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Do Trade Agreements Enhance Bilateral Trade? Focus on India and Sri Lanka

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Abstract: This article examines bilateral trade relations between the two important countries of South Asia, India and Sri Lanka, in light of the South Asian Free Trade Area (SAFTA) and the India–Sri Lanka Free Trade Agreement (ISFTA). The analysis period spans the years 1995 to 2020. The primary analysis found that bilateral trade has been sluggish and that the SAFTA and ISFTA agreements have had no discernible effect on these two countries’ bilateral trade performance. The causes of lackluster trade performance were investigated using the “revealed comparative advantage” and the “trade complementarity” indices. Clear evidence was found demonstrating that the reason for the bilateral trade’s consistent lackluster performance is due to both countries’ lack of revealed comparative advantage in the majority of product groups, followed by export similarity in the product groups where they do have a comparative advantage. The findings also confirm the suspicion of many observers that they are competitors rather than natural trading partners. Although any substantial future increase in their bilateral trade is improbable and fanciful, the paper reflects on methods of strengthening bilateral trade.

Keywords: India–Sri Lanka trade; revealed comparative advantage; trade complementarity; SAFTA; ISFTA



Citation: Akram, H.W.; Ahmad, A.; Dana, L.-P.; Khan, A.; Akhtar, S. Do Trade Agreements Enhance Bilateral Trade? Focus on India and Sri Lanka. *Sustainability* **2024**, *16*, 582. <https://doi.org/10.3390/su16020582>

Academic Editors: Gioacchino Pappalardo and Anna Visvizi

Received: 8 November 2023

Revised: 1 December 2023

Accepted: 7 December 2023

Published: 9 January 2024



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1. Introduction

South Asian countries are some of the least economically linked in the world, despite their close geographic proximity and the fact that they have bilateral and multilateral free trade agreements (FTAs) among themselves. Because of protectionist regulations, high logistical costs, a wider trust deficit, and a lack of political will, among others, trade in South Asia is still far lower than it could be (only 5% of the region’s total trade with the world). This makes South Asia one of the most disconnected and disunited regions in the world, more particularly when it is compared with other regions such as North America, the Pacific, and East Asia, where intraregional trade is very high, and even among sub-Saharan Africa countries, where intraregional trade has been on the increase over the years due to the concrete steps taken by the administrations of those countries to create transparent mechanisms for trade facilitation. For the sake of achieving the goals of bilateral and multilateral trade agreements among countries, it is vital to expand connectivity in the South Asian region. This can be accomplished by boosting and facilitating bilateral and intra-regional trade. Access to new markets and more foreign direct investment (FDI) in a variety of industries would both be possible as a result of this type of endeavor, which would be made possible by the free flow of commodities, services, people, and knowledge. The consequent expansion of the economy would not only help to reduce the level of mistrust that exists in the area but would also bring prosperity to the trading countries.

As is evident, bilateral trade is an important element behind the development of contiguous countries, and this applies to India and Sri Lanka, two important countries from South Asia and the Indian subcontinent [1,2]. They have had a relationship for more than 2500 years, and their linguistic, cultural, and social linkages and bonds are centuries old. According to World Bank data [3], these two developing countries are home to more than 18% of the world's population, which constitutes 2.49 percent of the total land surface area of the world and represents 3.19 percent of the world's GDP at the current US dollar [4,5], but their bilateral trade has been hovering around 0.75 percent of their total trade with the world since 1995. There has been a consensus among scholars like Akram [1,6], Joshi [7], Julian and Ahmed [8], Inikori [9], Khan [10], and Zahonogo [11] that trade is an important aspect influencing the economic progress of a nation, and that taking recourse to international trade indubitably brings about absolute gains for the partners involved. This becomes more relevant when they badly need deeper involvement in several areas of economic development, including a vibrant atmosphere for small and medium enterprises and environmental sustainability [12–14]; entrepreneurial spirit, as it brings about economic development [15–19]; entrepreneurial traits and assets that have a role in shaping globalization [20]; international joint ventures [21]; and innovation systems [22,23]. India's reliance on international trade for a good number of agendas involving domestic development, such as increasing exports, reducing the trade deficit, establishing a favorable environment for private sector development, development of business-friendly infrastructure, peace and security, terrorism control, promoting regional-balanced development, etc., are clearly visible in India's active pursuit and follow-up of the South Asian Association for Regional Cooperation (SAARC), South Asia Preferential Trading Arrangement (SAPTA), South Asia Free Trade Area (SAFTA), ASEAN–India Free Trade Agreement (AIFTA), and bringing all five countries of BRICS on one platform [1]. The South Asian Free Trade Agreement (SAFTA) is a treaty in which both India and Sri Lanka are parties. For Sri Lanka to avail of the benefits of trade and investment, productivity gains, and increased competitiveness, apart from the advantages mentioned above, it must be involved in SAFTA, FTAs with India, Pakistan, Singapore, and the Asia-Pacific Trade Agreement (APTA).

Nevertheless, both countries know the importance of good trade relations, as the countries' and regions' prosperity is dependent on bilateral and multilateral trade [7]. They have tried their best in the past to be members of important agreements at the bilateral and regional levels, as is clear from the works of Kelegama; Mukherji and Iyengar; and Sikdar [24–26], among others. However, any perceptible continuous increment in their bilateral trade has been elusive during the last two decades, barring a few years, especially after 2000, when their bilateral trade rose to some extent. The lack of any discernible continuous increase in their bilateral trade necessitates an investigation to determine the cause.

In this paper, we examine the present status of the bilateral trade between India and Sri Lanka, two South Asian countries. We investigate whether free trade agreements such as SAFTA and ISFTA have brought about any change in their trade profiles or not. Following a thorough examination, the cause of India–Sri Lanka trade sluggishness was attempted to be identified by utilizing Balassa's [27] revealed a comparative advantage index and a trade complementarity index, as mentioned by the World Bank [28]. The persistently low level of trade for a long period and the lack of meaningful improvements in bilateral trade over the years despite lofty expectations raise several concerns. Are they afflicted with poor economic connections, suffocating trade and impeding the growth of trade relationships? Is it the case that they are incapable of cultivating latent trade potential? Is there a lack of trade complementarity between them that prevents them from satisfying each other's import requirements? Are they not naturally trading partners [1]? There are various things to consider in order to establish the underlying causes of their weak and restrained trade. Political and social issues, most notably the strained ties between economies, are not included in the present study. The current article focuses solely on

economic considerations, primarily using Balassa's "Trade Complementarity Index" and "Revealed Comparative Advantage Index" [27].

Thus, the paper attempts to answer the following research questions:

RQ 1: *Have free trade agreements such as SAFTA and ISFTA led to significant changes in the trade profiles of India and Sri Lanka over time?*

RQ 2: *What are the underlying causes of the persistently low level of bilateral trade between India and Sri Lanka?*

RQ 3: *Does Balassa's Revealed Comparative Advantage Index reveal distinct comparative advantages for India and Sri Lanka in certain industries?*

RQ 4: *Does the Trade Complementarity Index indicate a high level of trade complementarity between India and Sri Lanka?*

RQ 5: *To what extent are poor economic connections and trade barriers contributing to the sluggishness in trade and impeding the growth of trade relationships between India and Sri Lanka?*

RQ 6: *Can the lack of meaningful improvements in bilateral trade between India and Sri Lanka be attributed to their inability to cultivate latent trade potential, or are there other factors at play?*

RQ 7: *Are India and Sri Lanka not naturally trading partners, and if so, what factors contribute to this lack of natural trade compatibility between the two countries?*

The selection of India and Sri Lanka as the focal points of this research paper is particularly pertinent due to their unique position in the South Asian region and the presence of significant trade agreements like SAFTA and ISFTA. These two countries share close geographic proximity, historical trade ties, and cultural affinities, making them an intriguing case study for assessing the impact of trade agreements. Moreover, the sluggishness in their bilateral trade despite the existence of such agreements raises critical questions about the effectiveness of regional trade pacts and the underlying factors influencing trade dynamics. By examining the revealed comparative advantage and trade complementarity indices, this research paper offers empirical evidence that sheds light on the challenges faced by India and Sri Lanka in terms of enhancing their trade relationship. The confirmation of their status as competitors rather than natural trading partners underscores the need for a nuanced understanding of regional trade dynamics. Overall, this study provides valuable insights into the complexities of bilateral trade and offers important lessons for policymakers aiming to bolster economic cooperation between neighboring countries in South Asia.

This research paper stands out as a unique contribution to the field of international trade for several reasons. Firstly, it focuses on the bilateral trade relationship between India and Sri Lanka, two significant South Asian countries with historical ties and shared economic interests. Secondly, it scrutinizes the impact of two crucial trade agreements, SAFTA and ISFTA, over a span of 25 years (1995 to 2020), offering an extensive and detailed analysis of their effectiveness in promoting bilateral trade. What sets this paper apart is its utilization of the "revealed comparative advantage" and "trade complementarity" indices to systematically investigate the reasons behind the consistently lackluster trade performance. The uncovered empirical evidence, which highlights the lack of comparative advantage and export similarity in crucial product groups, challenges conventional assumptions about regional trade dynamics. Additionally, the paper addresses the crucial issue of whether India and Sri Lanka are competitors or natural trading partners, adding a valuable dimension to the understanding of their economic relationship. Lastly, this paper's reflection on potential strategies to strengthen bilateral trade provides practical insights for policymakers and stakeholders in fostering economic cooperation. In essence, this research paper offers a comprehensive, empirically grounded, and nuanced analysis of the complexities surrounding bilateral trade, making it a unique and valuable addition to the literature on international trade dynamics in South Asia.

Also, neighboring countries can benefit from this research by gaining a deeper understanding of the factors influencing bilateral trade dynamics, especially when dealing with neighboring economies of varying sizes and capabilities. Additionally, the paper's reflection on strategies to strengthen bilateral trade, despite the challenges, can offer valuable lessons and potential approaches for fostering economic cooperation within the South Asian region. As such, this research contributes to the broader discourse on regional trade in South Asia and offers insights that can be adapted and applied by neighboring countries to enhance their own trade relationships and economic cooperation efforts.

The remainder of the paper is organized as follows: Section 2 discusses the findings of previous research. Section 3 includes notes on the research design, and Section 4 contains a thorough discussion of the results. The paper is concluded in Section 5.

