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A STUDY ON EXPORT COMPETITIVENESS IN SPICES

G. ANTO GNANA UDAYA,
Ph.D Research Scholar (Part-Time)
Reg.No: 2022127012003
PG & Research Department of Commerce
St. John's College, Palayamkottai, Tirunelveli - , Tamilnadu, India
(This college is affiliated to Manonmaniam Sundaranar University, Tirunelveli)

Dr. G. KOIL SAMUVEL
PG & Research Department of Commerce, St. John's College, Palayamkottai, Tirunelveli, Tamilnadu, India
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ABSTRACT
The flavour and perfume of Indian spices are well-known both domestically and outside. India ranks among the world's top producers, consumers, and exporters of spices. The research used secondary data. Using a constant price analysis, the level of export competitiveness and market competitiveness for the main spices, including cumin, black leaf, turmeric, and chilli, was determined. Chilli, turmeric, and coriander were found to have high levels of global market competitiveness.
Keywords: spices, competitiveness, global market

INTRODUCTION

With a 44% production share and a 36% portion of the world's spice trade, India is the greatest producer of spices in the world. India's acreage and spice production have both steadily increased in recent years. India dominates the region in the production of ginger and has an almost monopoly on cardamom (big). India is also the greatest producer of turmeric. About 70–75 percent of the overall spice production is consumed by Indian homes as a whole or as added value (powder or masala), 5–10 percent is used to make oleoresins and by a company that makes pharmaceuticals and cosmetics, and 15–20 percent is exported. The final 5% is allocated to seeds. (Source: Commodity India.com).

Being a net exporter of agricultural goods, India will benefit from foreign earnings from exports by importing capital goods, which will open the door for additional investment and, in turn, spur technical innovation that will increase productivity and efficiency. Dependence on foreign exchange mobilisation from international trade becomes desired to quicken the speed of economic development. Export development for agricultural economies in developing nations like India appears to be being driven by the export of spices. It is crucial for India to research export trends in this industry. As the global market becomes more and more competitive, it is necessary to boost production and productivity while lowering cultivation costs to make Indian spices competitive on a worldwide scale. Due to their lower yield and greater production costs, Indian spices are more expensive on the international market. The low production of spices in our nation is due to a variety of factors, including an unfavourable gene pool, ageing, and the prevalence of diseases in cardamom and ginger. Despite being a significant producer of black pepper, India produces much less of

it than nations like Thailand and Malaysia. Another item where the nation has lost its ability to compete in world trade is cardamom as a result of growing production costs. Similar to this, Indian ginger is less expensive than ginger from China and Nigeria. Promotional efforts for the production of spices should be stepped up to take advantage of the expanding worldwide market. The average Indian farmer cannot afford the extremely high cost of organic spice certification. This ought to be scaled back to a manageable level. The introduction of cheap, low-quality spices from other nations into India and their subsequent reexport under the Indian label run the risk of destroying the reputation for high quality of Indian spices on the global market and negatively affecting future demand for Indian spices. This study was therefore carried out to increase the nation's export capability and to identify the rival nations in the global spice export market. The analysis of spices' level of competition is another major topic of the study. It also helps exporters and farmers choose the target spice market.

HISTORY OF THE SPICE TRADE

Textual and archaeological data have both been used to study the history of spices as a trading commodity. However, agreement on the first commercial exchanges that allowed spices manufactured in South Asia to reach the Mediterranean and Europe remains elusive. Although the spice trade between South Asia and the early Greek and Roman empires has abundant archaeological and textual evidence, it may have started even earlier, in the 11th or 12th century BC (Gilboa and Namdar 2015).

During the first to third century AD, which encompasses the most of the modern European economy, spices were one of the most significant components of trade from the Indian subcontinent to various areas of the Roman Empire (Galle 2017). Black pepper is one spice that has grown in popularity in both the Middle East and Europe, despite the fact that the use of spices in rituals, fragrances, and medicines was common even before the mediaeval period (Vander Veen & Morales 2015). Due to its scarcity and high expense of procurement, the spice has been associated with mysticism ever since it gained popularity in the European region (Keay 2006). It has also remained a popular emblem for elite social position. The excessive control of the spice trade exercised by Arab merchants and later by the Ottoman Empire, which caused an increase in the price of this commodity, increased European interest in the trade. One of the main reasons for looking for a new trade route across the sea to the east was unfamiliarity with the overland trade routes that stretched through the deserts separating the Asian peninsula from Europe.

