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An Assessment of Agricultural Export Competitiveness of Commercial Crops: Pathways to Augment Indian Agricultural Exports

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ABSTRACT

Agricultural exports in developing countries significantly impact achieving sustainable development goals targeted at improving agricultural productivity, sustainability, poverty eradication, and employment creation. The pattern of agricultural export competitiveness of India vis-à-vis other Asian agricultural-based countries was assessed during the post-WTO period (2001 to 2019). The Revealed Symmetric Comparative Advantage (RSCA) technique was employed using time series data focusing on High-Value Commercial (HVC) crops. As is evident from the RSCA indices for India, a high degree of export competitiveness was witnessed in tobacco, cotton, and spices, whereas it declined in sugarcane, coffee, and tea over the years. The commodities that exhibited strong competitiveness reflected huge potential, whereas commodities such as sugarcane, coffee, and tea experienced erosion in their competitiveness. With the changing priorities of the nation, there is a need for India to redraw future agricultural export scenarios focusing on the production of HVC crops, processing and value chains, and diversification of export baskets while maintaining the sustainability of agro-ecological assets. Nevertheless, agricultural exports had vast potential to drive the economy in developing countries like India. The holistic conclusion advocates an important policy implication for the design of export strategy to augment the export competitiveness of HVC crops and enhance the share of agricultural exports in the context of emerging trends and change commercial facets of Indian agriculture.

Keywords
Export competitiveness, high-value crops, strategy, sustainable development goals.

JEL Codes
B27, F15, F18, F60, Q11.

INTRODUCTION

Agricultural exports in developing countries will significantly impact achieving the sustainable development goals addressing sustainability concerns in agriculture, poverty, and employment issues. In recent times, world agricultural output has grown by 2.6 per cent, mainly led by growth in the emerging and developing economies such as India, Brazil, Russia, and China. The economies of the developing world have realized the importance of creating economic growth by augmenting agricultural production and exports. With a growing global population, agriculture has provided opportunities for growth in developing economies and integration into world trade. According to the OECD (Organization for Economic Cooperation and Development), agricultural production in developing countries is anticipated to grow each year, which leads to a persistent increase in their share of global production. These countries naturally have both a large rural population and a farm sector that allows many households to learn about the cultivation of food (Hassan & Babu, 1991; Coale & Hoover, 2015; Hickey et al., 2016). For instance, Brazil has become the largest food exporter in the world and emerged as a critical trade partner for many countries in the recent past. In a similar line, India is striving to strengthen its global trade relationships through growth in agricultural production and exports.

Nevertheless, agriculture has been recognised as a crucial sector for countries with an objective to broaden their presence in the international trade architecture. Agricultural exports are a crucial source of farm income in many developing countries. From India, agricultural exports have recovered from a pandemic-induced decline, which turned positive following a pick-up from July 2020 onwards. Hence, growth in the agriculture sector creates an economic fortune for developing countries in the world.

The landscape of international trade has transformed rapidly across the globe with the advent of the World Trade Organization (WTO). It is important for any country to establish a place in the global markets. In the post-WTO period, India has followed an outward-looking strategy and proved its competency to establish itself as a credible player for some agricultural exports in the world market. This strategy has helped in creating a distinctive niche market for agricultural commodities from India. Conversely, recent growth rates in the farm sector were rising faster than growth in domestic demand; thus, the accelerated growth in the quantity of exportable surplus has been witnessed in the agricultural sector. Agricultural exports made a significant contribution to the economic prosperity of developing countries in the past several decades and drove the agriculture growth in the post-pandemic economic recovery. In developing countries with a relatively small urban population, increasing agricultural exports can accelerate high economic growth in contrast with increasing domestic market demand. Therefore, agricultural export growth contributes significantly to the growth of the overall agriculture sector and farmers' income enhancement. Further, the growth and transformation of agriculture create employment in secondary agriculture, food processing and marketing, as well as the expansion of other non-farm employment in rural areas (Aksoy & Beghin, 2005).

It is well known that India occupies a leading position in the global trade of agricultural commodities. However, its total agricultural export basket accounts for slightly above 2per cent of world agricultural trade. This might be attributed to the inward-looking trade policies (import substitution), which are mainly aimed at food security and price stabilization due to the huge demand for agricultural produce to feed the Indian population. There is a need for India to address the composition of the agriculture export basket. Presently, the majority of agricultural exports are low value, raw or partially processed, and exported in bulk quantity. These factors constrained the contribution of agricultural exports to global agricultural trade. Despite the fact that many sectors of the Indian economy suffered because of the disturbance caused by the Covid-19 pandemic, the agricultural exports have been booming in recent months, which is an excellent sign to focus on them in post-pandemic recovery. Nevertheless, India has enormous unexplored potential with respect to agricultural exports. It is imperative to harness the maximum exportable surplus from the farm sector in general and high-value commercial crops in particular.

