

EXPORT COMPETITIVENESS OF PROCESSED CASTOR OIL

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ABSTRACT

Castor is cultivated in 30 different countries on commercial scale, of which India, China and Brazil are the major castor growing countries accounting for 92.71 per cent of the world's production. India is the largest exporter of castor oil in the world, accounting for 93 per cent of the total exports of castor oil. Gujarat is leading castor producing state with share of 80.56 per cent. Hence, research study conducted to analyze the export competitiveness of processed castor oil from India. The Nominal Protection Coefficient (NPCs) indicated that castor oil was found to be non-competitive during the whole study period to more than half importing countries i.e. 52 and less competitive in 39 importing countries from India.

KEY WORDS: *Castor oil, Export competitiveness, Nominal Protection Coefficient*

INTRODUCTION

Castor is cultivated in 30 different countries on commercial scale, of which India, China and Brazil are the major castor growing countries accounting for 92.71 per cent of the world's production (Sudha *et al.*, 2017). India, being the single largest producer of castor seed in the world, is likely to witness a decline in the crop output after the farmers shifted to other remunerative crops during *kharif* 2016. The total castor acreage fell by more than 24 per cent in 2016-17 in comparison to that of the previous year. In Gujarat, the largest producer of castor seed, a drop of over 27 per cent was recorded in the acreage with merely 5.65 lakh hectares being sown. Rajasthan and Andhra Pradesh also registered a drop in acreage of 14.5 and 32.6 per cent, respectively (Shah, 2017). An analysis of the situation reveals that the acreage from castor has been shifted to

groundnut and cotton which were more remunerative last year. Pulses acreage also rose significantly which can be attributed to higher prices it commands. The lower castor seed and oil prices prompted processors and consumers in China and EU to boost castor oil imports from India during the past year. Farmers too, reduced the crop by sizeable quantum. Castor oil is unique owing to its exceptional diversity of applications. The oil and its derivatives are used in over 100 different applications in diverse industries such as paints, lubricants, pharma, cosmetics, paper, rubber and more (Patel *et al.*, 2016).

World's exports of castor increased to 537.2 thousand tons in 2016-17 from 494.9 thousand tons in 2011-12, representing a growth of 8.54 per cent over the same period. Being a monopoly castor producer, India has also virtual monopoly position in castor oil exports, too. In 2016-

17, India accounted for 93 per cent of total global castor oil export. In absolute terms, India's castor oil exports increased to 500 thousand tons in 2016–17 from 460.6 thousand tons in 2011–12 (SEA, 2018). Its main trading partners in this specific sector are China, Europe, Thailand and Japan. China has been one of the biggest growth drivers for castor oil due to its demand for sebacic acid (a basic industrial chemical compound) which is developed from this oil. China currently imports 46.39 per cent of its total castor oil requirement, valued at 326.42 million dollar, from India in 2016-17 (Mielke, 2017). However, despite these glorious numbers, India continues to be a price taker and not a price setter in the global castor oil market. One major reasons being that India became the largest producer of the seed by default. Hence, study has been conducted to find out the export competitiveness of processed castor oil from India.

METHODOLOGY

Data collection

The study relied on secondary data pertaining to export of castor oil from India. The secondary data included production of the castor in India, export prices, domestic wholesale and world market prices for the periods 2016-17 at district and state level. These data were collected from various issues of Seasons and Crop Report of Gujarat, Agro Stat published by different sources and web database of Food and Agriculture Organization and IndiaStat. Value of export of agricultural commodities through was also collected from the custom houses (Sea Cargo). The price data are monthly quotations for nominal spot price castor oil were collected from different websites.

Nominal Protection Coefficient (NPC)

The competitiveness indicates the ability of firm to produce commodities with certain level of efficiency. Competitiveness

is a dynamic process, which needs to be created and sustained. In this study, the export competitiveness of processed castor oil in India was studied by Nominal Protection Coefficient.

Nominal Protection Coefficient was compute to determine the extent of competitive advantage enjoyed by the commodity in the context of trade. The coefficients shed light on whether a country has comparative advantage in export of that commodity in a free trade scenario or not.