Trade has long been centred on a network of land and ocean routes. This fact is where the term "Spice Route" for trade routes came from. Cinnamon, ginger, cassia, cardamom, and a few more unidentified spices are mentioned in the ancient maritime manual Periplus Maris Erythraei as being among the main spices trafficked during the first and third century AD (Galli 2017). Significant changes in the social, political, and cultural relations between the Indian subcontinent and the rest of the world resulted from the discovery of direct maritime routes. During the 16th century, trade in items from the East Indies, including the Indian subcontinent, such as black pepper, cloves, nutmeg, etc. flourished, and trade volume gradually expanded (Halikowski 2015). Indian history was fundamentally influenced by the influx of traders from the big economies of the 16th and 17th centuries who concentrated on the profitable spice trade that developed in colonial culture and introduced early capitalism to the Malabar coast (Kalidasan 2015). Spices remained one of the most trafficked goods in international trade despite a drop in relative value in the eighteenth and nineteenth centuries. Multiple sources of supply for bulk spices have resulted in greater competitive issues for the spice sector in recent years.

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METHODOLOGY

To make the collection of information and the determination of pricing on the global market easier, the entirety of India has been taken into account at the aggregate level of the study. The research used secondary data. The Spice Board of India and www.indiastats.com collated secondary data on production, export quantity, and export value over a period of 17 years (2006-07 to 2022-23). To get the intended outcomes, the acquired data was processed. The data were combined by continents, and several statistical tools were used to analyse the data by continent.

Any currency's value on the global or foreign market will often fluctuate over time. To provide a genuine picture of export earnings, growth rates have been set at constant prices using 2006–2007 as the base year. Appropriate unit export values indicators were constructed to convert current price values into fixed pricing.

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NPC = Pd ÷ Pb

Where, NPC = Nominal Protection Coefficient

Pd = domestic price of spices

Pb = limit price of the spice

BORDER PRICES

It represents the amount that farmers or domesticated species would have earned in a free-trade scenario with the same exchange rate. The international rate has been modified for goods, insurance, marketing, and trade margin costs, including any processing charges, to determine border rates. Alternatively, CIF/FOB rates have been computed by dividing the value of imports or exports by their corresponding amounts.

LOCAL PRICES

Wholesale spice prices for a few markets were used as local prices to approximate the prices farmers receive throughout the harvest as closely as feasible.

RESULTS AND DISCUSSION

Spice Area and Production in the World and in India

Table 1 shows the spice area and production in relation to the world and India from 2006–2007. It can be observed from the table that the spice area rose greatly internationally from 2006–2007 to 2022–2023. From 2014–15 to 2017–18, there was a substantial rise in the output of spices (from 1,743 thousand tonnes to 25,206 thousand tones).

Table 1
Area and production of spices in world and India

Year	Word		India	
	Area (ha)	Production (MT)	Area (ha)	Production (MT)

2007	781846	1319655	3927430	945600
2008	627714	1269855	4032115	9599900
2009	829875	1175006	4317552	9211058
2010	721678	1385962	4482660	1063000
2011	737026	1436457	4388955	1029700
2012	711228	1617032	4437870	1063000
2013	788309	1601619	578000	10125880
2014	849280	1747862	541000	1104000
2015	775273	1743125	725690	11042470
2016	967373	1767425	776519	11125010
2017	1038760	2196034	740998	11140980
2018	1005063	2520629	740333	1292000
2019	103258	2367764	690000	1699790
2020	1056982	2440580	773000	1496990
2021	1185992	2436486	768000	1477900
2022	1286957	2243756	896000	1580694
2023	1356894	2543950	985638	1528900

(Source: Food and Agriculture Organisation)
(Figures in parentheses are percentage of world area and production, respectively.)

Time series data for area and spice output in India and the rest of the world from 2006–07 to 2022–23 revealed a pattern of rising spice production in India and the rest of the world. Between 2014–15 and 2016–17, both globally and in India, more land was dedicated to the cultivation of spices. The spiciness area shrank in 2018–19 before increasing once more from 2020 forward. In the case of Indian spices, it was discovered that from 2006–07 to 2022–23, both the area and production of all spices increased steadily. Similar to the dramatic rise in global output, India's production of spices increased from 2010–2011 to 2012–2013 (from 1029 ktonnes to 1104 ktonnes). However, in general, the region and the production of spices both exhibit a rising trend in the upper and lower current.

India's contribution to global output, which was 945600MT in 2006–2007, has been dwindling over time. In 2022–2023, India's contribution to global output was 1528900MT. In the years 2006–2007 and 2022–2023, India accounted for 3927430 and 985638, respectively, of the world's spice area. Table 1 demonstrates that India has made a substantial contribution to the study and production of spices worldwide.