2. Literature Review

2.1. Theoretical Framework for the Research

2.1.1. Comparative Advantage Theory

Comparative advantage theory, originally formulated by David Ricardo in the early 19th century, stands as a cornerstone in the study of international trade [29,30]. The theory is grounded in the idea that countries should specialize in the production of goods and services where they have a comparative advantage, i.e., the ability to produce these items at a lower opportunity cost compared to their trading partners [31]. This specialization allows countries to maximize their productive efficiency, leading to greater overall economic welfare [32]. The Heckscher–Ohlin model, developed by Eli Heckscher and Bertil Ohlin, posits that countries should specialize in producing goods that are intensive in terms of the factors of production they possess in abundance [33,34]. This model emphasizes the role of factor endowments, such as labor and capital, in shaping trade patterns. The Heckscher–Ohlin model has provided a theoretical framework for understanding the determinants of comparative advantage, highlighting the importance of resource endowments. Extensions of the Heckscher–Ohlin model, such as the Stolper–Samuelson theorem, delve deeper into the effects of changes in factor prices on trade patterns. These models offer insight into how shifts in relative factor endowments can influence comparative advantage [35]. Factor-specific models are crucial to understanding the nuanced dynamics of comparative advantage, particularly concerning factors like skilled labor, capital, and technological advancements. Empirical studies play a pivotal role in testing and validating the predictions of theoretical models. One widely used method is the measurement of revealed comparative advantage, introduced by Bela Balassa. This approach assesses a country's comparative advantage by comparing its actual export patterns with the predictions of the Heckscher–Ohlin model. Balassa's method provides a quantitative tool for assessing comparative advantage and has been influential in empirical research [27]. Leamer and Levinsohn [36] conducted a seminal empirical analysis of international trade theories, including the Heckscher–Ohlin model, using real-world data. Their work assessed the alignment between theoretical concepts and empirical evidence [36]. Their research contributed to bridging the gap between theory and practice, offering valuable insights into the factors that influence comparative advantage in the real world.

In recent years, the concept of global value chains has gained prominence in the study of comparative advantage. GVCs involve the fragmentation of production processes across countries, challenging traditional notions of comparative advantage. Researchers have explored GVCs impact trade patterns and have highlighted the importance of factors like supply chain connectivity and technological capabilities. The GVC perspective has expanded our understanding of how countries participate in and benefit from international trade [37]. Another significant development in the field is the consideration of firm-level heterogeneity. Melitz's model of firm selection and trade emphasizes that not all firms participate in international trade, and those that do can experience different levels of success. This approach introduces a new dimension to comparative advantage by accounting for

firm-level productivity differences [38]. Heterogeneous firm models have implications for trade patterns and the distributional effects of trade within countries.

In the context of our research on “Do Trade Agreements Enhance Bilateral Trade? Focus on India and Sri Lanka,” Comparative advantage theory serves as a vital framework for understanding the dynamics of trade agreements. The theory suggests that trade agreements should ideally align with the comparative advantages of the signatory countries. In the case of India and Sri Lanka, identifying these comparative advantages is the first step. India, as a diversified economy, excels in information technology, pharmaceuticals, and services. Sri Lanka, on the other hand, has a niche in the apparel and textile industry, tea production, and tourism. A well-designed trade agreement should encourage specialization in these sectors, thereby promoting efficiency and enhancing bilateral trade.

The research question at hand seeks to understand whether trade agreements, such as the one between India and Sri Lanka, indeed enhance bilateral trade. Comparative advantage theory provides valuable insight into this inquiry. Trade agreements often involve provisions for tariff reductions or eliminations, reducing trade barriers [39]. These changes should ideally facilitate the exchange of goods and services that align with the comparative advantages of the countries involved. By analyzing the India–Sri Lanka trade agreement through the lens of the comparative advantage theory, researchers can assess how tariff changes have impacted trade. Have tariff reductions led to an increase in exports from India and Sri Lanka in sectors where they possess comparative advantages? Have these reductions made imports more affordable, stimulating demand for goods and services in which the partner country specializes?

Moreover, trade agreements often address non-tariff barriers, including regulations, standards, and customs procedures [40]. These can pose significant obstacles to trade. Comparative advantage theory suggests that reducing such non-tariff barriers can further enhance trade, especially in sectors where the countries have comparative advantages [41]. Therefore, researchers should investigate whether the agreement has harmonized regulations or reduced these barriers, ultimately fostering more substantial bilateral trade. Beyond the immediate impact on trade volumes, comparative advantage theory encourages the exploration of the broader economic implications of trade agreements [42]. Economic welfare is a key consideration. The theory predicts that countries specializing in their comparative advantage sectors should experience improved economic welfare. Researchers can assess this by examining changes in GDP, employment levels, consumer prices, and other economic indicators. A positive shift in these metrics would signify the potential benefits of the trade agreement for both India and Sri Lanka. Additionally, it is crucial to evaluate the trade balance. If one country within the trade agreement consistently experiences a significant trade surplus while the other faces persistent deficits, it may indicate an imbalance in how comparative advantages are leveraged. Ideally, a balanced trade relationship, where both countries benefit, is considered a desirable outcome [43].

2.1.2. Trade Complementarity Theory

Trade complementarity theory is a valuable framework for understanding how trade agreements can enhance bilateral trade [44], and it is particularly relevant to our research on “Do Trade Agreements Enhance Bilateral Trade? Focus on India and Sri Lanka.” This theory posits that countries often trade with one another because their goods and services are complementary rather than directly competitive [45]. In other words, they produce different products that, when combined, create greater value and utility for consumers and businesses. In the context of India and Sri Lanka, trade complementarity theory suggests that these two countries may have goods and services that are naturally complementary. India’s strength in information technology and services, for example, may complement Sri Lanka’s expertise in the apparel and textile industry, tea production, and tourism. By trading these complementary goods and services, both countries can benefit from increased economic activity and improved consumer welfare. Therefore, examining how the India–Sri Lanka trade agreement aligns with this theory becomes crucial in assessing its impact on

enhancing bilateral trade. To determine how the India–Sri Lanka trade agreement relates to trade complementarity theory, this research delves into the specifics of the agreement and assess whether it encourages the exchange of complementary goods and services. The agreement’s provisions, such as tariff reductions or eliminations, non-tariff barrier reductions, and investment facilitation, should ideally facilitate the trade of complementary products [46]. For instance, if the trade agreement has provisions that reduce tariffs on IT services from India while simultaneously making it easier for Sri Lankan apparel and textile products to enter the Indian market, it aligns with the theory. These provisions can incentivize companies in both countries to engage in trade that enhances the value of their respective products and services. Furthermore, the research should investigate whether the trade agreement promotes cooperation in areas where India and Sri Lanka have complementary strengths, such as joint ventures or technology-sharing initiatives [47]. Such collaborative efforts can lead to innovation and increased productivity, contributing to the overall enhancement of bilateral trade. Trade complementarity theory also extends to assessing the economic impacts of the trade agreement. Researchers analyze whether the agreement has led to an increase in the production and export of complementary goods and services, ultimately benefiting the economies of both India and Sri Lanka. Additionally, it is crucial to consider the long-term prospects of the trade agreement. Does it create an environment that encourages businesses in India and Sri Lanka to continuously explore complementary trade opportunities? Is there evidence of sustained growth in trade volume and value? Assessing the agreement’s long-term impact on bilateral trade can help policymakers and stakeholders make informed decisions about the future of their economic relations [48]. Thus, trade complementarity theory is closely related to our research on “Do Trade Agreements Enhance Bilateral Trade? Focus on India and Sri Lanka.” It offers a lens through which we can examine whether the India–Sri Lanka trade agreement encourages the exchange of complementary goods and services, ultimately enhancing bilateral trade. By assessing the alignment of the agreement with this theory and analyzing its economic impacts, our research can provide valuable insights into the effectiveness of the trade agreement and its potential to promote economic growth and cooperation between these two countries.

2.2. Literature Review on Trade and Economic Growth, Bilateral Trade between India and Sri Lanka, Trade Agreements, and Regional Implications

The literature, including that characterized by classical and neoclassical schools of thought, views trade as the primary driver of economic expansion. It emphasizes the importance of trade in fostering economies of scale, strengthening economic structure, and increasing competitive market forces. The new theories of economic growth have placed emphasis on an open trade policy framework, arguing that this better directs available resources to industries in which they can be used to their greatest benefit [49,50]. They emphasize that a country with a higher degree of economic openness tends to grow at a faster rate through technology absorption than a country with a lower degree of openness. Bhagwati [51] is a proponent of the neoclassical view that a nation’s economic growth can be attributed to its exports, and that this growth, in turn, can be attributed to the positive effects of competition on the human skills and technological foundation of the nation. Romer [52] lays out the theoretical foundation for economic growth through trade openness, which incorporates the spillover effects generated by technical progress, human capital, and investment in knowledge-based sectors. Agrawal and Kamakura’s study [53] challenged the conventional wisdom surrounding the influence of the country of origin on consumer behavior. Their research suggests that while country of origin is a relevant factor, it is just one of many cues in the complex landscape of consumer decision-making. They argue that product quality plays a more significant role in price differentials among brands, challenging the notion that a brand’s country of origin alone dictates price premiums or discounts. This perspective sheds valuable light on the multifaceted nature of consumer perceptions and purchasing decisions.

What can be inferred from the available literature is that bilateral trade can bring about welfare gains for the trading countries and is applicable to these two South Asian countries, India and Sri Lanka, as well.

Towards this end, a good number of scholars have attempted to find out what should be done to achieve the desirable aspects of bilateral trade as far as the two countries mentioned above are concerned. For instance, through the use of a gravity equation with multilateral trade parameters, Fratianni and Oh [54] examined the connection between RTA size and openness. Taneja et al. [55] attempted to compare the features of formal and informal trade between two important South Asian countries, India and Sri Lanka. They stated that while the free trade agreement (FTA) between India and Sri Lanka is a step in the right direction, it does not address the issue or the challenges of transaction costs that arise in the transactional context. The authors find that formal trading has higher transaction costs than informal trading, implying that reduced transaction costs in formal trade may enhance trade between the two countries. They emphasize that the number of administrative obligations at each stage of the trade transaction, including shipping barriers, must be considerably reduced. It is rightly stated that international shipping is vital for international trade. Streamlining and minimizing redundant and wasteful procedures and the use of electronic media could help to achieve this. The increasing focus on electronic data exchange (EDI) systems is a welcome move in this regard, as it will likely lessen the interface between dealers and government authorities. The authors argue that reducing restrictions on trading through official channels could address the issue of high transaction costs. This would also have a far more significant influence on the South Asian region in terms of commercial expansion. According to Taneja et al. [55], the prevalence of informal trade between the two countries has decreased since liberalization, and further tariff reductions and domestic tax harmonization would further reduce the incidence of informal trade.

Weerakoon and Thennakoon [56], in their seminal study on “India–Sri Lanka FTA: Lessons for SAFTA,” pointed out that the signing of the India–Sri Lanka Free Trade Agreement (ISFTA) two decades ago was a significant step forward for the two emerging countries of South Asia to harness their economic and trade complementarities. The post-ISFTA performance of trade between the countries, as expected, shows that exports are increasing. According to them, imports have also increased significantly, accompanied by strong product growth and diversification. The authors added that, though ISFTA was only intended for the trade of goods, it has resulted in increased trade. Over time, investment flows and service integration between the two countries have also increased. The authors further state that, although the ISFTA has resulted in a significant increase in bilateral trade, the agreements remain rather restrictive because of the magnitude of the negative lists kept by both countries. While initiatives are being made to trim the negative lists as part of the ongoing comprehensive economic partnership agreement (CEPA) discussions, the quantum of the reduction in the negative list is likely to be limited due to the legitimate concerns of economists about the impact of the pruning on some important industries, like agriculture, which is very sensitive to foreign competition. Sri Lanka, in particular, is unlikely to press for more liberalization because it had yet to fully experience the implementation of previously agreed-upon parameters until 2008.