Historically, various agricultural commodities exported from India have responded differently, and their degree of comparative advantage in the global markets has transformed significantly in the post-WTO period. Nevertheless, the significant implications of national policies and external market environments on the growth of agricultural exports from developing countries have been comprehensively discussed in the international economics literature. However, the comparative analyses of the export behaviour of specific countries relating to their different domestic supply conditions with external market situations are undoubtedly the need of the hour. It assumes more importance with respect to agricultural exports. This investigation contributes to the literature by examining the structural change and competitiveness of the selected agricultural exports from India vis-à-vis other agriculture-based countries in Asia.

METHODOLOGY

The study aims at assessing the competitiveness of commercial crop commodities with an accent on the comparative advantage in relation to other agricultural-based countries of Asia in the global market. The predominant agriculture-based Asian countries and commercial commodity/commodity groups with high export potential were selected for the analysis. The rationale behind the selection of commodities was based on the sizeable area grown and their growing importance in terms of processing, value addition and increasing export demand in the global markets. Under commercial crops: tobacco, cotton and sugarcane were chosen, and plantation crops, spices, tea, and coffee were selected. The data on exports of these agricultural commodities from 2001 to 2019 (post-WTO regime) was obtained from the official website of FAO. The designated commodities corresponded to the several codes of SITC (Standard International Trade Classification), and their export values were provided in US dollars. The values of exports are referred to in US dollars to net out the effect of changes in the exchange rate.

Measuring Agricultural Export Competitiveness in Major Asian Countries

Revealed Comparative Advantage (RCA) Index

Balassa's Revealed Comparative Advantage (RCA) technique is a measure of competitiveness broadly used in economic literature to evaluate the patterns of trade and specialization of countries in commodities with a competitive edge. Balassa (1965) first introduced the concept of RCA. The formula is defined as a country's share of world exports of a commodity divided by its share of total world exports. The RCA was used widely to analyse the changes in trading patterns (Yeats, 1985; Batra & Khan, 2005; Kannan, 2010). This index revealed the comparative advantage of a nation from its past trade data and helped to identify the trends in competitiveness in a commodity or a commodity group. The changes in the level of these indices invariably indicated the changes in competitiveness. It ascertained the comparative advantage or disadvantages a country had for a commodity with respect to another country or group of countries. The index is based on the principle that countries specialize and export those agricultural commodities which they can produce at a relatively lower cost. The export competitiveness of agricultural commodities can also be analysed using a different index for measuring competitiveness (Vollrath, 1991). Under the assumption that the commodity pattern of trade reflected the inter-country differences in relative costs as well as non-price factors, the index was assumed to reveal the comparative advantage of the trading countries. The factors that contributed to movements in RCA were economical, structural, world demand and trade specialization. The disadvantage, however, was that it could not distinguish between improvements in factor endowments and the pursuit of appropriate trade policies by a country (Batra & Khan, 2005). The original index of RCA was first formulated by Balassa (1965).

$$B = \frac{X_{ij}/X_{ik}}{X_{nj}/X_{nk}}$$

Where, X_{ij} = Exports of country 'i' of commodity 'j'

X_{ik} = Exports of country 'i' of a set of commodities 'k'

X_{nj} = Exports of a set of countries 'n' of commodity 'j', and

X_{nk} = Exports of a set of countries 'n' of a set of commodities 'k'

In the present study, country 'i' refers to India, commodity 'j' refers to any selected agricultural commodities and/or a set of commodities, 'k' refers to the total agricultural commodities and set of countries, and 'n' refers to Asia. The index tried to identify whether a country had revealed comparative advantage rather than determine the underlying comparative advantage sources. The RCA assumed the value greater than unity for a given country in a given commodity, and the country was said to have a revealed comparative advantage in that commodity. Nevertheless, RCA suffered from the problem of asymmetry as 'pure' RCA was basically not comparable on both sides of unity. If the index ranges from zero to one, then the country is said not to be specialized in a given sector, while the value of the index ranges from one to infinity if a country is said to be specialized. The index was made symmetric, following the methodology suggested by Dalum et al. (1998). The new index is called 'revealed symmetric comparative advantage' (RSCA) and is mathematically expressed by the equation.

