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Review Article

Competitiveness and Determinants of Agricultural Exports: Evidence from India

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ABSTRACT

The export opportunity allows the agricultural sector to expand its productive capacity to the full extent. An attempt is made in the present study to specify and estimate the agricultural exports of India at the commodity level. The majority of exportable crops used in the study are Maize, Wheat, Rice, and Others and Country United States of America, Spain, India, Mexico and Sri Lanka Imports, Export of Fruit and Vegetables & Cereals and Preparations. The literature surveyed shows that Indian exports are influenced by several factors. The main objective of this study the factors that affect exports of major agricultural commodities in India from 2018-19, 2019-20, and 2020-21, to study the Food Imports of Fruit and Vegetables & Cereals and Preparations, to study the Cereals Imports and Exports by Main Commodities Geographically, the investigations were carried out at the all-India level and separately for three important tradable commodities, viz., rice, wheat, Maize and others. The choice of these crops was determined by their increasing share in external trade. The analysis covered the time from 2018 to 2021. Data were collected from secondary sources and converted at 2004-2005 prices. Therefore, the findings of the study validate that the impact of various factors on agricultural exports may not be the same for all commodities. In a nutshell, the empirical findings reveal the predominance of factors like lagged export, production and world income in determining agricultural exports of India. For rice and wheat rather than production, stock with the government influences export to a large extent. Because of semi-government interventions in the cereal market, actively for mandatory PDS, exports are not allowed regularly for many tradeable commodities like wheat, therefore, much depends on demand and supply.

Keywords: Agricultural Commodities, Agricultural Exports, Global Competitiveness Determinants

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INTRODUCTION

India's agricultural and allied sector exports remained resistant during 2020-21 to 2021-22, posting a remarkable growth of 18 per cent and 20 per cent in these two years, respectively. This growth was achieved in the midst of a sharp increase in global food prices led by edible oils and cereals. This increase in global food prices was the fallout of COVID-19 pandemic-induced supply disruptions, an increase in pent-up demand with the easing of lockdown restrictions and the conflict in Ukraine since February 2022.

The agricultural and allied activities export growth was stagnant in the pre-pandemic period, despite record production of food grains and horticulture crops for four successive years from 2016-17 to 2019-20. The agricultural export as a per cent of agricultural and allied activities Gross Value Added (GVA) decelerated from a peak of 14 per cent in 2013-14 to 7.3 per cent in 2019-20. Even as India emerged as a major producer and a net exporter of food with a significant increase in the shares of several commodities in the total value of agricultural exports, its share in global exports contracted marginally from 2.6 per cent in 2013 to 2.2 per cent in 2019. This came against the backdrop of the easing of global commodity prices underpinned by huge global stockpiles and trade protectionism driven by geopolitical tensions.

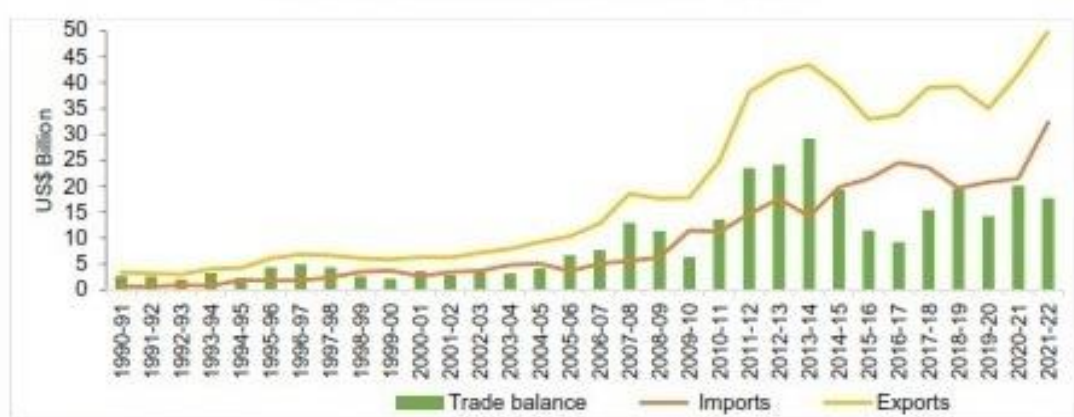
Theories on international trade argue that openness and integration with global markets support economic growth and employment generation in developing countries. International trade can catalyse economic growth through productivity enhancement by facilitating technological progress, increased flow

of investment and efficient resource allocation. Several empirical studies have shown that an increase in agricultural exports can fuel growth more than an expansion of domestic market). Evidence from the countries that sustained agriculture trade reforms showed an acceleration in agricultural growth.