Joshi [57] investigated whether the Free Trade Agreement (ISLFTA) between the two burgeoning SAARC countries, India and Sri Lanka, has created or diverted trade. The strategy employed in the paper was similar to that employed by Romalis [58] to investigate NAFTA using the six-digit HS classification of products to employ tariff variations at the product level and has developed seven panel sets of data from 1996 to 2006. Investigating the impact of commodity and time changes in ISLFTA tariff preferences on the importing of different products from the control nation to the ISLFTA region, the ISLFTA resulted in virtually limited business for the control countries. Joshi [57] further stated that consumers in India and Sri Lanka can purchase a number of the most competitive products from regional vendors, allowing them to consume more for the same amount of money, and

claims that ISLFTA is among the few agreements that are actually fruitful in South Asia. The success of ISLFTA demonstrates that if the demands, concerns, and challenges of weaker economies are treated adequately and favorably, the size differential between FTA members is unimportant.

Sikdar [26] investigated the trade pattern between India (South Asia's largest country) and Sri Lanka by constructing a competitive benchmark based chiefly on the two economies' fundamental endowments, preferences, and technologies. The study proposes a novel method for determining the comparative advantages of two emerging South Asian economies linked by international trade, as well as obtaining the benefits of such free trade. The author states that, in the immediate aftermath of the ISFTA coming into force, the export growth in both economies became fascinating, and an analysis of the structure of trade between them indicated that trade volume rose for several products that were of little importance for both countries prior to the ISFTA's adoption. As a result of the FTA's adoption, many items became commercially feasible. Thus, it is possible that these items were exported from one country to another as a result of numerous concessions exchanged. That paper concluded that the countries' bilateral trade flow increased as a result of easier access (either duty-free or at a reduced rate) to their markets, which surely helped to expand trade within the South Asian region as well as global trade. However, in order to keep the expanding trade momentum going, additional goods with comparative advantages should be traded.

De Silva et al. [59] conducted an intriguing empirical inquiry into the consequences of liberalizing trade on Sri Lanka's agricultural sector. Based on national data (1960–2010), the study presented a quantitative examination of the effects of trade policy on agricultural growth in Sri Lanka. To determine whether trade policy improvements increase agriculture sector growth, the researchers used the ordinary least square (OLS) approach and models of multiple regression. The empirical findings demonstrate that trade liberalization positively impacted agricultural sector growth, and that, as a result, agricultural productivity in Sri Lanka could improve. To improve agricultural productivity further, more emphasis should be placed on reducing excessive and unspecialized workers in the agricultural sector.

Kelegama [60] investigated the India–Sri Lanka Free Trade Agreement (ISFTA). In the analysis, the author highlights both the positives and negatives of the agreement. The study demonstrates that the FTA has been proven to be beneficial for Sri Lanka, but its full potential could not be harnessed due to some issues such as access to the Indian market and the supply capacity of Sri Lanka for a few products. The paper states that the agreement between the two burgeoning countries of South Asia, which aimed to address several of the FTA's problems in a larger economic framework, failed to take effect due to a lack of political foresight and entrepreneurial leadership in Sri Lanka. Kelegama [60] further states that, although the ISFTA has been in existence for the past 12 years and has a long list of accomplishments, it is not without flaws. Sri Lanka has yet to fully realize the FTA's full potential, and the study contends that strengthening, extending, and broadening the FTA is the path forward in this respect. To give the FTA additional energy, policy mechanisms under the aegis of the various governments must be formulated, and the trade–investment connection is an invaluable component that might be leveraged for this purpose.

Kelegama [24] states that, although the purpose of a free trade agreement is that the contracting parties should have a win–win situation, the contracting countries ought not to be bothered about trade deficit or lopsided export basket. They must move ahead to maximize the benefits of the free trade agreement. The paper states that it is without doubt that the agreement between the two countries (ISFTA) has clearly proven to be beneficial for Sri Lanka, but more effort ought to be made to expand the scope so that Sri Lanka can reap the full benefits in an equitable manner. The author states that non-tariff barriers (NTBs) in India are currently being addressed as one of the most important issues. The author concludes that Sri Lankan exports have built a name for themselves despite significant non-tariff hurdles in the Indian market. A stronger economic relationship with India could result in even more beneficial consequences, but Sri Lanka's interests ought to be properly

promoted to achieve that objective, which was attempted by the proposal for the Economic and Technology Cooperation Agreement. This will lay the framework for island exporters and investors to capture a larger portion of India's rapidly developing market.

Using a gravity trade model, Taguchi and Rubasinghe [61] examined the impact of trade agreements on Sri Lanka. The SAFTA (a multilateral agreement among eight countries in South Asia), the ISFTA (a free trade agreement between India and Sri Lanka), and the PSFTA (an FTA between Pakistan and Sri Lanka) are the three FTAs included in the study. The gravity trade model estimation findings demonstrated that the ISFTA produced trade creation effects, which could not be substantiated in the SAFTA, and that the PSFTA only had trade creation effects on imports from Sri Lanka. The authors state that differences in preferential tariff rates and the presence of long negative lists among the multiple FTA agreements appear to be reflected in these results. Taguchi and Rubasinghe [61] conclude that the strategic relevance of the estimation results is that there is still a significant amount of room for the SAFTA and PSFTA's trade benefits to grow over time if the tariff reduction timetable in the SAFTA could be streamlined and the sensitive list items in the SAFTA and PSFTA could be decreased.

Subsequently, Khalid et al. [62] looked into the relationship between SAARC countries' regional trade and the region's food security issues. The paper econometrically analyzed the factors affecting the volume of food trade using data from Pakistan, India, Sri Lanka, and Bangladesh from 1990 to 2018. They point out that if resources are efficiently employed, the region's (South Asia) higher consumption and greater import requirements can be met through adjacent trading partners. Their findings reveal that importing or exporting countries' gross domestic product (GDP) and investment from abroad (FDI) have a positive impact on regional trade. However, the bilateral rate of exchange between trading partners has a detrimental impact on trade volume. Using Johansen's cointegration test, their findings revealed that there was no long-run link between trade volume and food security. Khalid et al. [62] suggested that policymakers should concentrate on ways to improve the environment in Pakistan and India so that they can not only meet rising global food demand, but also increase their competitiveness in major export markets for both high-quality and low-quality priced goods. Pal and Pohit [63] sought to answer a key research question: why, even after a decade of implementation, do Indian exporters (13 percent) use the ISFTA route for trade far less than their Sri Lankan counterparts (65 percent)? Non-tariff barriers (NTBs), according to the authors, are being blamed in existing studies for impeding trade growth. Pal and Pohit [63] state that NTBs, on the other hand, have been classified as a sub-class of non-tariff measures (NTMs), which represent a more limited concept of discovering hidden impediments in the international trade process.

The research conducted by Murshed, Abbass, and Rashid [64] addresses a crucial and timely topic related to renewable energy adoption in selected South Asian economies: Bangladesh, India, Pakistan, and Sri Lanka. The study's focus on the economic transition from non-renewable to renewable energy sources in the context of the United Nations' 2030 Sustainable Development Goals agenda is particularly pertinent. The authors' exploration of how trade and financial liberalization policies can influence this transition adds a valuable dimension to the research. The paper's empirical approach, employing econometric analyses, provides quantitative insights into the relationship between trade openness, foreign currency inflows, and the adoption of renewable energy resources in the region. The findings, suggesting that higher levels of trade openness and increased foreign currency inflows contribute to greater renewable energy consumption, are significant and have important policy implications. These results underscore the potential role of trade agreements and foreign investment in advancing renewable energy initiatives and achieving energy sustainability in South Asia.

Kumar [65] offered a comprehensive analysis of regional trade integration in South Asia within the context of multilateral trade agreements. The research was timely, given the increasing importance of regional cooperation and integration in the global economy. The study employed the trade intensity index and autoregressive multilateral framework

to evaluate trade relationships among four major South Asian countries: India, Bangladesh, Pakistan, and Sri Lanka. One of the paper's notable strengths is its focus on both short- and long-run trade complementarities, which provides a nuanced understanding of trade dynamics in the region. The identification of long-run trade complementarities between Pakistan and Sri Lanka and short-run complementarities between India and Bangladesh, as well as India and Sri Lanka, offers valuable insights into potential areas of collaboration and competition among these countries. The paper also underscores the significance of its findings for policy implications. The idea that trade barriers hinder regional trade integration in South Asia and that greater trade openness can foster balanced economic development is a crucial takeaway.

Jain [66] assessed the broader implications of this relationship, not only on the Indo-Sri Lankan ties, but also on India's role as a leader in the South Asian region. The article critically examines China's substantial investments and engagement in Sri Lanka, a phenomenon observed in several South Asian countries, under the guise of economic development. One of the strengths of the article is its historical context, which provides readers with a well-rounded understanding of how the Sino-Sri Lankan relationship has evolved over time. The mention of China's economic, military, and diplomatic assistance to Sri Lanka is significant in highlighting the depth of this engagement. Furthermore, the article's exploration of how these developments have affected India's role and influence in the region contributes to a nuanced analysis. The mention of China's ambitious projects like the Maritime Silk Route and the Belt and Road Initiative adds an important dimension to the article. By examining the strategic implications of China's actions, the paper encourages readers to consider the long-term goals and motivations behind Chinese investments in Sri Lanka and the broader region.

Gurtu et al. [67] presents an insightful analysis of the impact of free trade agreements (FTAs). The article's emphasis on the role of FTAs in shaping the economic activities of participating countries is particularly relevant in today's globalized economy. It offers valuable insights for policymakers and researchers alike by shedding light on the potential desirability of FTAs and their role in improving economic activities.

Marwah et al. [68] wrote a commendable work titled "Political Economy of Trade in BIMSTEC: A Contemporary Perspective". The study delves into the nature and evolution of BIMSTEC, focusing on intra-regional trade dynamics, particularly trade relations with India and China. The article serves as a valuable contribution to the understanding of regional cooperation and trade in South and Southeast Asia. They propose recommendations for strengthening BIMSTEC's identity and effectiveness. The suggestions, including a focus on connectivity, improved logistics, and the establishment of a BIMSTEC university, reflect a deep understanding of the soft power elements that can enhance the regional organization's appeal and viability. These recommendations offer actionable insights for policymakers and stakeholders involved in regional cooperation efforts.

Samarakoon and Sarvananthan [69] provided a thought-provoking analysis of the Memorandum of Understanding (MoU) between India and Sri Lanka for the construction of a bridge across the Palk Strait. The study's focus on the potential impact of this proposed bridge on trade, services, and travel between the two countries, as well as the broader implications, is of significant interest. The article effectively highlights the potential benefits of the bridge in terms of facilitating trade and travel between India and Sri Lanka, as well as the broader South Asian region. It also raises an important point about the bridge serving as an alternative to the Sethusamudram project, potentially mitigating environmental concerns. However, to further strengthen the article, it could have delved deeper into the potential negative consequences and challenges associated with the bridge construction. Additionally, discussing potential mitigation measures for addressing environmental and social impacts would have provided a more comprehensive analysis.