RSCA = (RCA-1) / (RCA+1)

It ranged between -1 and +1 and was free from the problem of skewness. A commodity would have a comparative advantage in its exports if the corresponding RSCA value were positive and vice-versa. The RSCA is generally used to look into the comparative advantage of the selected agricultural commodities in the current study.

RESULTS AND DISCUSSION

Structural Changes in Agricultural Exports in Major Asian Countries

In the global agriculture market, the position of Asian countries inclined profoundly towards demand due to their massive population and limited natural resources. The Asian region accounts for 50 per cent of the global population with approximately 20 per cent of the world's agricultural land. However, Asia achieved significant productivity improvements in the farming sector in the past few decades and emerged as a major supplier of commercial crops to the international market. The structural dynamics of agricultural exports for India and major Asian countries were analysed from 2001 to 2019 and presented in Figure 1. The trends in the share of agricultural exports from India increased from 8 to 9 per cent between 2001 and 2010. The figures for 2015 and 2019 were 11 and 10 per cent.

Conversely, China accounts for nearly one-fourth of Asian agricultural exports; its share in agricultural exports showed a declining trend from 26 per cent in 2001 to 20 per cent in 2010 and gradually maintained over the years and increased to 23 per cent in 2017. Similarly, the share of agricultural exports from Indonesia showed a steady increase from 7 per cent in 2001 to 14 per cent in 2010 and again maintained at 13.6 per cent in 2017.

Further, Malaysia exhibited a mixed trend, and Vietnam revealed an increasing trend in the share of agricultural exports during the study period. The other two Asian countries, Thailand and Turkey, with a share of 11 and 6 per cent, respectively, exhibited a position in the share of agricultural exports.

Agricultural Export Competitiveness of India vis-à-vis Other Asian Countries

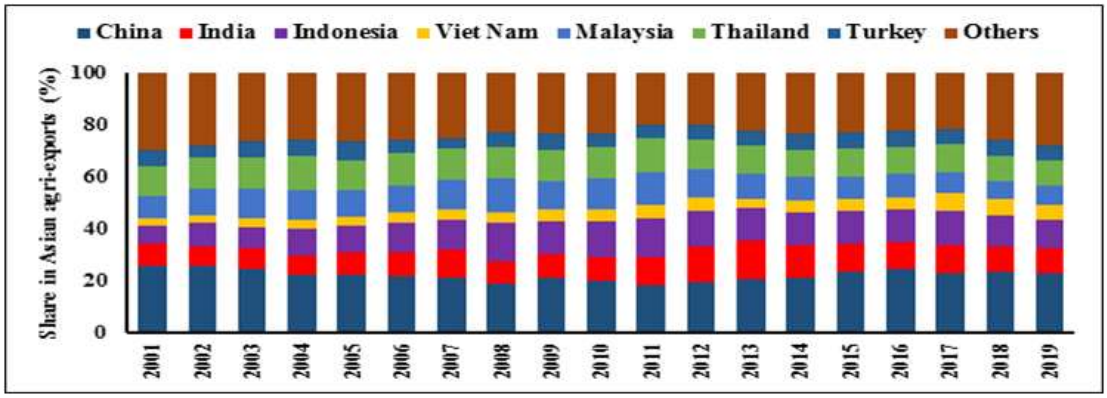
Currently, India is a major supplier of several agricultural commodities to the global market. However, India faces major competition in the export of agricultural commodities from other Asian countries in the international market despite the fact that there are global trade policies in the post-liberalization regime, making it a level playing field to compete with Asian countries and on the global platform. Under the hypothesis that the commodity pattern of trade reflected the inter-country differences in relative costs and non-price factors, the index was expected to reveal the comparative advantage of the trading countries (Shinoj & Mathur, 2008). The comparative status of the export competitiveness of traditional agricultural-exporting countries in Asia (India, China, Indonesia, Malaysia, Thailand, Turkey, and Vietnam) was analysed (Table 1).

It is clearly established that the RSCA indices for the total agricultural exports from India with respect to Asian countries showed a declining trend from TE 2003 to TE 2019. This displays that India was losing its comparative advantage in exporting agricultural commodities with respect to other Asian countries in global markets. Instead, Myanmar, Vietnam and Indonesia were improving rapidly in their comparative advantage and posing severe competition to Indian agricultural exports in the international markets. Therefore, it was a serious concern for India to reverse this trend and augment the competitiveness of Indian farm exports in the global markets. In line with this, an individual commodity wise analysis was carried out to assess the agricultural export competitiveness of India vis-à-vis other Asian countries.