As far as global competitiveness of agricultural commodities is concerned, there are a number of commodities where India has lost market share substantially. These are mainly cashew kernels, fruits and vegetables, pulses, spices, sugar, tea and tobacco. Loss in market shares reflects reduced global competitiveness, which include both price and non-price factors. The country faces fierce competition from other major players in the field, both the existing and new entrants. Ironically, the major challenge is from within Asia itself where countries like China, Malaysia, Philippines, Thailand, Singapore and Indonesia among others pose a big threat to Indian agricultural products.

INDIA'S AGRICULTURAL TRADE BALANCE

India's agricultural trade balance peaked in 2013-14 with the hardening of global prices from 2006-07 to 2012-13. The robust performance of agricultural exports relative to imports resulted in a buoyant trade balance. Subsequently, the trade balance decelerated until 2019-20 with an intermittent revival. Though the trade balance rebounded during pandemic period (2020-21 to 2021-22), it remained low as agricultural imports were high due to an unprecedented surge in edible oil prices against the backdrop of global supply disruptions and geopolitical tensions (Chart 1).



Source: MoA&FW.

Chart 1: India's Agricultural Trade Balance

REVIEW OF LITERATURE

Gulati and Kelly (2001) and Bathla (2011) found that exports of agricultural commodities are determined by a host of factors, varying from commodity to commodity. In the case of wheat and rice, production, stock and government policies matter.

Kumar and Rai (2007) observed the determinants of tomato exports in India. World exports and relative prices have a positive impact on tomato exports. However, domestic production had a negative impact on tomato exports from the country. In this context, the authors put forth the arguments that the increase in domestic production had coincided with the increased international production, causing depressed international prices and hence lower exports from India.

Kumar et al. (2007) examined the determinants of livestock exports. The ratio of production to consumption, ratio of world export to world output, exchange rate and removal of quantitative restrictions have positively affected livestock exports. However, relative prices did not play an important role in influencing overall livestock exports.

Riedel (1984) categorically argued that the typical demand function of exports yields biased estimates of the parameters if the supply side variables are not taken into account. Therefore, in the literature, an economic analysis of export performance entails both demand and supply factors to be considered as determining variables in the export function. The important literature on the subject suggests that agricultural exports in India are influenced by multiple factors which vary across the commodities.

OBJECTIVE

- To study the factors that affect exports of major agricultural commodities in India from 2018-19, 2019-20, 2020-21.
- To study the Food Imports of Fruit and Vegetables & Cereals and Preparations
- To study the Cereals Imports and Exports by Main Commodities

DATA AND METHODOLOGY

Geographically, the investigations were carried out at the all-India level and separately for three important

tradable commodities, viz., rice, wheat, Maize and others. The choice of these crops was determined by their increasing share in external trade. The analysis covered the time from 2018 to 2021.

Data were collected from secondary sources and converted at 2004-2005 prices. Data on agricultural exports and production were taken from Food and Agricultural Organisation of the United Nations (FAO) trade database. Data on world income/GDP was taken from World Bank database. Rice and wheat stock data were taken from RBI database on Handbook of Statistics on Indian Economy. The data on domestic and international prices of agricultural commodities were taken from various sources. Domestic wholesale prices have been taken from FAO database.

METHODOLOGY

The paper is organised as follows. The stylised facts are discussed in Section 4.4. India's Rice Exports to Newer Destinations Section 4.5. Food Imports 2021

shows the Fruit and Vegetables & Cereals and Preparations (USD Million), of select agricultural commodities. Section 4.6 Discussed in Cereals Imports and Exports by Main Commodities (Thousand Tonnes) 2021. The determinants of commodity exports are examined in Section 4.7. Analyse the India's Total Exports of Cereals (2018-19 – 2020-21), and Section 5 concludes.

