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## Export competitiveness in spices from India

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**Abstract**

Indian spices are popularly known for their flavour and aroma in domestic as well as in the international markets. India is one of the largest producers, consumer and exporter of spices in the world. The study was based on secondary data. The degree of export competitiveness and the competitiveness of market for major spices viz chilli, black paper, turmeric, coriander and cumin were analysed using At constant price, chilli, turmeric and coriander possessed highly competitiveness in world market whereas, black paper and cumin were moderately competitive in world market.

**Keywords:** Spices, competitiveness, nominal protection coefficient, international market

**Introduction**

India is the world's largest spices producer, with a 44 per cent share in output and 36 per cent in the global spices trade. Over the past years, there has been a steady increase in area and production of spices in India. India has near monopoly in Cardamom (large), and India is largest producer of turmeric, leads in area and production of ginger. Out of the total spices production, Indian households consume about 70-75 per cent either in whole form or in value added form (powder or masalas), 5-10 per cent is utilized by oleoresins, pharmaceuticals and cosmetics companies, 15-20 per cent is exported and the remaining 5 per cent goes for seed purposes. (Source:www.commodityindia.com).

India being a net exporter of agricultural commodities, the foreign earnings by way of exports will lead to the import of capital goods which will pave way for the increased investment resulting in technological advances, eventually leading to improved productivity and efficiency. To accelerate the pace of economic development, reliance on international trade becomes desirable to muster foreign exchange. For the agrarian economies of developing countries like India, spices exports seem to be the engine of the growth of exports. A study about the performance of exports in this sector is important for India. As the international market becomes increasingly competitive, it is essential to enhance the production and productivity and bring down cost of cultivation to make the Indian spices globally competitive. Indian spices possessed higher prices in the world market because of low productivity and high production cost. Several reasons like existence of uneconomic and senile genetic stock, incidence of diseases in cardamom and ginger are attributed to low productivity of spices in our country. Though India is a leading producer of black pepper, its productivity is very low compared to other pepper producing countries like Thailand and Malaysia. Cardamom is another commodity in which the country has lost its competitiveness in the international trade because of increased production cost. Similarly, Indian ginger is costlier compared to Chinese and Nigerian produce. Promotional activities for spices production have to be strengthened to capture the growing world market. The cost of certification of organic spices is prohibitively high and beyond the capacity of an average Indian farmer. This has to be brought down to a reasonable and affordable level. Impact of low grade, low priced spices from other countries to India and their re-export under Indian label may destroy the quality image of Indian spices in the international market and may detrimentally affect the demand for Indian spices in future. Thus, to improve the export potential of country and to highlight the competitive countries in international market for export of spices these study was undertaken. The study also focuses on the analysis of competitiveness of the spices. It also help the exporters and farmers in identifying demanding market of spices.

## Methodology

Whole India was taken into consideration at aggregate level for analysis so as to facilitate data compilation and prices in the international market. The study was based on secondary data. The secondary data on production, export quantity and export value were compiled from Spice Board of India and [www.indiastats.com](http://www.indiastats.com) for a period of 17 years (2000-01 to 2017-18). The collected data were processed to arrive at the desired results. The data were grouped into continents and continent wise analysis was done using various statistical tools.

There is usually fluctuation in the international or external value of any currency over a period of time. Therefore, considering 2000-01 as the base year, growth rates at constant price were worked out to give the real picture of export earnings. For converting values of current prices into those at constant prices, suitable indices of unit export values were constructed.

To fulfil the specific objectives of the study, based on the nature and extent of availability of data, the following Nominal Protection Coefficient analytical tools and techniques were adopted.

Pursell and Gupta (1998) defined NPC of a commodity as the ratio of that commodity's domestic price to its international reference price and referred to it as an estimate of the extent to which its price has been affected by government interventions in the country's international trade. NPC determines the degree of export/import competitiveness of commodities by mean laying the divergence of domestic price from the international or border price.

$$NPC = P_d \div P_b$$

Where, NPC = Nominal Protection Coefficient

$P_d$  = Domestic price of spices

$P_b$  = Border price of spices

## Border prices

It is the price that the farmers would have received or the prices of the domestic varieties would have been under conditions of free trade at the same exchange rate. Border prices were computed by using international price adjusted for freight, insurance, marketing costs and trading margins including any processing cost or by using the Cost Insurance Freight (CIF)/ Free on Board (FOB) prices which are derived by dividing value of imports or exports by their respective quantities.

## Domestic prices

In order to approximate as closely as possible to the prices that the farmers receive during the harvest, the wholesale prices for spices for the selected markets were considered as domestic prices.

## Results and discussion

### Area and production of spices in world and India

The area and production of spices with respect to world and India from 2000-01 is presented in Table 1, It is observed from the Table that the area of spices at world level drastically increased from 2000-01 to 2016-17. In case of production of spices, sudden increase was observed from 2009-10 to 2011-12 (1767 thousand MT to 25206 thousand MT).