Analysis of Export Competitiveness in High-Value Commercial Crops from Major Asian Countries

The analysis of commodity-wise agricultural export competitiveness from major countries of Asia from 2001 to 2019 is presented in Figures 2, 3a and 3b.

Cotton: India maintained its prime status as the largest exporter of cotton globally during the period under study, particularly through its comparative advantage in the international markets. The RSCA estimates of Indian



Source: FAOSTAT, 2020

Figure 1. Changes in the share of agricultural exports from India and other major Asian countries

Table 1. Agricultural export competitiveness of India vis-à-vis other major Asian countries

Period	India	China	Indonesia	Malaysia	Thailand	Turkey	Vietnam
TE 2003	0.52	-0.12	0.48	0.38	0.57	0.52	0.90
TE 2006	0.50	-0.23	0.64	0.46	0.60	0.50	0.91
TE 2009	0.49	-0.29	0.68	0.55	0.59	0.41	0.91
TE 2012	0.47	-0.32	0.69	0.58	0.59	0.46	0.93
TE 2015	0.52	-0.32	0.69	0.51	0.56	0.49	0.93
TE 2019	0.40	-0.31	0.70	0.43	0.50	0.43	0.96

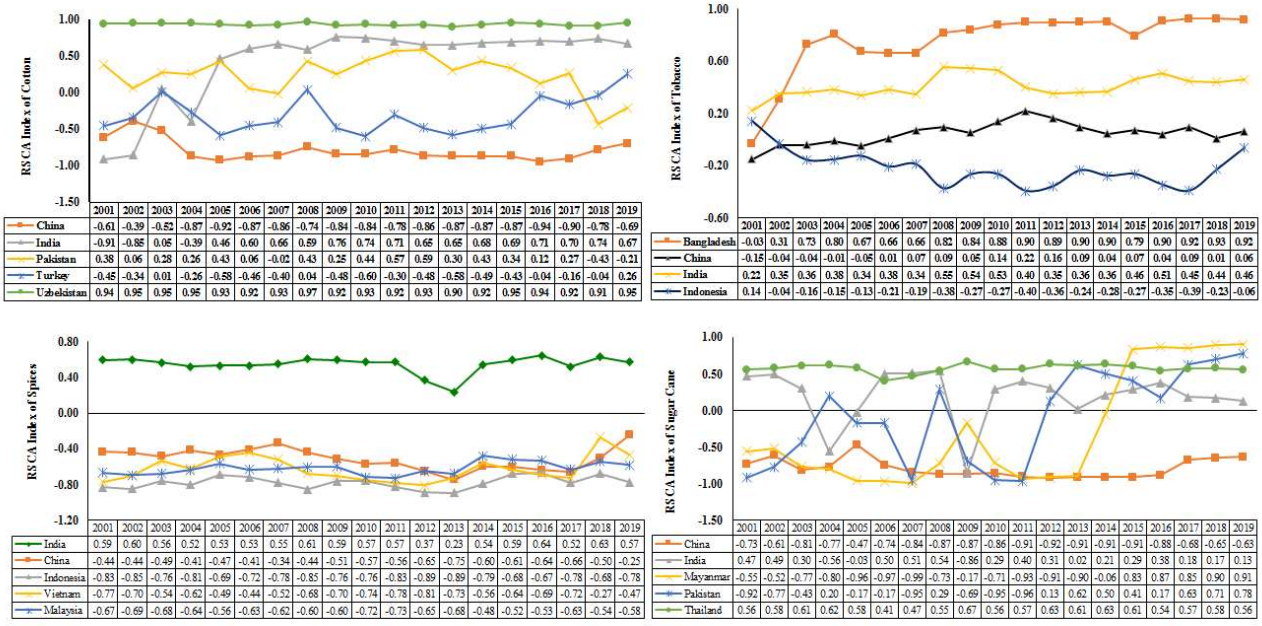
Source: FAOSTAT, 2020.
TE: Triennium Ending.

cotton exports were negative (-0.91) in 2001, intensely shifted to positive, then gradually increased over the years and peaked at 0.72 in 2019. The RSCA estimates of Uzbekistan had consistently maintained a very high level (> 0.90) during the entire period, though its share in total Asian exports declined sharply over the years. This indicated that Uzbekistan cotton was competent in establishing itself and created a niche market. The RSCA estimate of Pakistan was consistently positive, with little variation during the entire period. However, Turkey and China depicted a negative index, underlining India's gaining competitiveness, as they showed no signs of recovery throughout the study period.

