

## Export competitiveness of Pomegranates from India

P. MADHUMATHI<sup>1</sup>, B. L. PATIL<sup>1</sup>, V. R. KIRESUR<sup>1</sup> AND N. M. KERUR<sup>2</sup>

<sup>1</sup>Department of Agricultural Economics, <sup>2</sup>Department of Agribusiness management

University of Agricultural Sciences, Dharwad - 580 005, India

E-mail: patil.basagouda@gmail.com

(Received: September, 2023 ; Accepted: December, 2023)

DOI: 10.61475/JFS.2023.v36i4.12

**Abstract:** Pomegranate is an important fruit crop of arid and semiarid regions of the world. In 2021-22, India had an area of 2.7 lakh hectares under pomegranate cultivation with a production of 30.86 lakh metric tonnes and a productivity of 11.4 metric tonnes/ha; 99043.09 tonnes of fresh pomegranates were exported from India to other countries with a value of ₹ 688.76 crores. In the present study, export competitiveness of Indian pomegranates was analysed by using nominal protection coefficient (NPC) under the exportable hypothesis for a period of 20 years from 2002-03 to 2021-22. Time series data were collected from the websites of APEDA, NHB and Indiastat. Nominal protection coefficient (NPC) for pomegranates was found to be greater than unity in period I (1.29) while in period II, the NPC was found to be less than unity (0.82). This showed that pomegranates were not export competitive in period I while they were moderately competitive in period II. In the overall period, the NPC value was found to be 0.95 indicating that Indian pomegranates were internationally competitive. Hence, the Government may focus on international relative pricing and formulate targeted strategies to increase domestic pomegranate production through widespread promotion initiatives in the country.

**Key words:** Export competitiveness, Nominal Protection Coefficient, Pomegranates

### Introduction

Pomegranate is a significant fruit crop of arid and semiarid regions of the world. It is believed to have originated from Iran. It has both cultivated (*Punica granatum* L.) and wild types (*Punica protopunica*). Pomegranates possess inherent resilience to endure high temperatures, drought and limited moisture availability. Their versatile adaptability, hardiness, low maintenance requirements, consistent yet high yields, excellent storage qualities, desirable taste, therapeutic properties and the potential to enter a dormant phase during periods of limited irrigation availability suggest opportunities for expanding pomegranate cultivation in India.

India holds the title of the world's largest pomegranate producer, with Iran following closely behind. Additionally, several other countries including Turkey, Spain, Tunisia, Morocco, Afghanistan, China, Greece, Japan, France, Armenia, Cyprus, Egypt, Italy and Palestine also cultivate this fruit (Anonymous, 2011). In 2021-22, India had an area of 2.7 lakh hectares under pomegranate cultivation with a production of 30.86 lakh metric tonnes and a productivity of 11.4 metric tonnes/ha (Anonymous, 2022a); 99043.09 tonnes of fresh pomegranates were exported from India to other countries with a value of ₹ . 688.76 crores (Anonymous, 2022b). In India, the total production of pomegranates is concentrated mainly in Maharashtra, followed by Gujarat, Karnataka, Andhra Pradesh, Rajasthan and Madhya Pradesh.

Despite being the leading global producer, India's share in total world exports of pomegranates is less than 4 per cent. Approximately 80 per cent of India's pomegranate exports are directed to Middle Eastern countries. In the year 2021-22, the primary markets for India's pomegranates included the United

Arab Emirates (UAE), Bangladesh, Nepal, Qatar, Netherlands, Saudi Arabia, Oman and Kuwait (Anonymous, 2022c).

Pomegranate is a high value crop. India produces fine edible quality of pomegranates which are available almost throughout the year. Also, there's a great demand for pomegranates all over the world considering their nutritional benefits and other importance. Hence, there's a tremendous potential to increase the export of pomegranates from India. Though previous studies have been done on the topic, export scenario of commodities keeps changing over the years. Therefore, the objective of the present study was to analyse the export competitiveness of pomegranates from India.

### Material and methods

Secondary data for a period of 20 years from 2002-03 to 2021-22 were used for the study. Time series data were collected from the websites of APEDA, NHB and Indiastat.com

The export competitiveness of pomegranates was analysed using Nominal Protection Coefficient (NPC). NPC was calculated as the ratio between domestic price to the international price of a comparable grade of commodity, adjusted for all the transfer costs such as freight, insurance, handling costs, margins, losses *etc.* Symbolically,

$$NPC = P_d / P_r$$

Where, NPC - 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 the farmer would have received in case of free trade.

**Decision criteria**

NPC < 0.5: Highly competitive

NPC between 0.5 to 1.0: Moderately competitive

NPC > 1.0: Non-competitive

NPC can be estimated under two main hypotheses *i.e.* under importable hypothesis and exportable hypothesis. The decision criterion is that if NPC is less than one, then the commodity is competitive (under importable hypothesis it is considered a good import substitute and under exportable hypothesis, it is worth exporting). If NPC is greater than one, the commodity is not competitive (neither a good import substitute nor worth exporting).