Nevertheless, there are a good number of studies that have tried to explore the causes of lackluster bilateral trade; it can be deduced that the available literature is devoid of any study that has tried to answer the following questions from basic economic angles. Thus,

the present paper answers the following questions: Are India and Bangladesh afflicted with poor economic connections, suffocating trade and impeding the growth of trade relationships? Is it the case that they are incapable of cultivating latent trade potential? Is there a lack of trade complementarities between them that stunt them from satisfying each other's import requirements? Are they not naturally trading partners? Answers to these questions from an economic perspective are missing in the literature, and this paper makes important contributions to the literature in terms of bridging that vacuum. Firstly, it frames the untouched areas of research and then proposes them in terms of research questions. Secondly, we attempt to answer the proposed questions based on suitable econometric equations and validate them using supporting evidence.

3. Methodology

To analyze the status of Indian–Sri Lankan trade and determine the impact of the “South Asian Free Trade Agreement (SAFTA)” and the “India–Sri Lanka Free Trade Agreement (ISFTA)” on their bilateral trade, the research employed a quantitative research design to analyze the bilateral trade prospects between India and Sri Lanka in light of the SAFTA and ISFTA agreements.

The study utilized secondary data on bilateral trade flows, trade agreements, and trade indices from the World Trade Organization (WTO), United Nations Conference on Trade and Development (UNCTAD), and research papers from the period of 1995–2023.

The process of collecting research papers spanning this period involved a systematic and multifaceted approach. This procedure aimed to ensure the comprehensive coverage of relevant scholarly works, trade agreements, and bilateral trade data to facilitate a thorough analysis of the research question (Figure 1). The collection of research papers began with an exhaustive search across reputable academic databases, including, but not limited to, academic journals, conference proceedings, and research repositories. Online databases such as Scopus, Web of Science, and Google Scholars were systematically explored. Keyword searches were conducted using a combination of terms related to trade agreements: bilateral trade, India, Sri Lanka, SAFTA, ISFTA, and relevant trade theories. Boolean operators and advanced search filters were employed to refine the search results and identify papers that directly addressed the research topic. The search process also extended to institutional websites and repositories of organizations specializing in trade research, such as the World Trade Organization (WTO) and the United Nations Conference on Trade and Development (UNCTAD). These organizations often provide access to a wealth of research reports, policy briefs, and working papers related to international trade agreements and trade dynamics. Additionally, prominent think tanks and economic research institutions were explored for publications that could contribute valuable insights to the research paper. To ensure the inclusion of the most recent research papers, a timeframe extending to 2023 was adopted. This approach enabled the incorporation of the latest developments in India and Sri Lanka's trade relationships, as well as any recent assessments of the SAFTA and ISFTA agreements. The selection criteria for research papers involved a meticulous review of abstracts and titles to assess their relevance to the research questions. Papers that demonstrated a direct or tangential connection to the impact of trade agreements on bilateral trade between India and Sri Lanka were considered for inclusion. Moreover, citation networks were examined to identify seminal papers and those frequently cited in the literature, as these often represent foundational contributions to the field. By following citation trails, additional research papers that might have been missed during initial searches were uncovered, enriching the pool of resources available for analysis.

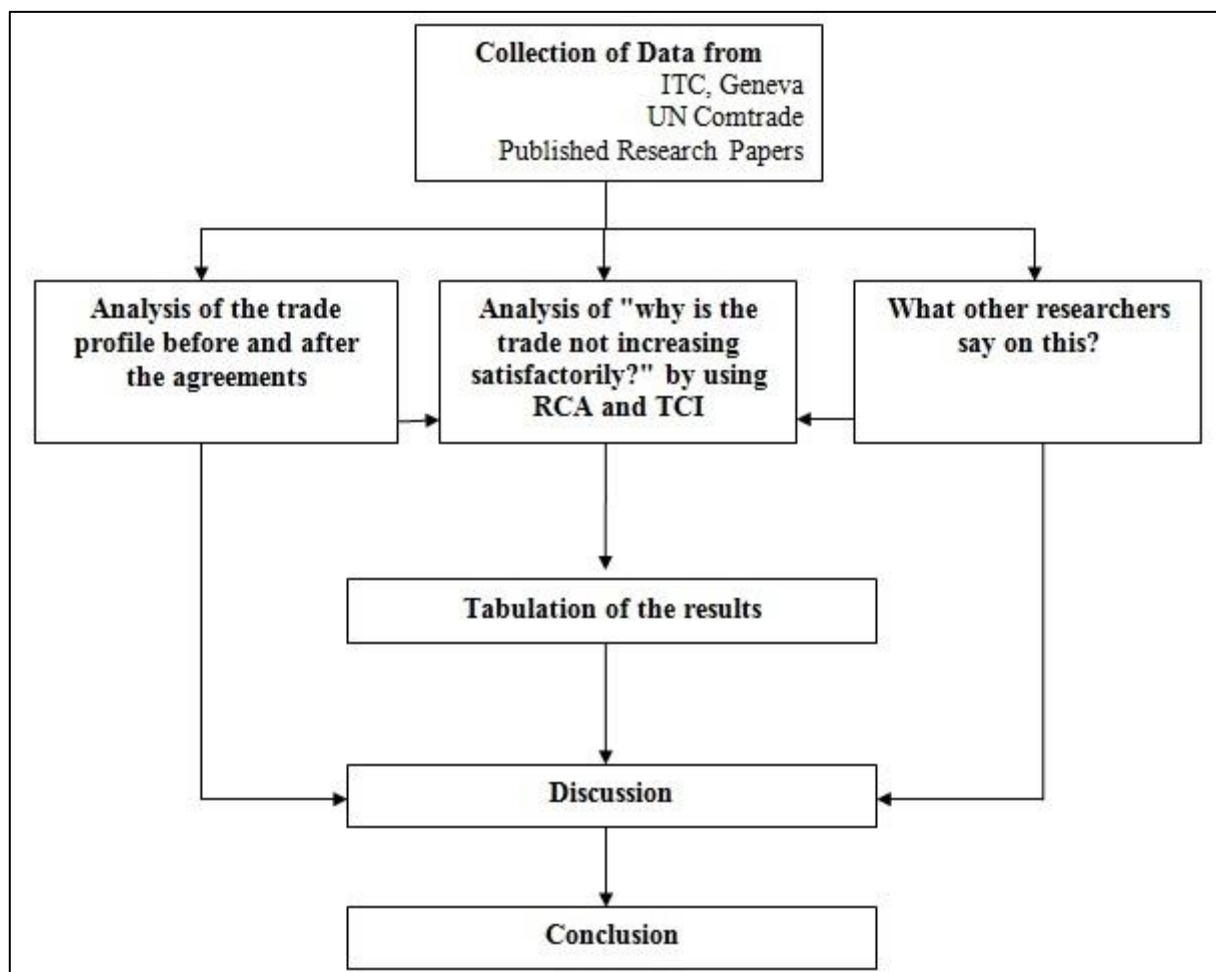


Figure 1. Schematic Diagram of research design. Source: Authors.

The cited papers in the research on this topic form a cohesive body of literature that is closely related and collectively contributes to the overarching objectives of the current work. These papers share common themes, methodologies, and research questions, creating a network of knowledge that enriches the understanding of trade agreements and bilateral trade dynamics between India and Sri Lanka. Firstly, the cited papers are related to each other through their shared focus on the impact of trade agreements on bilateral trade. They collectively form a research context that highlights the significance of trade agreements in shaping economic relationships between countries. These papers delve into the empirical assessment of these trade agreements, evaluating their effects on trade flows, tariff reductions, and trade complementarity. This empirical focus establishes a foundation for the current work's quantitative analysis of the SAFTA and ISFTA agreements' impact on India and Sri Lanka's bilateral trade.

Moreover, the cited papers contribute to a shared understanding of the theoretical underpinnings of trade agreements and bilateral trade. They explore trade theories such as comparative advantage, factor proportions theory, and the gravity model, providing theoretical frameworks that guide the analysis of trade dynamics. For instance, Moktan [70] applied these trade theories to assess the expected and observed outcomes of trade agreements. This theoretical grounding aligns with the current work's methodology, which employs trade theories to evaluate the SAFTA and ISFTA agreements' impact on India and Sri Lanka's trade complementarity and revealed a comparative advantage. Additionally, the cited papers are interconnected through their exploration of regional trade dynamics and trade agreements' roles within broader regional contexts. Many of these papers consider the South Asian region as a whole, examining the relationships between

countries beyond India and Sri Lanka. This broader perspective is evident in the paper by Akram [1], which evaluated the trade potential within the South Asian Association for Regional Cooperation (SAARC). While focusing on regional dynamics, these papers provide insights into the importance of bilateral trade relationships within larger regional trade blocs. This regional context is relevant to the current work, which seeks to understand how India and Sri Lanka's bilateral trade fits into the broader regional and global trade landscape. Furthermore, the cited papers collectively offer insights into the calculation and application of trade indices, such as the revealed comparative advantage (RCA) and the trade complementarity index (TCI). These indices serve as analytical tools for assessing the comparative advantage and trade complementarity between countries. Also, the cited papers contribute to a shared exploration of policy implications arising from trade agreements and their impact on trade dynamics. These papers offer discussions on the potential consequences of trade agreements for industries, tariffs, and trade patterns. Understanding these policy implications is essential for the current work, as it seeks to evaluate not only the statistical significance, but also the real-world implications of the SAFTA and ISFTA agreements on India and Sri Lanka's bilateral trade.

The analysis began by examining the trends and patterns of bilateral trade flows between India and Sri Lanka during the study period. The “revealed comparative advantage” index and the “trade complementarity” index were calculated to assess the comparative advantage and trade complementarity between the two countries. The RCA (revealed comparative advantage) was calculated by employing the formulation given below:

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

where;

RCA_{ij} represents the revealed comparative advantage index for a specific product j in a country i ;

X_{ij} represents the value of exports of the specific product j from country i ;

X_i represents the total value of exports from country i ;

X_{wj} represents the value of world exports of the specific product j ;

X_w represents the total value of world exports.

Then, we used TCI. The formula for calculating the trade complementarity index is as follows:

$$TCI_{ij} = (X_{ij}/X_i)/(X_j/X_w) \quad (2)$$

where;

CI_{ij} represents the Trade Complementarity Index for a specific product j between country i and country j .

X_{ij} represents the value of exports of the specific product j from country i to country j .

X_i represents the total value of exports from country i .

X_j represents the total value of imports of the specific product j by country j .

X_w represents the total value of world imports of the specific product j .

The SAFTA and ISFTA agreements were evaluated in terms of their objectives, provisions, and impact on bilateral trade between India and Sri Lanka. The analysis involved comparing trade flows and trade performance before and after the implementation of the trade agreements. Any statistical significance or causal relationships between the agreements and bilateral trade performance were also assessed.