Tobacco: The RSCA estimates for Indian tobacco exports were 0.22 during 2001, which gradually increased in the following years, peaking at 0.55 in 2008 and 0.45 in 2019. However, Bangladesh was found to have outsmarted India during the study period; RSCA estimates for Bangladesh tobacco exports were negative (-0.03) during 2001, then intensely shifted to positive (0.80) in 2004, and reached the peak level (0.92) in 2019. This indicated Bangladesh had a high comparative advantage in tobacco exports in the international market. Indonesia had witnessed erosion in its comparative advantage in tobacco exports. Nevertheless, the most peculiar observation is that China was found to lose its edge in tobacco exports gradually over the years; accordingly, India had a distinct advantage over China.

Sugarcane: The results showed that India is the largest producer of sugarcane in the world (FAOSTAT, 2020). However, India could not maintain itself as the largest exporter from Asia in the post-reform period, particularly its comparative advantage in the international markets. The RSCA estimates of Indian sugar exports fluctuated over the years and reached negative in some years (2004, 2005 and 2009). The RSCA estimates of Thailand were consistently maintaining a high level (> 0.50) in most of the years except 2006 and 2007. This indicated that the sugar from Thailand was enjoying competitiveness in the international market. The RSCA estimates of Myanmar and Pakistan shifted from negative to positive in recent years. China has depicted a negative index during the entire study period. Nevertheless, India had to improve its competitive edge in sugar exports to face stiff competition from other competing countries in Asia (Thailand, Myanmar and Pakistan) in the coming years.

Spices: Historically, India has been accredited as the land of spices. India is the largest producer and exporter of spices in the world presently. India maintained its admiring position as the largest exporter of spice during the period under study, especially through its comparative advantage in the international markets. The RSCA estimates of Indian spice exports were as high as 0.59 in 2001, thereafter maintained more than 0.50 and gradually reached 0.52 in 2019. The RSCA estimates of other Asian spice exporters (Indonesia, China and Vietnam) were highly negative and



Source: FAOSTAT, 2020.

Figure 2. Trends in RSCA estimates of cotton, tobacco, spices and sugarcane exports from India and other Asian countries

persistent over the years. Therefore, India did not face any remarkable external contestants in spice exports and maintained its supremacy over other Asian players.

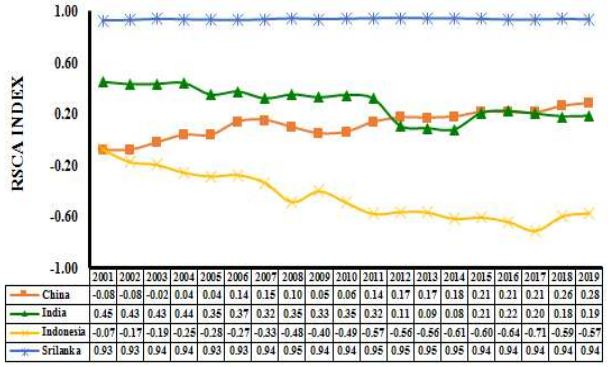
Tea: For the period 2001-2019, India had a comparative advantage in tea exports, as was evident from the positive values of RSCA. However, India's comparative advantage was deteriorating gradually over the years. In 2001, the value of RSCA was 0.45, which fell to 0.20 by the year 2017, depicting a clear downward trend. Among other important Asian tea exporters, Sri Lanka was far ahead with significantly higher values of the RSCA index than India, China revealed improvement in values of the RSCA index while Indonesia was less competitive than India. Sri Lanka outsmarted India with the value of the RSCA index for tea exports was more than 0.93 during the study period. The results had substantial and wide-ranging implications for India as Sri Lanka's dominance in the global market remained unchallenged and directly impacted the Indian tea industry.

Coffee: India's comparative advantage in coffee export showed a declining trend over the years from 2001 to 2019. Hence, India witnessed losing its advantage with other countries like Vietnam and Indonesia, the major competitors to India, as these two countries were found to have outsmarted India. It was noticed that the comparative edge, which India exhibited during the initial years, deteriorated over the years, as the index gradually eroded from 0.38 in 2001, reached a negative value in some years, and gradually stood at 0.05 in 2017. However, the concern was that Vietnam had improved its position quickly, posing stiff competition to coffee from India in the markets globally. The RSCA value for Vietnam coffee during 2001 was 0.87, sustained over the years and maintained at 0.79 by 2019. Apart from Vietnam, Indian coffee exports faced the challenge from Indonesia, though to a lesser extent. However, China coffee did not enjoy a comparative advantage throughout the study period.