The Nominal Protection Coefficient (NPC) is defined as the ratio of the domestic price to the world reference price of the commodity under consideration (Audichy, *et al.*, 2017).

$$NPC = \frac{P_d}{P_r}$$

Where,

P_d = Nominal Protection Coefficient

P_d = Domestic price of the commodity in question

P_r = World reference price of the commodity in question

i.e. what he farmer would have received in case of free trade.

NPC basically helps in measuring the divergence of domestic price from the international price and thus protection coefficient is less than the unity, the commodity under consideration is export competitive, and if it is greater than one, than the commodity is protected or non-competitive. In order to identify the most favorable countries for export of processed castor oil, NPC values were computed for different importing countries and were classified into four categories as follows:

Highly competitive ($NPC < 0.5$),

Moderately competitive ($0.5 < NPC < 0.75$),

Less competitive ($0.75 < NPC \leq 1.00$) and

Non-competitive ($1.00 < NPC$)

RESULTS AND DISCUSSION

The competitiveness of different importing countries for castor oil was estimated by computation of Nominal

Protection Coefficient (NPC) values for different importing countries for the period 2016-17. For the purpose of calculating NPC, the information regarding transportation and packaging charges was collected from exporter of Gujarat and domestic prices were taken from AGMARKNET and various price policy reports of Commission for Agricultural Costs & Prices. The export competitiveness of castor oil was worked out for different importing countries and presented in Table 1. The export of castor oil was found to be less competitive to 39 castor oil importing countries from India which includes Belgium, China, Netherland, France, Japan, United States of America, Thailand, Italy Brazil, United Kingdom, Korea etc. Overall analysis shows that for most of countries, export of castor oil from India was non-competitive during the year 2016-17, almost 52 castor oil importing countries from India were non-competitive, which includes Colombia, Mexico, Ukraine, Spain, Taipei Chinese, Singapore, Viet Nam, Canada, Germany, Ghana, Mauritius etc. during the year 2016-17.

In the year 2016-17, China was less competitive and leading castor oil importing countries from India followed by Netherland, France, United States of America and Thailand. While in term of unit value, Belgium paid the highest unit value of castor oil followed by China, United Kingdom, Netherland and France. It clearly evident from data that not a single castor oil importing countries from India was highly and moderately competitive as NPC value was not less than 0.5 and $0.5 < NPC < 0.75$, respectively.

CONCLUSION

The export performance in castor oil has revealed that India has ample scope to increase export of castor oil. The Nominal Protection Coefficient (NPCs) indicated that

castor oil was found to be less competitive to non-competitive during 2016-17 to all importing countries. China, Netherland, France, United States of America and Thailand served as the major importers and promising countries for castor oil from India. Study indicated that India's export of castor oil was mainly concentrated in China. India needs to find out other international stable markets to reduce the trade risk in long run. Hence, appropriate export promotion strategies should be evolved to diversify the geographical concentration.

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Table 1: County wise analysis of castor oil export from India and NPC value

Country	Value (Rs. Lakh)	Quantity (MT)	Unit Value (Rs/kg)	Reference Price (P _r)	NPC (P _d /P _r)
Belgium	11057	8026	72.588	71.158	0.854
China	395879	277432	70.080	68.650	0.885
United Kingdom	11993	8401	70.049	68.619	0.885
Netherlands	127777	88748	69.455	68.025	0.893
France	104803	72442	69.122	67.692	0.897
Brazil	12883	8904	69.114	67.684	0.897
Italy	13368	9220	68.971	67.541	0.899
Japan	26915	18514	68.787	67.357	0.902
Kuwait	485	330	68.041	66.611	0.912
United States of America	94012	63941	68.014	66.584	0.912
Israel	978	664	67.894	66.464	0.914
Egypt	2003	1356	67.698	66.268	0.917
Thailand	34552	23280	67.377	65.947	0.921
Sri Lanka	301	202	67.110	65.680	0.925
Chile	207	132	63.768	62.338	0.974
Russian Federation	6933	4418	63.724	62.294	0.975
South Africa	3369	2145	63.669	62.239	0.976
Korea	76	48	63.158	61.728	0.984
United Arab Emirates	6086	4066	66.809	65.379	0.929
Korea	13870	9257	66.741	65.311	0.930
El Salvador	3	2	66.667	65.237	0.931
Iran, Islamic	2160	1428	66.111	64.681	0.939
Malaysia	3588	2369	66.026	64.596	0.940
Saudi Arabia	1175	775	65.957	64.527	0.941
Slovenia	465	306	65.806	64.376	0.944
Turkey	9244	6075	65.718	64.288	0.945
Morocco	34	22	64.706	63.276	0.960
Lithuania	258	166	64.341	62.911	0.965
Jordan	162	104	64.198	62.768	0.968
Pakistan	353	226	64.023	62.593	0.970
Syrian Arab	111	71	63.964	62.534	0.971
Bahrain	169	108	63.905	62.475	0.972
Ukraine	631	389	61.648	60.218	1.009
Costa Rica	26	16	61.538	60.108	1.011
Lebanon	121	74	61.157	59.727	1.017
Myanmar	36	22	61.111	59.681	1.018
Argentina	825	519	62.909	61.479	0.988
Greece	272	171	62.868	61.438	0.989
Finland	1168	732	62.671	61.241	0.992
Indonesia	638	399	62.539	61.109	0.994
Bangladesh	80	50	62.500	61.070	0.995
Australia	2290	1431	62.489	61.059	0.995
Hong Kong, China	154	96	62.338	60.908	0.997
Colombia	169	105	62.130	60.700	1.001