The time series data of area and production of spices in world and India since 2000-01 to 2016-17 showed increasing trend of production of spices for world as well as India. Area under spices cultivation increased during 2009-10 to 2011-12 for world and India. In 2013-14, area of spices decreased and again it was increased from 2015 onwards. In case of Indian spices, the area as well as production of all spices was found to be increasing steadily since 2000-01 to 2016-17. Similar to world production the sudden jump in production of spices were observed from 2009-10 to 2011-12 (1029 thousand MT to 1699 thousand MT) in India. However in overall; the up and down stream were observed in both area and production of spices with increasing trend.

In 2000-01, India's share in world production was 71.65 per cent and it was declined over the period of time. India's share in world production was 60.06 per cent in 2016-17. India has 76.26 per cent of world area under spices in 2000-01 and 75.61 per cent share in world area under spices in the year 2016-17. From the table 1, it was observed that India has major contribution in area and production of spices in the world.

**Table 1:** Area and production of spices in world and India

Year	World		India	
	Area (ha)	Production (MT)	Area (ha)	Production (MT)
2000-01	781845	1319655	596300 (76.26)	945600 (71.65)
2001-02	617714	1266790	397500 (64.35)	882200 (69.64)
2002-03	829875	1174006	633600 (76.34)	738800 (62.92)
2003-04	721678	1384471	507600 (70.33)	954700 (68.95)
2004-05	737026	1436427	512400 (69.52)	966100 (67.25)
2005-06	711225	1617032	499300 (70.20)	1075100 (66.48)
2006-07	788309	1601619	559500 (70.97)	1020000 (63.68)
2007-08	829150	1747862	578000 (69.70)	1104000 (63.16)
2008-09	778279	1743125	541000 (69.51)	1063000 (60.98)
2009-10	957373	1767435	725600 (75.79)	1029700 (58.25)
2010-11	1038760	2196034	776516 (74.75)	1474900 (67.16)
2011-12	1008043	2520629	740990 (73.50)	1699790 (67.43)
2012-13	101210	2367764	740337 (73.14)	1496990 (63.22)
2013-14	950898	2440058	680000 (71.51)	1500488 (61.49)
2014-15	1014090	2436486	737000 (72.67)	1504000(61.72)
2015-16	1056262	2243756	768000 (72.70)	1292000 (57.58)
2016-17	1184992	2543950	896000 (75.61)	1528000 (60.06)

(Source: Food and Agriculture Organisation)

(Figures in the parentheses are percentage to the world area and production respectively).

### Country wise export of spices from India

The country wise export of spices in quantity term and value term from 2005-06 to 2016-17 is given in the Table 2.

It was seen from the table, Sri Lanka, USA, Malaysia, Bangladesh, UK, Nepal, South Africa, Saudi Arabia and UAE were the major importing countries of Indian spices. It is observed from the table that, Sri Lanka imports the spices from India were rose from 4656.43 MT (2005-06) to 56284.94 MT (2016-17) indicating that Sri Lanka is the leading importing country of major spices from India.

In case of USA, Malaysia, Saudi Arabia, UK and all other importing countries of spices shows increasing trend during the study period of 2005-06 to 2016-17. The table shows five years interval of export of spices, indicating after every five year interval the spices import of respective country shows increasing trend with respect to quantity and in value term.

In case of Sri Lanka, the export of spices from India were observed to be 4656.43 MT during 2005-06 which was increased steadily to 15251.43 MT, 28349.14 MT and

56284.44 MT during year 2010-11, 2014-15 and 2016-17 respectively. However, in term of export value, it was seen that, the foreign exchange earn from Sri Lanka was Rs1396.26 lakh in the year 2005-06 which were increase to Rs59564.93 lakh during 2016-17. In case of USA, the quantity of spices export were observed to be 3243 MT during 2005-06 accounted to Rs2541.70 lakh which was increased to 52539.51 MT accounted Rs138456.02 lakh during 2016-17. Similarly, the quantity of 3002.37 MT of Rs1210.04 lakh

were exported to Malaysia during 2005-06 and it was increased to 45996.81 MT of Rs60954 lakh during 2016-17. The quantity of 964.21 MT of Rs294.52 lakh, 977.46 MT of Rs770.97 lakh and 794.61 MT of Rs912.04 lakh were exported from India to Bangladesh, UK and Saudi Arabia respectively during 2005-06 and its quantity and export value were increase during 2016-17 was 43011.11 MT of Rs35452.62 lakh, 20072.49 MT of Rs40472.63 lakh and 16728.61 MT of Rs46040.07 lakh respectively.