Summary of Agricultural Export Competitiveness of Commercial Crops from India

The study revealed that India's competitiveness in agricultural exports exhibited variability over the years and across commodities. This variability may be attributed to both internal supply factors as well as the global trade environment. In India, the government policy on the tobacco sector was at crossroads amidst promoting exports to increase the foreign exchange earnings and internal excise revenue on the one hand and reduction of tobacco crop size annually due to concerns about public health and the environment on the other. The demand for tobacco and its products was expected to be reduced because of the restrictions or bans on tobacco usage, consequently affecting the supply side. It could contribute to policy changes. For example, the Tobacco Board in India reduced the FCV tobacco crop size by 12 per cent for the state of Karnataka in 2020-21. It was anticipated that similar crop size-reduction measures for the state of Andhra are anticipated in Pradesh as well.

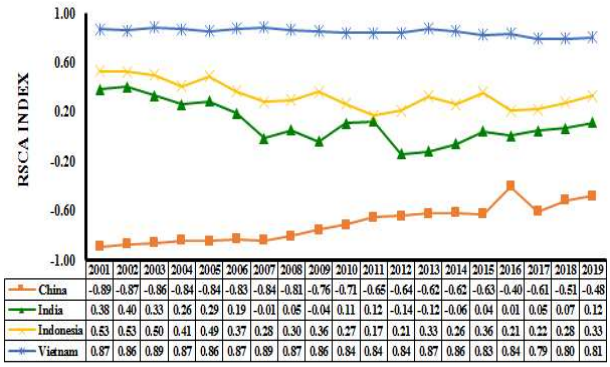
Nevertheless, India holds a great potential to take advantage of the consistent demand for tobacco in the international markets. Therefore, it was crucial to have a balanced policy framework for shaping the future course of the tobacco sector. The policy stance on other commercial crops (cotton and sugarcane) and plantation crops (spices, coffee and tea) was envisioned to promote their growth and development and quality improvement through R&D support, meet the requirement of both export market and domestic consumption, and promote the agro-based industries. The cost of production and the level of productivity of the commodity can considerably



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
China	-0.08	-0.08	-0.02	0.04	0.04	0.14	0.15	0.10	0.05	0.06	0.14	0.17	0.17	0.18	0.21	0.21	0.21	0.26	0.28
India	0.45	0.43	0.43	0.44	0.35	0.37	0.32	0.35	0.33	0.35	0.32	0.11	0.09	0.08	0.21	0.22	0.20	0.18	0.19
Indonesia	-0.07	-0.17	-0.19	-0.25	-0.28	-0.27	-0.33	-0.48	-0.40	-0.49	-0.57	-0.56	-0.56	-0.61	-0.60	-0.64	-0.71	-0.59	-0.57
Srilanka	0.93	0.93	0.94	0.94	0.93	0.93	0.94	0.95	0.94	0.94	0.95	0.95	0.95	0.95	0.94	0.94	0.94	0.94	0.94

Source: FAOSTAT, 2020.

Figure 3a. Trends in RSCA estimates of tea exports from Asian countries



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
China	-0.89	-0.87	-0.86	-0.84	-0.84	-0.83	-0.84	-0.81	-0.76	-0.71	-0.65	-0.64	-0.62	-0.62	-0.63	-0.40	-0.61	-0.51	-0.48
India	0.38	0.40	0.33	0.26	0.29	0.19	-0.01	0.05	-0.04	0.11	0.12	-0.14	-0.12	-0.06	0.04	0.01	0.05	0.07	0.12
Indonesia	0.53	0.53	0.50	0.41	0.49	0.37	0.28	0.30	0.36	0.27	0.17	0.21	0.33	0.26	0.36	0.21	0.22	0.28	0.33
Vietnam	0.87	0.86	0.89	0.87	0.86	0.87	0.89	0.87	0.86	0.84	0.84	0.84	0.87	0.86	0.83	0.84	0.79	0.80	0.81

Source: FAOSTAT, 2020.

Figure 3b. Trends in RSCA estimates of coffee exports from Asian countries

influence the export competitiveness of a country (Harilal & Joseph, 1999).