COUNTRY WISE EXPORT OF SPICES FROM INDIA

Spice Exports by Country from India, spice exports in terms of quantity and value from 2006-07 to 2022-23 is presented in below Table

Table 2

Country wise export of spices from India (Quantity in MT) (Value in Rs. Lakh)

Country	2006-07		2011-12		2016-17		2022-23	
	Qty	Export Value	Qty	Export Value	Qty	Export Value	Qty	Export Value
USA	3243.0	2541.70	18756.80	20810.30	24240.40	46925.12	55539.51	138456.02
Canda	1045.61	764.65	1746.94	1998.92	1179.3	2395.40	3202.90	13632.24
Mexico	178.08	71.02	781.44	580.94	7074.46	8019.21	13099.32	19314.20
South Africa	492.71	179.01	1714.9	1262.22	3639.39	3687.75	7709.74	8648.91
Malaysia	3002.37	1210.04	17841.92	12094.65	29730.60	29124.71	47996.81	60954.00

Pakistan	656.40	220.60	5007.96	2538.74	8080.17	9749.75	3093.61	9969.81
Nepal	2184.00	1324.92	1565.00	663.82	3734.56	2753.63	10387.34	10678.45
UK	977.46	771.97	3306.14	3959.58	7943.79	13653.12	20071.49	40471.63
Iran	323.45	57.01	36.00	10.91	4315.00	3170.19	140001.74	12775.47
Singapore	428.48	146.09	1687.41	1295.05	1816.30	2002.98	3354.86	4700.48
UAE	2115.66	599.64	2190.91	1512.37	8713.88	12531.49	13172.51	25290.85
Japan	399.16	328.46	789.32	1166.61	811.99	2886.92	1830.59	8825.21
Egypt	240.00	74.42	1471.80	1125.82	399.24	322.70	609.55	765.78
Australia	623.41	480.00	1245.10	1577.20	1115.50	2139.00	2295.20	5777.60
Sri Lanka	4656.43	1439.26	15241.43	7960.85	28347.16	20907.15	58284.94	64583.59
Saudi Arabia	794.64	912.64	1484.80	3627.52	8678.89	21376.67	16728.71	46040.09
Bangladesh	864.54	364.05	2658.32	4589.32	8569.45	16895.20	25698.25	35258.21
Germany	1562.32	3587.65	6784.21	12589.32	19358.28	22589.32	29658.47	42369.02
Morocco	64.25	96.21	1187.25	995.3	5007.6	5231.2	6489.02	8951.2
Netherlands	660.2	2397.5	4589.08	6589.45	8003.05	12004.89	13452.08	15321.07

(Source: www.indianspices.com)

Table 2 shows spice exports from India by country, broken down by value and quantity, from 2006–07 through 2022–23. Viewed from the table, Sri Lanka, the United States, Malaysia, Bangladesh, the United Kingdom, Nepal, South Africa, and Saudi Arabia were once The primary countries importing Indian spices are Saudi Arabia and the United Arab Emirates. The table shows that Sri Lanka is the top importer of spices from India, with imports rising from 4656.43 tonnes in the 2006–07 fiscal year to 64583.59 tonnes in the 2022–23 fiscal year.

Over the study period from 2006–07 to 2022–23, an increasing tendency is seen for the United States, Malaysia, Saudi Arabia, the United Kingdom, and all other spice importing countries. The table illustrates a five-year period for the export of spices, indicating that the import of spices into the relevant country exhibits an increasing trend in terms of quantity and length of value after each five-year period.

In the case of Sri Lanka, it was noticed that the country's spice exports from India totaled 4,656.43 tonnes in the 2006–07 fiscal year. From then, they progressively climbed to 15,251.43 tonnes, 28,347.16 tonnes, and 56,284.94 tonnes in the following fiscal years: 2011–12, 2016–17, and 2022–23. However, in terms of export value, Sri Lanka earned Rs. 1496.26 lakh in the fiscal year 2006–2007, which increased to Rs. 64583.59 lakh in the next year (2022–2023). In the instance of the United States, it was noticed that the quantity of spices exported was 3243 tonnes in 2006–07, equivalent to 2541.70 thousand rupees, and climbed to 55539.51 tonnes, equivalent to 138456.02 thousand tonnes in 2022–2023. Similar to this, in 2006–07, 3002.37 tonnes from Rs 1,210.04 and grew to 47,996.81 tonnes from Rs 60,954 in 2022–23 were sold to Malaysia. Exports from India to Bangladesh, the UK, and Saudi Arabia totaled 864.21 tonnes worth Rs 364.05 lakh, 977.46 tonnes worth Rs 771.97 thousand, and 794.64 tonnes worth Rs 912.04 lakh respectively in 2006–2007. The volume and value of exports increased in 2022–2023 to 25098.25 MT worth Rs 35,258.12 thousand, 20071.49 MT worth Rs 40,471.63 thousand, and 16,728.71 MT worth Rs 46,040.09