INDIA'S RICE EXPORTS TO NEWER DESTINATIONS:

In terms of rice (basmati as well as non-basmati) exports especially in 2020-21, India shipped non-basmati rice to nine countries - Timor-Leste, Puerto Rico, Brazil, Papua New Guinea, Zimbabwe, Burundi, Eswatini, Myanmar and Nicaragua, where exports were carried for the first time or earlier the shipment was smaller in volume. The total volume of export of rice to these nine countries was only 188 metric tonne and 197 metric tonne in 2018-19 and 2019-20 respectively while the volume shipment rose to 1.53 lakh tonne in 2020-21.

Table 4.4.1: India's Rice Exports to Newer Destinations

Countries	2018-19			2019-20			2020-21		
	Qty in MT	Rs. Lacs	US\$ Mill	Qty in MT	Rs. Lacs	US\$ Mill	Qty in MT	Rs. Lacs	US\$ Mill
Timor-Leste	0	0	0	0	0	0	52225	13187.2	18
Puerto Rico	0	0	0	25	6.6	0	32278	8822.1	12
Brazil	15	10.1	0	4	3.2	0	39875	8279.2	11.2
Papua N Guinea	2	4.5	0	4	3.6	0	21922	5726.6	7.8
Zimbabwe	145	67.7	0.1	0	0	0	3785	1103.6	1.5
Burundi	0	0	0	0	0	0	1788	470	0.6
Eswatini	26	8.9	0	383	94.5	0.1	1214	332.7	0.5
Myanmar	0	0.2	0	90	57.4	0.1	299	190.3	0.3
Nicaragua	0	0	0	100	32.3	0.1	400	122	0.2
Total	188	91.4	0.1	606	197.5	0.3	153786	38233.5	52

FOOD IMPORTS, 2021

Table 4.5.1- Food Imports Fruit and Vegetables & Cereals and Preparations (USD MILLION)

Country	Fruit and Vegetables	Cereals and Preparations
United States of America	41779	12849
Spain	6863	4628
India	4940	216
Mexico	2373	5669
Sri Lanka	421	466

Source: World Food and Agriculture Statistical Yearbook 2022

Table 4.5.1- India's imports of consumer-oriented foods, led by Fruit and Vegetables (Tree nuts, spices, and fresh fruits) and Cereals and Preparations are one of the fastest-growing imported agricultural product segments in the country. In 2022, India imported 4,940 (USD Million) worth of consumer-oriented products and 216 (USD Million) Cereals and Preparations. A rising number of brand-oriented importers, modern and e-retail platforms, and

trendsetting restaurants are some of the major contributors to the growth of consumer-oriented product imports.

CEREALS IMPORTS AND EXPORTS BY MAIN COMMODITIES

In case of wheat, India exported substantial quantity of grain to seven new countries - Yemen, Indonesia, Bhutan, Philippines, Iran, Cambodia and Myanmar during 2020-21. In the previous financial years, only small quantities of wheat were exported to these countries. Wheat exports did not take place to these seven countries in 2018-19 and only 4 metric tonne of grain was exported in 2019-20. The volume of exports of wheat to these countries rose to 1.48 lakh tonne in 2020-21.

IMPORTS

In 2021 the world importers of Maize in United States of America 696.7, India were 231.8.

EXPORTS

In 2021 the world exporters of Maize Were United States of America 26131.6 comparatively India was lowest in 1766.9 Thousand Tonnes.

Table 4.6.1- Cereals Imports and Exports by Main Commodities (Thousand Tonnes) 2021

COUNTRY	IMPORTS				EXPORTS			
	MAIZE	WHEAT	RICE	OTHER	MAIZE	WHEAT	RICE	OTHER
United States of America	696.7	1909.9	1182.7	2075.6	51838.9	26131.6	2791.9	6939.1
Spain	8067.1	4151.8	202.8	1419	146.2	524	284	201.4
India	231.8	0.2	4.4	100.6	1766.9	928.7	14462.8	138.4
Mexico	15953.3	3726.1	765	522.8	312.4	255.6	7.6	0
Sri Lanka	29.8	1403.9	15.8	17.3	0	2.9	9.2	0.2

Source: World Food and Agriculture Statistical Yearbook 2022

INDIA'S TOTAL EXPORTS OF CEREALS (2018-19 – 2020-21)

India's overall exports of cereals have seen a sharp spike in 2020-21 with the export of non-basmati rice

growing by 136.04% to USD 4794.54 million; wheat by 774.17% to USD 549.16 million; and other cereals (Millets, Maize and other coarse gains) by 238.28% to USD 694.14 million.