Moreover, the dynamic demand for commercial crops unravels splendid opportunities for India to emerge as a major player in the international trade arena. Nevertheless, despite impressive strides made in agricultural production, India had yet to become a key player in the global trade architecture with respect to some agricultural exports. From the available trade literature, the experience of many countries advocates export orientation of the agriculture sector is one of the fundamentals for achieving export growth. During the post-economic reforms period, exports of various agricultural commodities from India have responded differently in comparative advantage, and India has enjoyed a comparative advantage in some agricultural exports (Shinoj & Mathur, 2008). Therefore, it was inevitable to envisage an agricultural export strategy by concentrating on high-value commercial crops with significant export potential. It would definitely unleash the new vistas to export high-value crops and value-added commodities, as India cannot exploit the full potential of high-value commercial crops and enable farmers to reap the benefit of export prospects.

Strategic Framework to Augment Agricultural Exports in the Context of Emerging Agricultural Trends and Changing Commercial Facets of Indian Agriculture

In light of the Covid-19 pandemic, there may be an opportunity for Indian agricultural exports as some other countries impose import restrictions in the global trade scenario. In the analysis of the government's response to global supply chain disruptions due to Covid-19, India had found the advantage of bridging the demand gap experienced by countries that rely on Asian countries to import agricultural commodities. The rapidly growing global population and shrinking farmlands, coupled with a dynamic socio-economic environment and agro-climatic and food consumption patterns, have posed a challenge to economists, scientists and policymakers to reassess how we grow food and feed the growing global population. Therefore, it was imperative to harness the agricultural export potential for invigorating agriculture growth, making global power in agriculture, and enhancing farmers' income (Government of India, 2018). However, in the recent past, the ratio of agricultural exports to agriculture GDP had rarely surpassed 3 per cent. However, the present landscape of Indian agriculture was structurally different when compared with the green revolution period. It was projected to shift more toward high-value crops and export-centric crops/cropping systems to increase farmers' income. In the past, our country's efforts were made to augment agricultural production and achieve food self-sufficiency. India was boarding on a different path with a distinct focus on boosting farm exports. With growing evidence that other regions in the country were diversified into export-oriented crops performed much better with regard to agricultural development (Pingali et al., 2019), the spice export trade was significant for agricultural

Table 2. Summary of export competitiveness in high-value commercial crops from India

Features of competitiveness	Tobacco	Cotton	Sugarcane	Spices	Tea	Coffee
Position in the world market	Third	Second	Second	First* and Second**	Second	Seventh
Level of Competitiveness (RSCA Index, 2019)	0.45	0.72	0.18	0.52	0.20	0.05
Export volume (tons)	185946	615816	3799274	233162	258048	232664
Export value (000 US$)	554616	1075032	1268269	353756	813746	499702
Share of Asian Exports (Per cent)	25.0	5.50	3.18	1.17	2.53	2.10
Current Government Policy to promote R&D	Centrally funded R&D Institutions	Centrally funded R&D Institutions	Centrally funded R&D Institutions	Centrally funded R&D Institutions	Centrally funded R&D Institutions	Centrally funded R&D Institutions