Table 1: Contd....

Country	Value (Rs. Lakh)	Quantity (MT)	Unit Value (Rs/kg)	Reference Price (P _r)	NPC (P _d /P _r)
Algeria	29	18	62.069	60.639	1.002
Mexico	3490	2159	61.862	60.432	1.005
Uzbekistan	55	34	61.818	60.388	1.006
Kenya	123	76	61.789	60.359	1.006
Sweden	34	21	61.765	60.335	1.007
Latvia	287	177	61.672	60.242	1.008
Canada	697	410	58.824	57.394	1.058
Tanzania	63	37	58.730	57.300	1.060
Qatar	75	44	58.667	57.237	1.061
Austria	29	17	58.621	57.191	1.062
Peru	140	82	58.571	57.141	1.063
Iraq	242	141	58.264	56.834	1.069
Nepal	67	39	58.209	56.779	1.070
Philippines	138	80	57.971	56.541	1.074
Spain	1330	811	60.977	59.547	1.020
Taipei, Chinese	2383	1452	60.932	59.502	1.021
Singapore	1692	1029	60.816	59.386	1.023
Uganda	79	48	60.759	59.329	1.024
New Zealand	56	34	60.714	59.284	1.025
Mozambique	90	54	60.000	58.570	1.037
Cuba	30	18	60.000	58.570	1.037
Romania	30	18	60.000	58.570	1.037
Dominican	25	15	60.000	58.570	1.037
Congo	5	3	60.000	58.570	1.037
Fiji	5	3	60.000	58.570	1.037
Nigeria	406	243	59.852	58.422	1.040
Viet Nam	1126	670	59.503	58.073	1.046
Poland	98	58	59.184	57.754	1.052
Bulgaria	33	18	54.545	53.115	1.144
Ghana	206	112	54.369	52.939	1.147
Oman	23	12	52.174	50.744	1.197
Senegal	16	8	50.000	48.570	1.251
Liberia	2	1	50.000	48.570	1.251
Benin	2	1	50.000	48.570	1.251
Guyana	2	1	50.000	48.570	1.251
Zimbabwe	2	1	50.000	48.570	1.251
Portugal	28	16	57.143	55.713	1.090
Belarus	32	18	56.250	54.820	1.108
Germany	2735	1519	55.539	54.109	1.123
Guatemala	29	16	55.172	53.742	1.130
Haiti	29	16	55.172	53.742	1.130
Norway	109	60	55.046	53.616	1.133
Yemen	52	24	46.154	44.724	1.358

Table 1: Contd....

Country	Value (Rs. Lakh)	Quantity (MT)	Unit Value (Rs/kg)	Reference Price (P_r)	NPC (P_d/P_r)
Panama	9	4	44.444	43.014	1.412
Trinidad and Tobago	9	4	44.444	43.014	1.412
Zambia	16	7	43.750	42.320	1.435
Mauritius	19	8	42.105	40.675	1.493

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