The data of HS 2-digit commodity groups for the period of 1995–2020 were used for the purpose of this analysis. To arrive at a clear picture of whether the trade agreements had any major effect on their bilateral trade, the periods before the agreement and after it have been termed as pre-ISFTA and post-ISFTA for the “India Sri Lanka Free Trade Agreement” and pre-SAFTA and post-SAFTA for the “South Asian Free Trade Agreement”. The causes of subdued bilateral trade were analyzed by employing the “Revealed Comparative Advantage Index” and “Trade Complementarity Index”.

The methodology chosen for the research paper is grounded in a well-considered approach that aligns with established research practices and trade theories. Several key factors justify the use of this methodology and its strong connection to prior research and trade theories. Firstly, the adoption of a quantitative research design is apt for addressing the research question, as it allows for a systematic and data-driven analysis of the impact of trade agreements on bilateral trade. This approach resonates with trade theories such as comparative advantage, which advocate for specialization and efficiency in trade. By using quantitative methods, the study aims to assess whether the South Asian Free Trade Agreement (SAFTA) and the India–Sri Lanka Free Trade Agreement (ISFTA) have indeed enhanced the bilateral trade prospects between India and Sri Lanka in line with these theories.

The utilization of secondary data from reputable sources such as the World Trade Organization (WTO) and the United Nations Conference on Trade and Development (UNCTAD) adds rigor and credibility to the research. This aspect connects the methodology to prior research in the field of international trade, as it leverages established data sources and aligns with previous studies that have examined trade agreements' effects on bilateral trade relationships. Additionally, the consideration of tariff rates, non-tariff barriers, and economic indicators in data collection aligns with trade theories like the New Trade Theory, which emphasizes economies of scale and product differentiation. This comprehensive data approach ensures that the analysis encompasses multiple facets of trade agreements' impact on India and Sri Lanka's trade dynamics. Furthermore, our methodology's calculation of the revealed comparative advantage (RCA) index and the trade complementarity index (TCI) directly connects to international trade theories. The use of the RCA index, for instance, reflects the application of comparative advantage theory, which suggests that countries should specialize in products where they have a relative advantage. By employing the TCI, the study delves into the notion of trade complementarity, reflecting the New Trade Theory's emphasis on specialization and product differentiation. These indices serve as empirical tools to assess whether the trade agreements align with these fundamental trade theories and whether they lead to increased trade specialization and complementarity between India and Sri Lanka. In terms of previous research and trade theories, the methodology also contributes by evaluating the SAFTA and ISFTA agreements in light of their objectives, provisions, and actual impacts on bilateral trade. This approach aligns with prior studies that have assessed the effectiveness of trade agreements [71–73]. The comparison of trade flows and performance before and after the implementation of these agreements reflects a broader trend in trade research, wherein researchers seek to understand the causal relationships and statistical significance of trade agreements regarding trade dynamics.

4. Analysis, Findings, and Discussion

The section on analysis has been split into three: Sections 4.1–4.3. Under Section 4.1, the trade profiles of India and Sri Lanka are analyzed. Under Section 4.2, the impact of ISFTA and SAFTA on trade flows between the two countries is assessed. Finally, under Section 4.3, the analysis mainly seeks to determine the inherent causes of subdued bilateral trade.

4.1. Present Status of Trade between India and Sri Lanka

Under this section, the current state of trade between India and Sri Lanka was investigated by employing data extracted from a specialist website (<https://www.trademap.org>, accessed on 1 January 2022), which is maintained by the International Trade Centre, Geneva, a multilateral agency that works in collaboration with the United Nations, World Trade Organizations, and the United Nations Conference on Trade and Development on matters of international trade. The findings of the other researchers were also taken care of during the analysis. The analysis encompasses developments vis-a-vis bilateral exports, imports, and total trade during the last two decades, starting from 2001.

The data for the period of 2001–2020 demonstrate that India’s trade with Sri Lanka has not been as impressive as its trade with the rest of the globe. During the aforementioned period, India’s average export to Sri Lanka as a percentage of overall exports to the world was less than 2%, and its average import from Sri Lanka during 2006–2020 could have been below 0.20 percent (Tables 1 and 2). The total trade of India with Sri Lanka lagged behind even the 1 per cent mark, whereas it emerged from the analysis that India’s exports (average of 2016–2020) to other countries such as the USA, China, UAE, Hong Kong, and Singapore stand, more or less, at 16, 5, 9, 4, and 3 percent, respectively. Moreover, the shares (average of 2016–2020) of other countries, such as China, the USA, the UAE, and Saudi Arabia, in India’s imports are also very perceptible, standing at, more or less, 16, 7, 6, and 5 percent, respectively. In addition, India’s exports of goods and services to, imports from, and trade volume with Sri Lanka have seen a fluctuating trend during the study period, with no consistency in the growth rates (Figures 2 and 3). Nevertheless, India’s exports to, imports from, and total trade with Sri Lanka have been very miniscule in percent terms. It is worth mentioning that India’s trade performance in Sri Lanka has been better than her trade performance in the world at large. During the period of 2006–2020, India’s exports to the rest of the world could have risen at an annual pace of 15%, which is lower than the country’s average growth in exports to Sri Lanka (around 20 percent).

Table 1. India’s trade with Sri Lanka (per cent) (2001–2020).

	Export	Import	Total Trade
Avg.	1.343	0.194	0.668
Avg. of growth	7.98	11.73	7.98

Sources: authors’ calculation based on data compiled from ITC, Geneva (<https://www.trademap.org>, accessed on 1 January 2022).

Table 2. Effect of ISFTA and SAFTA on Indian–Sri Lankan export, import, and total trade.

	Period	Percent		
		Avg. Export	Avg. Import	Avg. Total Trade
Pre-ISFTA	1995–1999	1.337	0.087	0.644
Post-ISFTA	2000–2020	1.578	0.186	0.762
Pre-SAFTA	1995–2005	1.710	0.210	0.878
Post-SAFTA	2006–2020	1.525	0.177	0.715

Sources: authors’ calculations based on data extracted from the website of the UN Comtrade Database (<https://comtrade.un.org>, accessed on 1 January 2022).

Similarly, India’s average growth in imports from the world during the study period stood at, more or less, 17 percent, whereas her imports from Sri Lanka registered an average growth rate of approximately 25 percent. Thus, in both cases, India’s trade with Sri Lanka was indeed higher than the national average. The average growth in total trade with Sri Lanka was also higher than India’s average growth in total trade with the world. It is, therefore, obvious from the analysis that all three dimensions of India’s trade with Sri Lanka have been better than its average performances in the world at large. However, it should be noted that trade between the two countries has struggled to achieve a discernible and continuous increase year after year (Figure 3), which is a subject for further analysis.

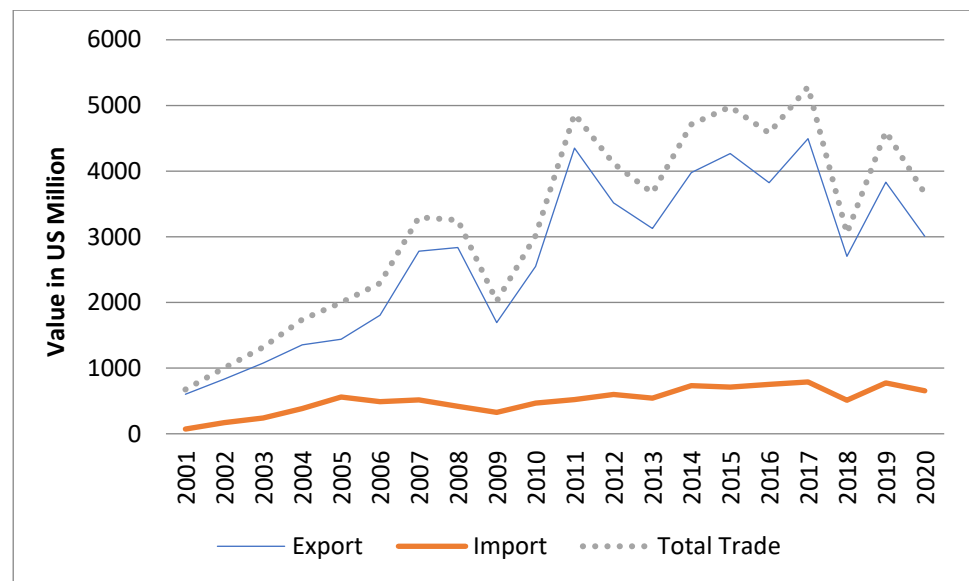


Figure 2. India's Trade with Sri Lanka (2001–2020). Source: authors' calculation based on data compiled from ITC, Geneva (<https://www.trademap.org>, accessed on 1 January 2022). Note: Data for the year 2018 were not available, so for the year 2018, the average of 2001–2020 was taken for the analysis.

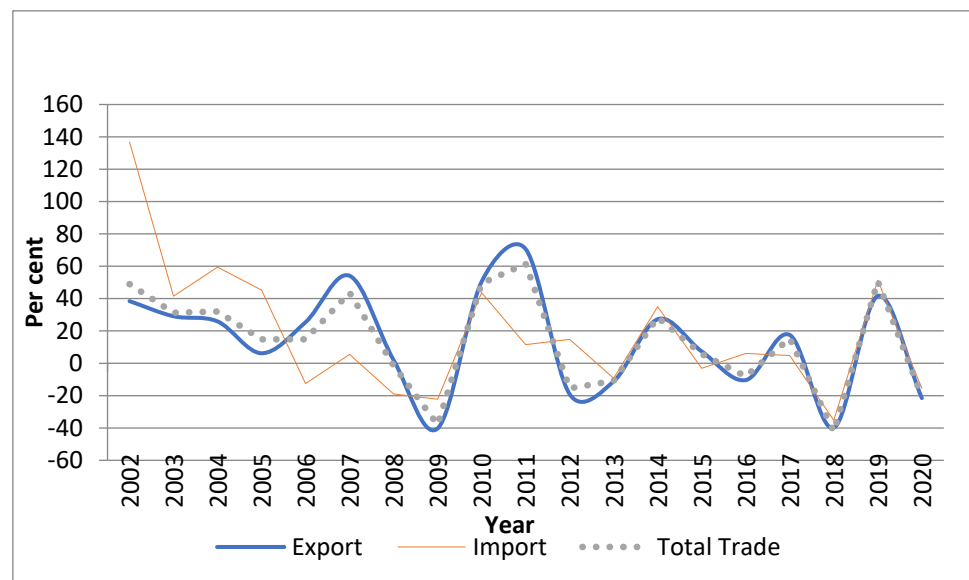


Figure 3. India's Trade with Sri Lanka: Annual Growth Rate (2002–2020). Source: authors' calculation based on data compiled from ITC, Geneva (<https://www.trademap.org>, accessed on 1 January 2022). Note: Data for the year 2018 were not available, so per cent for the year 2018 is based on the average of data of 2001–2020.