**** Ginger, Turmeric, Chilli, and Cumin.***
***** Cardamom, Pepper.***

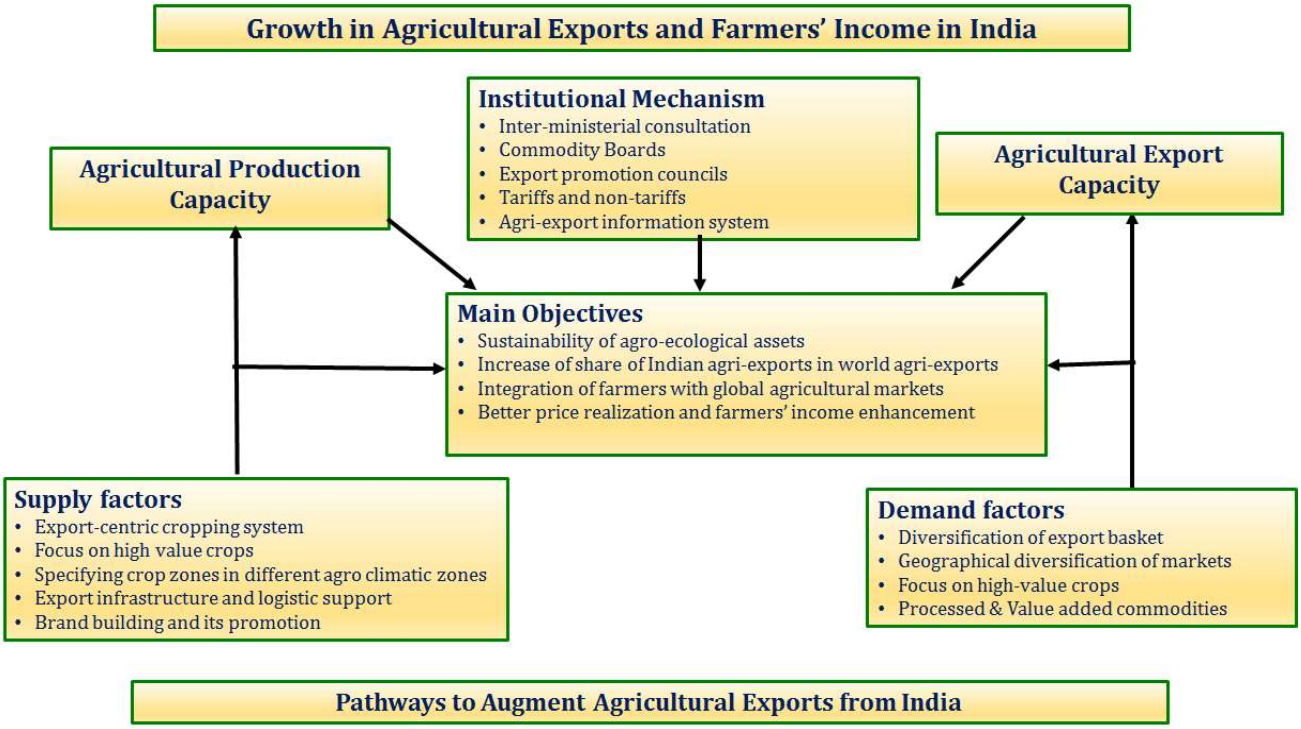


Figure 4. Strategic framework to augment agricultural exports in the context of emerging agricultural trends and changing commercial facets of Indian agriculture

development in the country. It was important to have a well-defined strategy committed to boosting agriculture exports and farmers' income in India to align with this path. This strategy would help mainly to strengthen the agricultural economy in an ongoing economic slowdown and add momentum to the pace of agricultural export growth. The design of the export strategy was mainly aimed at export-centric agricultural production and quality, particularly of high-value commercial crops and post-production process and value addition. Besides the supply and diversification strategies, it was necessary to have a paradigm shift from the export of raw materials to the export of agricultural processed and agricultural value chain systems and value-added products to enhance competitiveness in the international market. The development strategy based on agricultural exports was influenced by supply-side and demand-side factors. The illustration of the strategic framework for agricultural export growth includes the main objectives, institutional mechanism and relationship between supply-side and demand-side factors and their influence on the growth of agricultural exports presented in Figure 4. Contextually, the main supply factors are, *viz.,* focusing on high-value crops and identification of crop zones in different agro-climatic zones, export-centric crops, state-of-the-art infrastructure for exports, logistic support, brand building and promotion, etc. These factors influenced the production capacity at the national level and, subsequently, the volume of farm exports from India.

However, redefining government priorities and institutional mechanisms such as macroeconomic policy on high-value commercial crops is incommensurate with changing needs of the farmer, consumer, industry and exports and emerging priorities. It would certainly lead to production augmentation and drive the export volume of agricultural commodities. Conversely, the demand-side factors that pull a foreign country to import agricultural commodities from India include production of high-value crops, processing and value-addition, diversification of agricultural export basket, identifying and capturing new export destinations, etc.

CONCLUSIONS

The pattern of agricultural export competitiveness of India versus other Asian countries had depicted strong variations. The commodities such as tobacco, cotton, and spices exhibited strong competitiveness reflecting tremendous export potential, while, the commodities such as sugarcane, coffee, and tea experienced erosion in their competitiveness. There was an immense need to redraw future agricultural export strategies focussing on exportable commodities that had witnessed a loss in competitiveness while maintaining the competitiveness

of commodities with strong export potential. Nevertheless, the agricultural export strategy needs to concentrate on augmenting competitiveness by focusing on export-oriented high-value crops, processing and value addition, and diversification of export baskets. Thus, it was predicted that the strategic framework visualised to augment export competitiveness would unleash the potential of crops and boost agri-exports. The holistic conclusion advocates an important policy implication for the design of export strategy to augment the export competitiveness of HVC crops in the country.

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