EXPORT COMPETITIVENESS

The nominal protection factor (NPC) was used to categorise the competitiveness of exports. The domestic price to the frontier price ratio is shown here. This aids in assessing the level of market and export competitiveness for important spices including cumin, coriander, black pepper, turmeric, and chilli. Table 3 displays the NPC values for the period 2022-2023.

Table - 3
Nominal protection coefficients for major spices in India

Continent	NPC For Chilly		NPC For Black Pepper		NPC For Turmeric		NPC For Coriander		NPC For Cumin	
	Current Price	Constant Price	Current Price	Constant Price	Current Price	Constant Price	Current Price	Constant Price	Current Price	Constant Price
Australia	0.64	0.45	2.11	1.75	3.05	2.12	0.75	0.45	1.57	1.10
Asia	0.87	0.60	2.06	1.71	2.32	1.72	1.08	0.67	2.20	1.85
Africa	0.65	0.46	4.67	3.49	2.31	1.71	0.97	0.61	2.30	1.01
North America	0.66	0.45	2.12	1.76	0.82	0.49	0.63	0.41	2.03	1.72
South America	2.38	1.90	7.64	5.71	2.21	1.66	NA	NA	2.47	2.03
Europe	0.74	0.52	2.05	1.71	1.94	1.54	1.81	1.47	1.64	1.45

(NA: Not Available)

CHILI

Table 3 shows how competitively priced continental chilli exports are. At constant prices, it was discovered that continents like Australia (0.45), Africa (0.46), North America (0.46), and Europe (0.52) had the most fiercely competitive markets for chillies. While South America (1.90) and Asia (0.60) were the continents with the most competitive marketplaces for spicy peppers. South America is a noncompetitive market at the current cost of the continent. However, India finds that marketplaces on continents like Australia, Africa, North America, Asia, and Europe are extremely competitive.

BLACK PEPPER

In the export of black pepper, it was discovered that while markets in Africa (3.49) and South America (5.71) are not competitive fixed price, those in Europe (1.71), Asia (1.71), Australia (1.75), and North America (0.76) were found to be moderately competitive markets. All black pepper markets worldwide, it should be mentioned, cannot compete with India's at the present pricing. The high cost of production is this.

TURMERIC

The table clearly shows that North America (0.49), for example, was a very competitive fixed price market for turmeric export from India. However, it turns out that markets on continents like Asia (1.71), South America (1.66), Africa (1.71), and Europe (1.54) were extremely competitive. Australia (2.12) was a market with little competition. It was mentioned that North America (1.72) and Europe (1.94) were fairly competitive markets at the current price. where it was discovered that the markets of continents like South America, Australia, Asia, and Africa cannot compete with the existing pricing for exporting turmeric.

CORIANDER

Additionally, the level of competition in the world market for coriander has been evaluated and is shown in Table 3. The table shows that, at constant prices, Australia (0.45), North America (0.41), and Europe (0.57) are the three most competitive markets for the export of coriander. At constant pricing, the markets with the most competitiveness for Indian coriander exports were Asia (0.67), followed by Africa (0.61). Similarly, coriander exports

from India are competitive enough at the current pricing to go to continents like Australia (0.75), Africa (0.97), North America (0.63), Asia (1.08), and Europe (18.1).

CUMIN

One of the most vital spices in India is cumin. The table demonstrates that, at constant prices, markets for cumin export from India have proven to be extremely competitive in regions like Europe (1.45), Asia (1.85), Africa (1.01), and North America (1.72). At constant pricing, Australia (1.10) and South America (2.03) were uncompetitive markets for cumin exports. While Australia, Asia, Africa, South America, and North America were uncompetitive markets for the export of cumin from India, Europe (1.64) was a market with moderate competition at the current price.

CONCLUSIONS

1) From 2006–2007 to 2016–2017, acreage and spice production in India expanded steadily.
2) According to the notional protection coefficient calculations, India would need to build up its infrastructure in order to balance its comparative advantage as coriander and chillies were competitive for export in many nations.
3) Competition for export of black pepper, turmeric, and cumin is on par across all continents.

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