Table 4.7.1: India's Total Exports of Cereals (2018-19 – 2020-21)

Year Cereals Qty	2018-19			2019-20			2020-21		
	Qty in million metric tonne	Rs (crore)	US \$ million	Qty in million metric tonne	Rs (crore)	US \$ million	Qty in million metric tonne	Rs (crore)	US \$ million
Rice*	11.94	53,708	7769	9.51	45,426	6351	17.71	65,297	8,815
Wheat	0.18	369	60	0.21	444	63	2.08	4,034	549
Other cereals	1.22	2354	79	0.05	1455	204	3.02	5117	694

Source: DGCIS, *includes basmati as well as non-basmati rice exports

CONCLUSIONS

An attempt is made in the present study to specify and estimate the factors affecting agricultural exports at a disaggregated level from India. The literature surveyed clearly shows that Indian exports are influenced by a number of factors. A theoretical analysis has been carried out to understand the role of different factors from 2000 to 2021. The major exportable crops used in the model are Maize, Wheat, Rice, and Others. For each commodity, various measurements are specified to examine their influence on exports on India's Rice Exports to Newer Destinations.

The estimate for rice shows that lagged export lagged stock and world income played a predominant role. In the case of wheat, as India does not export much of wheat and there are wide year-to-year fluctuations, it

is mainly affected by lagged exports and lagged stock with the government.

Therefore, the findings of the study validate that the impact of various factors on agricultural exports may not be the same for all commodities. In a nutshell, the empirical findings reveal the predominance of factors like lagged export, production and world income in determining agricultural exports of India. For rice and wheat rather than production, stock with the government influences export to a large extent. Because of semi-government interventions in the cereal market, actively for mandatory PDS, exports are not allowed on a regular basis for many tradeable commodities like wheat; therefore, much depends on demand and supply.

REFERENCES

1. India expands its cereals exports footprints through shipping rice, wheat and other cereals to newer destinations; Overall exports of cereals have seen a sharp spike in 2020-21, Posted On: 21 JUN 2021 6:15PM by PIB Delhi.
2. Reforming Agricultural Trade for Developing Countries Alex F. McCalla and John Nash, Editors, 2007 The International Bank for Reconstruction and Development/The World Bank, e-ISBN: 0-8213-6497-9, 2007.
3. Kumar, A. (2004). Export performance of Indian Fisheries: Strengths and Challenges ahead. *Economic and Political Weekly*, Vol. 39, No. 38, PP. 4264-4270, 2004.
4. Ministry of Commerce & Industry (2021) Overall exports of cereals have seen a sharp spike in 2020-21, Posted by PIB Delhi, Release ID: 1729115) Visitor Counter: 2539, 21 JUN 2021 6:15PM.
5. Gulati A. and Kelley T. (2001). Trade Liberalization and Indian Agriculture: Cropping Pattern Changes and Efficiency Gains in Semi-Arid Tropics. Oxford University Press, 2001.
6. Kumar, N.R. and Rai M. (2007). Performances, Competitiveness and Determinants of Tomato Export from India, *Agricultural Economics Research Review*, Vol. 20, PP. 551-562, 2007.
7. Riedel J, Hall C. and Grawe R. (1984). Determinants of Indian Exports Performance in the 1970s, *Review of World Economics*, *Weltwirtschaftliches*, Archive 120:1, PP.40-63, 1984.
8. Handbook of Statistics on Indian Economy, RBI.
9. National Accounts Statistics (NAS), India.
10. Available at [https://www.cbi.eu/market-information/processed-fruit-](https://www.cbi.eu/market-information/processed-fruit-vegetablese-dible-nuts/groundnuts/market-entry)

[vegetablese-dible-nuts/groundnuts/market-entry](https://www.cbi.eu/market-information/processed-fruit-vegetablese-dible-nuts/groundnuts/market-entry), accessed on 14 October 2021. Directorate General of Commercial Intelligence and Statistics.