share. Sri Lankan green tea, as demonstrated in the analysis, possesses a comparative advantage, which presents an opportunity to expand its export potential. The findings indicate that green tea products under the HS code 090220 from Sri Lanka are in demand, particularly in markets such as the UAE, France, and the Russian Federation. According to the RCA index, Sri Lanka holds a comparative advantage in green tea exports. However, the ECI index suggests that Sri Lanka's competitiveness in the global green tea market is relatively low.

Experts emphasize the importance of strategic investments in value-added tea products, such as green tea, to enhance Sri Lanka's competitiveness. By capitalizing on green tea's potential in the export market and improving competitiveness, Sri Lanka can diversify its traditional tea sector, which has seen limited changes in recent years. Additionally, addressing issues related to artificial fertilization and maintaining quality standards is crucial for sustaining the marketability of Sri Lankan green tea. To foster growth in the sector, the government should support exporters, particularly in the early stages, by providing financial assistance and other facilities to ensure long-term profitability. Further, product branding initiatives, including collaborations with successful companies, participation in trade exhibitions, and trade fairs, can help boost the visibility and recognition of Sri Lankan green tea in international markets.

5.1 Areas for Further Study

A deeper exploration of the various green tea products under Sri Lanka's exports is needed, particularly in relation to HS code 090110, which has seen low export values over the past few decades. Identifying and analyzing different green tea products and their export competitiveness will be essential for improving their market performance, increasing their competitiveness, and boosting the overall export value of Sri Lankan green tea.

REFERENCES

- Arakelyan, H. S. (2020). Green Tea & Immunity. *ResearchGate*, 3.
- Afriha, F.A.M & S.J. Francis., (2024). Impact of Inflation on Living Standard of People: An Econometrics Analysis of Sri Lanka. *Journal of Business Economics and Management Studies*, 3 (2), pp. 21-44.
- Ashardiono, F., & Cassim, M. (2013). Climate Change adaption for Agro-foresting Industries: Sustainable Challenges in Uji Tea Cultivation. *Fourth International Conference on Sustainable Future for Human Security*. Sustain: Elsevier B.V.
- Balasooriya, R., & Mewan, K. M. (2019). Comparative Analysis on Physical & Chemical Charateristics of Commercial Manufactured Green Tea in Sri Lanka . *ResearchGate*.
- Balassa, B., & Noland, M. (1989). Revealed Compative Advantage in Japan and United States. *Journal of International Economic Integration*, 4(2), 8-22.
- Brouder, A. M., Billing, S., & Uren, S. (n.d.). The Future of Tea - A hero crop for the 2030. *Forum for the Future*. Wales.
- CBSL. (2018). *Annual Report* . Colombo: Central Bank of Sri Lanka .
- CBSL. (2022). *External Sector Performance* . Colombo: Central Bank of Sri Lanka ..
- CBSL. (2023). *National Account Estimates* . Colombo: Central Bank of Sri Lanka ..
- CBSL. (2024). *External Sector Performance* . Colombo: Central Bank of Sri Lanka ..
- Chang, K. (2015). *World Tea Production & Trade current and Future Development* . Rome: Food & Agricultural Organisation of th United Nations.
- Chaudhry, S. (2019). Export Competitiveness of Indian Tea Industry. *International Journal for Research in Engineering Application & Management*, 5 (2), 318-323. <https://doi.org/10.35291/2454-9150.2019.0054>.
- Danthanarayana, C.T., Francis, S. J., & Kumarage, A.S. (2024). Determinants of Financial Shortfalls in State-Owned Railway Systems: An ARDL Approach for Sri Lanka Railways. *International Journal of Accounting & Business Finance*, 10(1), 86 – 116. <https://doi.org/10.4038/ijabf.v10i1.153>.
- EDB. (2016, November 3). *Sri Lanka Export Development Board*. Retrieved from srilankabusiness.com: <https://www.srilankabusiness.com/tea/about-tea/>
- EDB. (2020). *Sri Lanka Export Development Board*. Retrieved from srilankabusiness.com: <https://www.srilankabusiness.com/tea/about-tea/>