**Table 2:** Country wise export of spices from India (Quantity in MT.) (Value in Rs. Lakh.)

Country	2005-06		2010-11		2014-15		2016-2017	
	Quantity	Export value	Quantity	Export value	Quantity	Export value	Quantity	Export value
Australia	623.41	480.00	1245.10	1577.20	1115.50	2139.00	2295.20	5777.60
USA	3243.00	2541.70	18756.80	20810.30	24240.40	46925.12	52539.51	138456.02
Canada	1045.61	754.65	1746.94	1998.92	1179.31	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	29104.71	45996.81	60954.00
Pakistan	656.40	225.60	5007.96	2538.74	8080.17	9749.75	3093.61	9969.81
Saudi Arabia	794.61	912.04	1484.80	3627.52	8678.89	21376.67	16728.61	46040.07
Nepal	2184.00	1324.92	1565.00	663.82	3734.56	2735.63	10387.34	10678.45
Bangladesh	964.21	294.52	6706.21	3363.26	26465.96	19119.16	43014.61	35452.62
Sri Lanka	4656.43	1396.26	15251.43	7960.75	28349.14	19907.40	56284.94	59564.93
UK	977.46	770.97	3306.14	3959.58	7943.79	13653.12	20072.49	40472.63
Germany	70.69	35.15	383.81	272.07	833.38	890.50	2644.52	3688.06
Iran	323.45	57.01	36.00	10.91	4315.00	3170.19	14001.74	12775.47
Singapore	428.48	146.09	1687.41	1295.05	1816.30	2002.98	3354.86	4700.48
Japan	399.16	328.46	789.32	1166.61	811.99	2886.92	1830.59	8825.21
UAE	2115.66	599.64	2190.91	1512.37	8713.88	12531.49	13172.51	25290.85
Egypt	240.00	74.42	1471.80	1125.82	399.24	322.70	609.55	765.78
Morocco	59.09	45.47	204.09	64.97	1187.29	995.90	5007.10	5241.56
Netherland	643.52	360.79	410.96	461.01	660.53	2397.93	1047.57	7115.23

(Source: [www.indianspices.com](http://www.indianspices.com))

### Export competitiveness

The export competitiveness was arranged using Nominal Protection Coefficient (NPC). This is the ratio of domestic price to the border price. This helps in measuring the degree of export competitiveness and the competitiveness of market for major spices *viz* Chilli, Black Pepper, Turmeric, Coriander and Cumin. The NPC values are presented in Table 3 which were related to the year 2016-17.

### Chilli

The continent wise export competitiveness for chilli is given in the Table 3 and it was observed that, at constant price the highly competitive markets for chilli were continents like Australia (0.35), Africa (0.36), North America (0.36) and Europe (0.42). Whereas, the moderately competitive continents markets for chilli were Asia (0.50) and South America (0.90). At current price the continent, South America was found to be non-competitive market. Whereas the continents like Australia, Africa, North America, Asia and Europe were found to be moderately competitive markets for India. Similar result was observed by the Rajesh (2002) in chilli export in his study on export performance of spices from India.

### Black pepper

In case of black pepper export it was revealed that, the continents like, Europe (0.71), Asia (0.71), Australia (0.75) and North America (0.76) were moderately competitive markets for Black Pepper export whereas, the continents like Africa (2.49) and South America (4.71) were found to be non-competitive markets at constant price. However, at current

price it was observed that all the markets in the world for black pepper were non-competitive to India. It may be due to high production cost. Similar result was found by Jayesh (2001) in his study on production and export performance of Pepper and cardamom in south India- An economic analysis.

### Turmeric

It is seen from the table that, the continent like North America (0.39) was the highly competitive market at constant price for the turmeric export from India. However, the continents like Europe (0.51), South America (0.66), Africa (0.71) and Asia were found to be moderately competitive markets. Australia (1.12) was non-competitive market. At current price, it was seen that North America (0.72) and Europe (0.94) were the moderately competitive markets. Whereas, continents like South America, Australia, Asia and Africa markets were found to be non-competitive at current prices for export of turmeric. Similar result was observed by the Rajesh (2002).

### Coriander

The world market competitiveness for coriander also worked out, and presented in the Table 3. It was observed from the table that highly competitive markets for export of coriander were Australia (0.35), North America (0.31) and Europe (0.47) at constant price. Whereas, moderately competitive markets were Asia (0.57) and Africa (0.51) at constant price for coriander export from India. Similarly at current price, the continents like Australia (0.60), Africa (0.87), North America (0.53), Asia (0.98) and Europe (0.81) were observed to be moderately competitive markets for coriander export from India.

## Cumin

The cumin is most important spice in India. It is depicted from Table that, at constant price, the continents like Europe (0.45), Asia (0.85), Africa (0.91) and North America (0.72) were found to be moderately competitive markets for cumin export from India. Australia (1.10) and South America (1.03) continents were non-competitive markets at constant price for export of cumin. Whereas, at current price the Europe (0.64) was moderately competitive market and Australia, Asia, Africa, South America and North America were non-competitive markets for cumin export from India.

**Table 3:** Nominal protection coefficients for major spices in India

Continent	NPC for Chilli		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	0.54	0.35	1.11	0.75	2.05	1.12	0.60	0.35	1.57	1.10
Asia	0.77	0.50	1.06	0.71	1.32	0.72	0.98	0.57	1.20	0.85
Africa	0.55	0.36	3.67	2.49	1.31	0.71	0.87	0.51	1.30	0.91
North America	0.55	0.36	1.12	0.76	0.72	0.39	0.53	0.31	1.03	0.72
South America	1.38	0.90	6.94	4.71	1.21	0.66	NA	NA	1.47	1.03
Europe	0.64	0.42	1.05	0.71	0.94	0.51	0.81	0.47	0.64	0.45

(NA: Not Available)

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