Although it seems fascinating that the magnitude of exports from India to Sri Lanka increased sixfold (USD 3006.13 million) in the year 2020 as compared to the export value of just USD 602.38 million in the year 2001, one cannot ignore the fact that the overall export of India to the world also increased, and the increment is even greater than what India could record in its exports to Sri Lanka. In 2001, the value of India's exports to the world was USD 43.87 billion, which increased to USD 275.48 billion in 2020, registering a six-fold increase. Thus, India's export performance as far as its exports to Sri Lanka is concerned was below India's overall export performance. However, India's imports from Sri Lanka climbed faster than India's overall imports from the rest of the globe. The value of India's

imports from Sri Lanka climbed from USD 71.97 million in 2001 to USD 654.44 million in 2020, thereby registering a ninefold increase. However, India's imports from the world increased by only seven times during this period. Since the export value of India is far greater than the import value of India from Sri Lanka, the impact on India's total trade has been clearly visible as well. India's total trade value could increase from on India's total trade 674.36 million in 2001 to 3660.57 in the year 2020, an increase of just five times. However, India's total trade with the rest of the globe increased by more than seven times during the same period.

The question arises as to why India's trade with Sri Lanka did not register more than India's overall growth in exports and total trade with the world, despite the fact that both countries are members of SAFTA, BIMSTEC, and ISFTA. SAFTA is an agreement among eight South Asian countries (namely, Afghanistan, Bangladesh, Bhutan, India, the Maldives, Nepal, Pakistan, and Sri Lanka) to reduce customs duties on tradable goods between them. The agreement has been in force since 1 January 2006. The Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation, on the other hand, is an agreement between South Asian and Southeast Asian countries to promote regional trade and development. This agreement has also been in force for the last two decades. The ISFTA is a bilateral trade agreement between India and Sri Lanka that has been in effect since 1 March 2000.

When it comes to the compositions of India's exports and imports, the country's five main items of export at HS-2 digits by value are: mineral fuels (HS 27); pharmaceutical products (HS 30); ships, boats, and floating structures (HS 89); sugar and sugar confectionery (HS 17); and iron and steel (HS 72). Apart from these, cotton (HS 52), knitted or crocheted fabrics (HS 60), machinery and mechanical appliances (HS 84), and vehicles and related products (HS 87) are also exported in large quantities. The major items imported from Sri Lanka include animal fodder (HS 23), ships and boats (HS 89), coffee, tea, maté, spices (HS 09), edible fruit and nuts (HS 08), and machinery and mechanical appliances (HS 84). Nevertheless, these items are of great significance and their trade values are quite perceptible; this does not mean they have reached the saturation level of trade or that trade potential does not exist. There is a possibility of a further increase in the trade of those items between India and Sri Lanka, which is outside the scope of this paper.

Several factors have contributed to the historically low trade levels between India and Sri Lanka [74]. First, structural challenges in both economies have hindered the full realization of their trade potential [75]. These challenges include differences in production capacities, product specialization, and economic structures, which can limit the complementarity required for robust trade relationships. Additionally, non-tariff barriers (NTBs) and trade barriers, including administrative complexities and bureaucratic red tape, have acted as deterrents to trade expansion. Furthermore, infrastructural issues, particularly in transportation and logistics, have hampered the smooth flow of goods between the two countries [76]. High transaction costs associated with formal trade channels have discouraged trade, and efforts to reduce these costs have been limited. The future of trade between India and Sri Lanka holds promise to a certain extent, but it also necessitates a strategic approach to overcome the persistent challenges. One avenue for growth lies in leveraging existing regional trade agreements, such as SAFTA, BIMSTEC, and ISFTA. These agreements provide a framework for reducing tariff barriers and promoting trade facilitation. By streamlining administrative processes, reducing non-tariff barriers, and enhancing trade-related infrastructure, both countries can unlock untapped trade potential [77]. Initiatives that focus on enhancing connectivity, such as better maritime links and transport infrastructure, could significantly boost trade. Additionally, addressing trade imbalances and exploring new avenues for collaboration in emerging sectors like information technology and services can diversify trade and mitigate reliance on traditional products [78]. Moreover, the strategic locations of India and Sri Lanka in the Bay of Bengal region offer opportunities for deeper regional integration and participation in global value chains [79]. By harmonizing trade policies, promoting investment, and fostering economic cooperation,

these countries can position themselves as key players in the evolving dynamics of South and Southeast Asian trade. Leveraging the opportunities presented by initiatives like the Belt and Road Initiative (BRI) and the Indian Ocean Rim Association (IORA) could facilitate enhanced connectivity and trade linkages with neighboring countries, further enhancing the trade ecosystem.

4.2. Assessment of Trade under the ISLFTA

This section attempts to determine whether the trade agreements, SAFTA and ISFTA, which were adopted with fanfare and much optimism, had any effect on the bilateral trade between the two countries (India and Sri Lanka). We already know that the purpose of trade agreements such as regional trading arrangements (RTAs) is to foster trade between the contracting countries by reducing barriers to trade and creating a business-friendly atmosphere in the region [80,81]. If the trade does not increase to a satisfactory level, a deeper investigation into the economic reasons is warranted to determine the underlying causes of the stunted trade. Adopting the approach of Akram [1], the period of 1995–2020 was divided into two parts: pre-ISFTA and post-ISFTA. The period of 1995–1999 was taken as pre-ISFTA, and the period of 2000–2020 was taken as post-ISFTA. Since data prior to 1995 were not available at UNComtrade, the pre-ISFTA period was confined to a four-year period. However, this does not affect the reliability of the analysis, as the post-agreement period is more important for arriving at any conclusion as to whether the agreement had any positive or significant changes. The effect of the SAFTA agreement was also checked using the same approach by dividing the period into pre- and post-SAFTA periods. Since the bilateral free trade agreements between India and Sri Lanka (ISFTA) and SAFTA came into force in 2010 and 2006, respectively, those two years were taken as the demarcating years to divide the period into pre-agreement and post-agreement. In the case of SAFTA, the 1995–2005 period was designated as the pre-SAFTA period, and the 2006–2020 period was designated as the post-SAFTA period. The analysis reveals that none of the agreements, including ISFTA and SAFTA, brought about any perceptible positive change in the bilateral trade between them. The average of India's export to Sri Lanka out of India's total export to the world during the pre-ISFTA period was 1.33, which barely increased to 1.57 per cent (Table 2 and Figure 4).

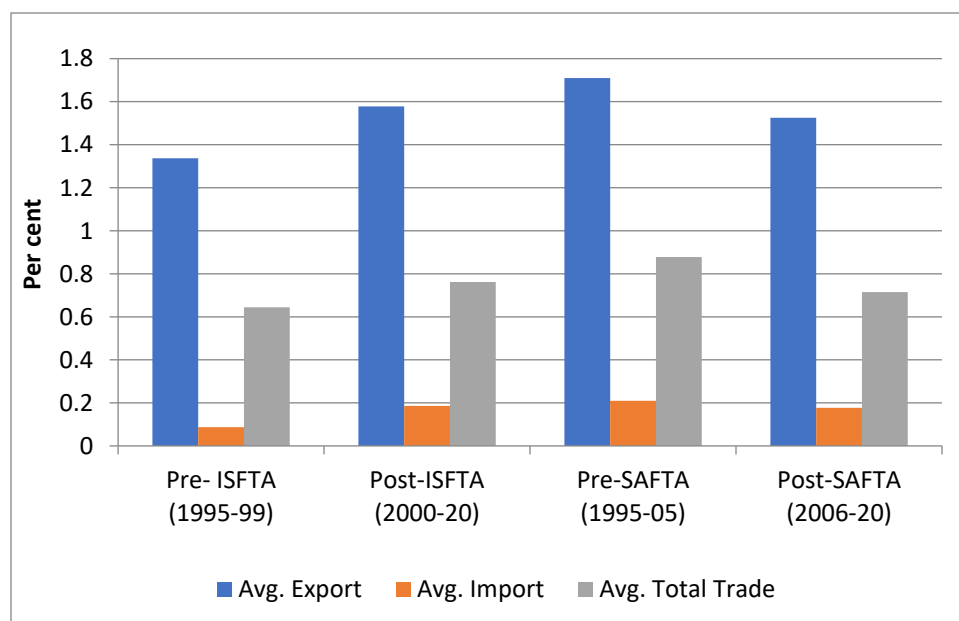


Figure 4. Effect of ISFTA and SAFTA ON India-Sri Lanka Trade. Sources: authors' calculations based on data extracted from the website of the UNComtrade Database (<https://comtrade.un.org>, accessed on 1 January 2022).

The SAFTA agreement did not bring about an expected change either. However, in the post-SAFTA period, India had a declining export figure, which plummeted from 1.71 in the pre-SAFTA period to 1.52 in the post-SAFTA period (Table 2). However, the import from Sri Lanka to India registered a significant positive difference by pushing India's import percentage up from 0.87 during the pre-ISFTA period to 0.18 in the post-ISFTA period, more than double. The analysis further reveals that the agreements proved to provide slight succor to Sri Lanka's exports to India, which is consistent with the statements of Beriha [82] and Kelegama [60], who asserted that ISFTA worked in favor of Sri Lanka to a certain extent. However, the export from Sri Lanka to India also seems to have declined during the post-SAFTA period, which was quite attractive before 2006. Since the volume of trade between the two countries, India and Sri Lanka, is largely determined by export from India to Sri Lanka due to India's gigantic position among the South Asian countries, the bilateral trade could not register a substantial positive growth. It barely increased from 0.64 percent in the pre-ISFTA period to 0.76 percent in the post-ISFTA period. The increase in trade may be attributed to an increase in imports from Sri Lanka, apart from a meagre increment in exports from India to Sri Lanka. By and large, the analysis clearly reveals that the purposes of both agreements, which were celebrated with much fanfare at the time of their launches, and which set much optimism in motion, seem to have been defeated. The finding in this study does not agree with the statement of Joshi [83], who stated that ISFTA is one of the successful agreements. Taneja et al. [55] rightly feared that the ISFTA might not be so fruitful, as it had many lacunae. According to them, it was more of a preferential trading arrangement in nature than a free trade agreement, as the majority of the tradable goods were not duty-free. In addition, a substantial number of products were on the negative list. The apprehensions of Taneja et al. [55] proved true with the passage of time. The findings of Kelegama [60] show the apprehensions of Taneja et al. [55] to be true.

The India–Sri Lanka Free Trade Agreement (ISFTA) has faced persistent challenges and limitations [84] that have contributed to its perceived failure. One significant issue is the trade imbalance between the two countries, with India consistently running a substantial trade surplus. This trade asymmetry has led to concerns in Sri Lanka regarding its domestic industries' competitiveness, particularly in the face of Indian products flooding its market. Furthermore, non-tariff barriers (NTBs) and non-tariff measures (NTMs) have impeded the smooth flow of goods between the two countries, creating additional hurdles for Sri Lankan exporters [63]. Another key factor is the limited scope of the ISFTA, which primarily covers the trade of goods and leaves out important sectors like services. This limited coverage has hindered the diversification of trade and prevented the two countries from tapping into the full range of economic opportunities available to them. Moreover, political and geopolitical factors have also played a role in the perceived failure of the ISFTA. Tensions between India and Sri Lanka on various issues have, at times, strained trade relations [85], leading to delays and disruptions in trade negotiations and agreements. Inefficiencies in customs procedures and border management have added to these challenges, resulting in delays and increased transaction costs for businesses engaged in cross-border trade. While there have been efforts to address some of these issues through Comprehensive Economic Partnership Agreement (CEPA) discussions and bilateral talks, progress has been slow, and concerns about the impact of further liberalization on sensitive sectors like agriculture have impeded substantial breakthroughs.