- Francis, S. J., Ravinthirakumaran, N., & Ganeshamoorthy, M. (2021). The impact of macroeconomic variables on stock prices in Sri Lanka: a bounds testing approach. *International Journal of Accounting & Business Finance*, 7(Special), 68 – 91. <https://doi.org/10.4038/ijabf.v7i0.108/>.
- Francis, S.J., M. Ganeshamoorthy, M., & Y. Udawatta, Y. Impact of Social Media Marketing On Consumer Behaviour: A Study with Reference to The Fast-Food Industry in Colombo, Sri Lanka. *Proceeding of the International Research Conference of the Open University of Sri Lanka (IRC-OUSL 2024)*, (p.1-6).
- Francis, S. J., & Salahudeen, S. (2022). Impact of Tourism Earnings on Economic Growth in Sri Lanka during 1970 – 2020: A Time series Analysis. *Proceedings of the South Eastern University International Arts Research Symposium SEUIARS – 2022*, (p. 133- 147).
- Francis, S. J., & Vijayakumar, S. (2019). Is the export-led growth hypothesis valid for Sri Lanka? A time series analysis. *Proceedings of the 9th International Symposium IntSym – 2019*, (p. 675-682).
- Francis, S. J., & Ganeshamoorthy, M. (2017), The impact of exchange rate volatility on Sri Lanka's export growth". *Strengthening Economic Resilience for Inclusive Growth Sri Lanka Economics Research Conference 2017*, (p. 287 – 292).
- Ganewatta, G., & Edwards, G. W. (2000). The Sri Lanka Tea Industry - Economic Issues and Government Policies. *Annual Conference of Australian Agriculture & Intergrated Management* (p. 32). Sydney: RIRDC.
- Gimhani K.W.K., & Francis S.J (2016). Relationship between trade openness and economic growth in Sri Lanka: A time series analysis. *Sri Lanka Forum of University Economists (SLFUE)*, Department of Economics, Faculty of Social Sciences, University of Kelaniya; 2016.
- Golding, J., Roach, P., & Parks, S. (2009). *Production of High Quality Green Tea thorough Intergrated Management*.
- Grosman, M. (2011). *Sector Overview Tea*. . The Sustainable Trade Initiative.
- Gupta, S. D. (2015). Comparative Advantage and Competetive Advantage: An economic perspective and a Synthesis. *Athens Journal of Business and Economics* , 9-22.
- Hilal, M. I. (2019). Sri Lanka's Tea Economy Issues & Strategies . *Journal of Politics & Law* , 11.
- Imarc. (2020). *Imarcgroup*. Retrieved from [imarcgroup.com: https://www.imarcgroup.com/tea-market](https://www.imarcgroup.com/tea-market)
- Iriste, S., & Katane, I. (2018). *Expertise as a Research Method in Education: Rural Environment Education Personality*. 7.

- Johnson, S. (2016, May 23). The Green Gold from Sri Lanka. (C. Jayawardane, Interviewer).
- Khaliqi, M., Gurning , H. R., Novanda, R. R., & Simamora, O. N. (2019). Export Competitiveness Indonesia Tea in International Market. *International Conference on Agriculture, Environment and Food Security*, 9.
- Kumarasinghe, J. P., & Sachithra, K. M. (2014). An empirical stud on export competitiveness of Sri Lanka: Based on Partial Least Squared Structural Equation Model (PLS- SEM). *International Journal of Research in Commerce, Economics & Management*, 16.
- Lei, L. (2017). Effects of Standards on Tea Exports from developing countries: Comparison of China and Sri Lanka . *Instituite of Developing Economies* .
- Maheswaranathan, S. (2023). Do remittances spur economic growth through export-led Growth: Empirical evidence from Sri Lanka? *International Research Journal of Social Sciences*, 12(2).
- Maity, S., & Gosh, M. (2015). India's Tea Exporting Scenario of Trade Openess: An analysis of Trend and Structural Shift. *Americal-Eurasian Journal of Scientific Research*, 11.
- Ministry of Agriculture. (2019). *Sri Lanka overarching Agricultural Policy* . Colombo: Ministry of Agriculture .
- Ndayitwayeka, W. M., & Ndimanya, P. (2015). Dynamics of Tea trade competitivness in EAC- Evidences from tea exporters of Burundi. *Journal of Economics & Sustainable Development*.
- Pilapitiya , C. G., & Silva, S.D. (2021.). A Comparative Analysis between Sri Lanka and Japan. *International Journal of Innovative Approaches in Agricultural Research*, 5 (1), 17-36. <https://doi.org/10.29329/ijjaar.2021.339.2>.
- Song, K. J. (2018). Review on the Challenges and Opportunites in Global Tea Industry . *ResearchGate*, 10.
- TEASL. (2024, September 30). *Tea Exporters Association of Sri Lanka (TEASL)*. Retrieved from teasilanka.org: <https://teasilanka.org/market-reports#:~:text=January%2DSeptember%202024%20cumulative%20exports,Kgs%20of%20January%2DSeptember%202023>.
- TMR. (2020). *Transperancy Market Research*. Retrieved from [transperancymarketresearch.com](https://www.transparencymarketresearch.com): <https://www.transparencymarketresearch.com/organic-tea-market.html>.
- Wekumbura, C., Mohotti, A. J., Frossurd, E., & Kudagammana, S. T. (2017). Prospects & Issues related to Tea Cultivation in Mid Country: Home garden based tea small holdings in a selected village in Sri Lanka. *ResearchGate*, 15.
- Weligamage, P. (2018). Export competitiveness of Sri Lanka Black Tea in the Japanese Market .