4.3. Natural Reasons for the Low-Level of Trades

The analysis to find the inherent causes for the low level of trade was performed in two parts. In the first part, the "revealed comparative advantage" index, as proposed by Balassa [27], for India and Sri Lanka are calculated. The second part checks whether they are ideal trading partners or real competitors.

4.3.1. Revealed Comparative Advantage

It is necessary to analyze the inherent reasons behind the subdued level of trade between countries if the trade between two or more countries is not increasing even after repeated attempts. The “Revealed Comparative Advantage” Index (RCA index), also known as the “Balassa index,” is one of the tools to accomplish this. The “Balassa index” is used to measure a country’s relative disadvantage or advantage in a specific class of goods or services. It is based on the concept of “Ricardian comparative advantage” [86]. The comparative advantage or disadvantage of a specific nation in a certain class of products is calculated using RCA to determine whether a country is better or worse than the rest of the world in terms of a given product. Researchers such as Akram [1], Batra and Khan [87], Bano and Paswan [88], Jain and Singh [89], and Wosiek and Visvizi [86] have already used RCA ratios to study countries’ export specialty in their studies. According to Akram [1], the RCAIJ (revealed comparative advantage ratio of a country *i* in product *j*) can be determined as follows:

$$(X_{ij}/X_{it})/(X_{wj}/X_{wt}) = \text{RC AIJ}$$

where X_{ij} represents a country’s export of product *j*, X_{it} represents the country’s total export, X_{wj} represents the world export of product *j*, and X_{wt} represents the total world export. If the RCA value exceeds one (>1), the country is said to be specialized (comparative advantage) in the commodity in question, and if the RCA is less than one (<1), the country is termed unspecialized (comparative disadvantage) [1,90,91].

The trade values of 99 product categories with HS two-digit codes for the years 2010, 2015, and 2020 were used to determine India’s and Sri Lanka’s comparative advantages and disadvantages, product-wise. The mean RCA of these three years was used to interpret the results in order to obtain a fair value. The analysis shows that (see Table 3), India had a comparative advantage ($\text{RCA} > 1$) in 43 of 99 two-digit commodity groups, accounting for specialization in 43.43 percent of product groups while having a comparative disadvantage in 56.56 percent of product groups (revealed comparative disadvantage). India had a competitive advantage in meat, fish, crustaceans, aquatic invertebrates, edible vegetables, coffee, tea, spices, cereals, oil seeds, vegetable plaiting materials, sugar, confectionery items, tobacco and tobacco substitutes, salt, lime, cement, ores, mineral oils, organic chemicals, pharmaceutical products, tanning extracts, explosives, raw hides and skins, silk, cotton, etc.

Table 3. Revealed comparative advantage (RCA) profile of India and Sri Lanka in 2-digit HS code.

Nomenclature	Country	
	India	Sri Lanka
Number of products with HS two-digit codes in which a country has revealed comparative advantage >1 (average of 2010, 2015, and 2020)	43	26
Products with HS two-digit codes in which a country has RCA >1 or comparative advantage (in per cent)	43.43	26.26
Products with HS two-digit codes in which a country has RCA <1 or comparative disadvantage (in per cent)	56.56	73.73

Source: authors’ calculation based on data extracted from the database of International Trade Centre, Geneva (<https://www.trademapp.org>, accessed on 1 January 2022).

Sri Lanka, in comparison to India, specializes in a small number of export commodities. It has a comparative advantage in only 26 of the 99 two-digit product groupings, accounting for a positive RCA in only 26.6 percent of the total number of items, as per the calculations. As a result, it had a disadvantage in the remaining 73.73 percent. Sri Lanka had positive RCAs in the product groupings of fish, aquatic invertebrates, crustaceans, edible fruit and nuts, plants, maté and spices, coffee, tea, vegetable products, vegetable or animal fats

and oils, tobacco and tobacco substitutes, fruit, nuts, animal fodder, rubber, newspapers, printed books, products of the printing industry, woven fabrics, paper yarn, special woven fabrics, etc.

The investigation's most striking finding was the large range of goods for which both India and Sri Lanka have had competitive advantages, implying that they suffer from export similarities and appear to be competitors. In 14 of the 26 product groups, India enjoys a comparative advantage (RCA greater than 1), indicating India's dominance. One of the causes of Sri Lanka's substantial trade deficit with India, among other things, is a lack of "export specialization" in a substantial number of commodity categories. With the exception of a few product categories, the prospects for inter-industry trade between India and Sri Lanka are poor.

It is also clear that one of the primary issues concerning RCA between India and Sri Lanka is the persistence of a limited range of exported goods. Both countries have historically focused on traditional products, such as textiles, tea, spices, and agricultural commodities. While these sectors have their merits, relying heavily on them raises concerns regarding diversification. Overdependence on a narrow set of exports can make both countries vulnerable to global market fluctuations and shifts in demand. Diversifying their export portfolios by expanding into higher value-added industries, technology-driven sectors, and services can mitigate this vulnerability and promote sustainable trade growth.

Revealed comparative advantage (RCA) theory, as is clear, is typically employed to understand why countries with distinct comparative advantages engage in trade to mutual benefit. However, when applied to the case of India and Sri Lanka, it fails to fully explain the stagnation in their trade relations. Several factors contribute to the limited applicability of RCA theory in this context. Firstly, the high degree of product overlap in which both India and Sri Lanka exhibit comparative advantage points to intense competition rather than complementarity. While RCA theory assumes that countries will specialize in different goods to maximize efficiency and promote trade, the stark similarity in their export portfolios suggests that they are competing in overlapping product categories. This competition can hinder trade growth rather than fostering it. Secondly, structural and non-tariff barriers may impede trade between India and Sri Lanka. Despite the complementary factors of production and geographical proximity, various challenges such as complex regulatory procedures, differences in standards and certification processes, and transport infrastructure issues may hinder the smooth flow of goods and services. These non-tariff barriers can offset the potential gains from specialization and hinder trade expansion.

Furthermore, issues related to asymmetry in the structure of their economies play a significant role in RCA. India boasts a vast and diverse industrial and manufacturing base, giving it the comparative advantage of producing a wide array of goods. In contrast, Sri Lanka has a smaller industrial base and a more pronounced focus on agriculture and traditional industries. This asymmetry raises questions about the potential for mutually beneficial trade between the two countries. It is essential for both countries to consider how to leverage their respective strengths to foster trade in areas where they genuinely hold a competitive edge, thus achieving a more balanced trade relationship. Another pertinent issue is the influence of trade policies, regulations, and logistics on RCA. Differences in trade-related policies, such as tariffs, non-tariff barriers, and regulations, can impact the actual realization of comparative advantage. Additionally, challenges in trade logistics, including transportation infrastructure and border procedures, can hinder the efficient movement of goods and services, affecting the practicality of exploiting RCA. Addressing these issues through bilateral trade agreements, harmonized regulations, and infrastructure development may enhance trade prospects and allow both countries to harness their respective comparative advantages to a certain extent.

Thus, the limited applicability of revealed comparative advantage theory in the case of India and Sri Lanka's trade can be attributed to the competitive nature of their export portfolios and the presence of non-tariff barriers that impede trade growth. To enhance

bilateral trade, policymakers should consider addressing these challenges and focus on promoting genuine complementarity in their trade relations, potentially leading to more significant trade volume between the two countries.

4.3.2. Trade Complementarity

The “Trade Complementarity Index (TCI)” determines whether two countries are “natural trading partners” and whether trade expansion is possible. If the countries’ trade complements each other, they are said to be natural trading partners, and vice versa is the case if they do not. If the countries’ trade complements each other, they are said to be natural trading partners, and vice versa this is not the case. Natural trading partners are countries that have complementary trade, whereas non-complementary trading partners are ones that do not. According to the World Bank [28], TCI is calculated as follows:

$$TCI_{ij} = [1 - \sum m_{ik}/M_i - x_{jk}/X_j]/2 \quad (3)$$

TCI_{ij} is the “trade complementarity index between countries i and j ”. It ranges from 0 to 1, where 0 = “ideal competitors,” and 1 = “ideal trading partners.” 0 signifies that the export profile of j is totally inversely connected to the import profile of i , while 1 suggests that the opposite is true. In this paper, the TCI of HS two-digit commodity groupings for the year 2020 was computed. The analysis revealed that both countries have fairly weak complementarities and appear to be competitors (see Table 4). Sri Lanka’s export profile is insufficient to meet India’s import requirements, as evidenced by the abysmally low value of 0.225. Sri Lanka lacks comparative advantage in a sizable product category, as demonstrated by the RCA analysis, and TCI research strengthens the uncertainty that Sri Lanka’s exports to India will not expand as projected, particularly in inter-industry trade. India, being a major country with an export advantage over Sri Lanka in relatively broad product groups, may cover Sri Lanka’s import requirements to a certain extent, as the result is greater than 0.642, indicating partial complementarity between India’s export and Sri Lanka’s import profiles. On the contrary, Sri Lanka’s performance in terms of meeting India’s import demand is comparatively disappointing. As a result, significant growth in bilateral trade, particularly from Sri Lanka’s perspective, is improbable in the future.

Table 4. Trade complementarities between India and Sri Lanka for the year 2020.

Importing Country	Exporting Country	
	Sri Lanka	India
Sri Lanka	--	0.642
India	0.225	--

Source: Authors’ calculation based on data derived from the website of ITC, Geneva (<https://www.trademap.org>, accessed on 1 January 2022).

It is clear that the concept of trade complementarity index (TCI) plays a crucial role in assessing whether two countries are “natural trading partners” and whether the potential for trade expansion exists. In the context of India and Sri Lanka’s trade, TCI serves as a valuable tool to evaluate the extent to which their export and import profiles align. The analysis of TCI for India and Sri Lanka in 2020 revealed a significant challenge in their trade relations. Both countries exhibited fairly weak complementarities, with TCI scores indicating a competitive rather than complementary trade dynamic. Sri Lanka’s TCI score of 0.225 reflects a limited ability to meet India’s import demands, signifying a lack of significant complementarity between their export and import profiles. This observation aligns with the findings from the revealed comparative advantage (RCA) analysis, which indicated product overlap and competition. On the other hand, India’s TCI score of 0.642 suggests partial complementarity between its export and Sri Lanka’s import profiles. While India has an export advantage over Sri Lanka in certain product groups, the overall performance of Sri Lanka in terms of meeting India’s import requirements is relatively

disappointing. This imbalance in trade complementarity raises doubts about the potential for significant growth in bilateral trade, particularly from Sri Lanka's perspective. The limited trade complementarity between India and Sri Lanka is a critical factor contributing to the stagnant growth in their trade relations. The lack of substantial complementarity implies that their exports and imports do not align efficiently, hindering the natural flow of goods and services between the two countries. One of the underlying issues is the similarity in the export portfolios of India and Sri Lanka, which leads to competition rather than cooperation. This competition may result in price wars and limited opportunities for mutual growth. Additionally, structural barriers, non-tariff obstacles, and regulatory complexities may further impede the seamless exchange of goods.

Although much of a chance of trade increase does not seem palpable, both countries must embark on a multifaceted approach. This includes a concerted effort to reduce tariffs and dismantle non-tariff barriers, streamline customs procedures, and invest in trade infrastructure, particularly at ports and transport networks. Additionally, facilitating information sharing between businesses, supporting SMEs, and promoting joint ventures may empower enterprises to seize cross-border opportunities. Moreover, addressing trade imbalances, enhancing cultural exchanges, and maintaining open diplomatic channels can be crucial steps. Finally, a commitment to regular policy assessments and adjustments can be instrumental in ensuring the growth, to a certain level, of bilateral trade and harnessing untapped potential.

Thus, for trade between India and Sri Lanka to increase, efforts should be directed towards identifying areas of genuine complementarity, where each country can specialize and benefit from mutual trade. Policymakers should consider measures to reduce trade barriers, simplify regulations, and promote inter-industry collaboration to harness the true potential of their trade relationship. Addressing these challenges will be crucial to unlocking the possibilities for trade expansion between India and Sri Lanka.

4.3.3. Internal Validity Limitations and Macroeconomic Trend

The study investigating bilateral trade between India and Sri Lanka in the context of the South Asian Free Trade Area (SAFTA) and the India–Sri Lanka Free Trade Agreement (ISFTA) raises important questions about the internal validity of its findings and the potential impact of macroeconomic trends on the observed outcomes. The analysis covered a substantial period, from 1995 to 2020, which coincides with significant macroeconomic developments that could confound the study's causal claims. For instance, during the sample period, the global economy experienced several external shocks, such as the 2008 financial crisis and the COVID-19 pandemic. These shocks had far-reaching consequences on trade patterns, economic growth, and policy responses both in India Sri Lanka and worldwide. As a result, any attempt to establish causal links between variables in the study may be confounded by the influence of these exogenous shocks. Based on the critique by Lucas [92] as well as that of Angrist and Pischke [93], attributing changes in trade patterns solely to domestic policies may overlook the substantial impact of these external events.

A notable limitation of our research might be the volatile and evolving landscape of global trade policies in the aftermath of the global financial crisis. The rise of populist leaders in both developed and emerging-market economies, as highlighted by Verner and Gyöngyösi [94]; Heydarian [95]; Hartwell and Devinney [96]; Hartwell [97]; and Gyöngyösi and Verner [98], triggered a wave of protectionism and the termination of multilateral agreements, as pointed out by Paiva et al. [99] and Campello et al. [100]. This political and economic backdrop significantly complicates the analysis of trade agreements' impact on bilateral trade between India and Sri Lanka. The unilateral policy shifts and trade disruptions initiated by various countries in response to changing political leadership and economic priorities [101,102] can introduce substantial noise into our data. This noise can obscure the true effects of trade agreements on bilateral trade flows. Furthermore, the unpredictability of trade policies in this environment makes it challenging to establish causal relationships between the presence or absence of trade agreements and changes

in trade volumes. The influence of numerous external and geopolitical factors beyond the scope of this study, for instance, a surge in global trade due to China's World Trade Organization entry [103], may also contribute to fluctuations in bilateral trade, making it difficult to isolate the specific impacts of trade agreements.

Another significant limitation might be the potential influence of central banks' expansionary monetary policies, as highlighted by Cortes et al. [104], Modugu and Dempere [105], and Papadamou et al. [106]. The massive liquidity injections made by central banks around the world can have far-reaching implications for foreign trade, including between India and Sri Lanka. These policies can affect exchange rates, interest rates, and capital flows, which, in turn, may impact trade dynamics between India and Sri Lanka. However, pinpointing the exact magnitude and direction of this influence is challenging due to the multitude of factors at play, including fiscal policies, market sentiment, and global economic conditions. Apart from this, the research period coincides with a notable increase in trade-policy uncertainty, as noted by Bloom [107] and Liu and Ma [108]. While protectionism is often considered a direct negative shock to global integration, the rise in trade-policy uncertainty introduces a second-order challenge. This uncertainty can create hesitancy among businesses and investors, potentially leading to changes in trade patterns. However, quantifying the precise impact of this uncertainty on bilateral trade between India and Sri Lanka is intricate, as it depends on various factors such as firms' risk perceptions, their adaptability, and the nature of their products.

Also, the interconnectedness of macroeconomic variables in a globalized world can lead to endogeneity issues [109–111]. Endogeneity occurs when the variables under investigation are interdependent, making it difficult to determine which variable is driving changes in the others. In our study, the interplay of variables like exchange rates, inflation, and trade policies may suffer from endogeneity, making it challenging to establish causal relationships. This limitation can undermine the study's ability to make robust causal claims.

The macroeconomic trends observed over a two-decade period may have both short-term and long-term effects. While the study may capture short-term correlations between variables, it might not fully account for the long-term consequences of these trends. This limitation is particularly relevant when assessing the sustainability of policy changes or trade patterns. Long-term effects may extend beyond the study's timeframe, making it challenging to draw definitive causal conclusions.

The aforementioned limitations collectively underscore the intricate web of interdependencies and external factors that shaped bilateral trade during the study period. While our research aims to explore the impact of trade agreements on India and Sri Lanka's trade, the presence of these macroeconomic and global trade complexities introduces substantial noise and potential confounding variables into our analysis. As a result, our ability to draw definitive causal conclusions regarding the role of trade agreements in enhancing bilateral trade is constrained.

5. Conclusions

This paper focused on determining the trade prospects between India and Sri Lanka. The findings reveal that India's trade with its island neighbor, Sri Lanka, has been abysmally low for the better part of the last two decades. During the period of 2001–2020, the average trade of India with Sri Lanka was less than 0.75 percent of her India's total trade with the rest of the world. Between 2001 and 2020, India's exports (average) to Sri Lanka were approximately 1.34 per cent, while average imports from Sri Lanka were around 0.19 per cent. The Indian–Sri Lanka trade is largely dominated by Indian exports to the country, and, thus, the India–Sri Lankan trade relationship has been lopsided throughout the era. Between 2001 and 2020, Sri Lanka's trade deficit was almost 68 percent of their total bilateral trade. Sri Lanka has been facing a large and unfavorable balance of trade over the years, tipping bilateral trade in favor of India. SAFTA and ISFTA, which were warmly welcomed with much fanfare and optimism, were largely unable to boost India's trade with the island

nation, and its trade with the neighboring nation fell short of all expectations of increased trade. The bilateral trade (average) in the pre-ISFTA period was 0.64, which could increase to 0.762 per cent in the post-ISFTA period. The same has been true for exports from India to Sri Lanka, which increased from 1.33 to 1.57 percent during the period mentioned above. Thus, it is obvious that the effects of these trade agreements are not very large. The findings in this paper contradict the findings of Joshi [57] and Sikdar [26], who found that, in the immediate aftermath of the ISFTA's introduction, export growth in both economies was impressive. There is no doubt that trade has increased, but it has not been impressive. The prospect of a perceptible increase in trade for a good number of reasons was distrusted by Kelegama [60], and the findings in this paper bear out that those suspicions were logical and based on analysis.

Clear evidence was found (as per the output of the RCA analysis) demonstrating that the reason for the consistently lackluster performance of bilateral trade was due to both countries' lack of revealed comparative advantages in the majority of product groups, followed by export similarity in those product groups where they do have a comparative advantage. Trade complementarities between the two countries were also found to be low, which does not portend tremendous growth in bilateral trade since both countries appear to be competitors rather than genuine trading partners, as the TCI analysis demonstrates. These findings coalesce around Ricardian trade theory, which postulates those disparities in national productivity control international trade patterns. However, there may be one-way trade from the Indian side, as India exports a broader range of products than Sri Lanka. Additionally, Sri Lanka's reduction in non-tariff barriers may help India to export more, and the same has also been recommended by previous researchers such as Taneja et al. [55] and Weerakoon and Thennakoon [56]. Sri Lanka should endeavor to convince India to agree to explicitly recognize the "asymmetry" in trade, cooperate to resolve certain outstanding issues with the current ISFTA's implementation, and bargain for reduced export quotas to India. They need to re-evaluate their service offerings as well. They should avoid taking hardline stances and instead look for ways to make trade between the two countries beneficial for both sides.

Thus, this paper makes important contributions to the literature in terms of gap filling and analysis of the root causes behind subdued bilateral trade from an economic standpoint. Answers to the following four questions in the form of gaps were missing in the literature from an economic perspective: (1) Are India and Bangladesh afflicted with poor economic connections, suffocating trade, and impeding the growth of trade relationships? (2) Is it the case that they are incapable of cultivating latent trade potential? (3) Is there a lack of trade complementarity between them that prevents them from satisfying each other's import requirements? (4) Are they not naturally trading partners? This paper makes important contributions to the literature in terms of bridging those gaps. Thus, firstly, it framed the untouched areas of research (gaps) and then proposed them in terms of research questions. Secondly, we attempted to answer the proposed questions based on suitable econometric equations validated by supporting evidence.

To bring change to trade, there is a need for comprehensive policy considerations to address the persistent challenges in Indian–Sri Lankan bilateral trade. Firstly, both countries should acknowledge the trade imbalance and India's dominant role in exports to Sri Lanka. Sri Lanka should actively engage in diplomatic negotiations to have this trade asymmetry explicitly recognized, leading to cooperative efforts to rectify it. Secondly, Sri Lanka should focus on reducing non-tariff barriers to facilitate smoother trade flows, as suggested by previous research. Streamlining customs procedures, addressing regulatory hurdles, and fostering an environment conducive to trade can enhance the overall trade ecosystem. Thirdly, diversifying the range of traded goods is essential. Policymakers should identify sectors where both countries exhibit comparative advantages and work towards product diversification, reducing competition, and promoting complementary trade relationships. Fourthly, a collaborative approach to resolving outstanding issues related to trade agreements is vital for building trust and ensuring effective implementation. Lastly,

both countries should prioritize the development of service trade, particularly in sectors such as IT, tourism, and education, to create new avenues for economic collaboration.

Author Contributions: Conceptualization, H.W.A.; methodology, H.W.A. and L.-P.D.; software, validation, H.W.A., A.A., L.-P.D., S.A. and A.K.; formal analysis, H.W.A.; investigation, H.W.A. and A.A.; methodology; resources, L.-P.D.; data curation, A.K.; writing—original draft preparation, H.W.A.; writing—review and editing, H.W.A., A.A., L.-P.D., S.A. and A.K.; visualization, H.W.A.; A.A., L.-P.D., S.A. and A.K.; supervision, L.-P.D. All authors have read and agreed to the published version of the manuscript.

Funding: The authors received no financial support for the research, authorship, and/or publication of this article.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: Because private data is not available, please contact us if necessary.

Conflicts of Interest: The authors declare that there are no conflicts of interest.

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