Under exportable hypothesis, the commodity in question is treated as exportable commodity and thus competes with internationally produced commodity at a foreign port. Therefore, the domestic commodity has to be extra efficient to the tune of international transportation costs at least. In the present study, nominal protection coefficient (NPC) was estimated under the exportable hypothesis.

The average whole sale price (in ₹ /q) of all the markets for pomegranates in India was taken as the domestic price. World reference price was considered at which export of fruits takes place. Estimation of world reference price entails adding freight charges, insurance charges, transportation cost, wharfage charges and service charges.

**Results and discussion**

The competitiveness of Indian pomegranates was analysed using Nominal Protection Coefficient (NPC) technique and presented in Table 1. NPC was determined for each individual year and the average for period I and period II was also determined. Table 1 showed that Nominal protection coefficient (NPC) was greater than unity in period I (1.29) while in period II, the NPC was found to be less than unity (*i.e.*, 0.82). In period I, the domestic price of pomegranates was higher than international price except in the years 2002-03, 2005-06 and 2006-07 where the NPC was less than 1 indicating export competitiveness of pomegranates. Also, during the period I, it could be seen that the NPC values were fluctuating every year having a lowest value of 0.81 in 2006-07 and having a highest value of 1.77 in 2011-12.

During period II, the NPC for pomegranates was comparatively better as the average was less than unity implying Indian pomegranates were export competitive. In the period II, the lowest NPC value of 0.57 was observed in 2014-15 and the highest value of 1.34 was observed in 2021-22. Unlike period I, in period II, international price of pomegranate was higher than domestic price except in the years of 2012-13 and 2021-22 where the NPC was greater than unity indicating that Indian pomegranates were not export competitive. The exceptions within both periods suggest that certain years exhibited different dynamics, potentially due to various market and policy factors. Fluctuating NPC values implied changing conditions affecting pomegranate exports, highlighting the need for adaptable strategies. The analysis suggested that recent years

Table 1. Nominal Protection Coefficient (NPC) for Indian Pomegranates (In ₹ / q)

Year	Domestic Prices	International Prices	NPC
2002-03	2130.76	2276.40	0.94
2003-04	2216.24	2044.40	1.08
2004-05	2369.38	2128.92	1.11
2005-06	2503.52	2885.18	0.87
2006-07	2980.87	3671.82	0.81
2007-08	3545.44	2592.45	1.37
2008-09	4210.88	3292.62	1.28
2009-10	5194.82	3574.14	1.45
2010-11	6649.37	3895.85	1.71
2011-12	8619.48	4882.92	1.77
Period I Average	4046.78	3130.57	1.29
2012-13	8369.49	6508.93	1.29
2013-14	8472.56	9528.76	0.89
2014-15	8716.52	15412.19	0.57
2015-16	8407.39	10227.27	0.82
2016-17	7555.96	9857.97	0.77
2017-18	6491.07	11359.92	0.57
2018-19	7025.39	10141.14	0.69
2019-20	7167.59	8535.56	0.84
2020-21	7141.74	7600.55	0.94
2021-22	9321.92	6954.25	1.34
Period II Average	7879.16	9629.25	0.82
Overall Average	1645667	1731545	0.95

have shown improved competitiveness, indicating potential growth opportunities in international pomegranate markets.

In the overall period, the NPC value was 0.95 which indicated moderate export competitiveness of pomegranates. It also revealed that pomegranate exports had a high degree of comparative advantage in the world market. India needs to capitalize this advantageous position by ensuring its position in the international market as a stable and dependable source of exportable quality pomegranates. There is also an urgent need to enhance the productivity levels of pomegranates so that cost of production can be minimized and thereby the comparative advantage could be increased.

The finding of this study was similar to the study on export performance of pomegranate in India by Mate (2019) where the NPC value of pomegranate export was 0.82 which indicated moderately export competitiveness of pomegranate in international level for the overall period (1988-89 to 2017-18).

**Conclusion**

Nominal protection coefficient (NPC) for pomegranates was found to be greater than unity in period I (1.29) while in period II, the NPC was found to be less than unity (0.82). This showed that pomegranates were not export competitive in period I while they were moderately competitive in period II. In the overall period, the NPC value was found to be 0.95 indicating that Indian pomegranates were internationally competitive. Hence, the Government may focus on international relative pricing and formulate targeted strategies to increase domestic pomegranate production through widespread promotion initiatives in the country.

**References**

- Anonymous, 2011, Vision 2030 report for pomegranates. National Research Centre on Pomegranate (ICAR), Solapur, Maharashtra, pp. 9-37.
- Anonymous, 2022a, Area, production and productivity of pomegranates in India. <https://www.indiastat.com/table/agriculture/area-production-productivity-pomegranate-india-200/789017>
- Anonymous, 2022b, Export quantity and value of pomegranates from India. [https://agriexchange.apeda.gov.in/index/genReport\\_combined.aspx](https://agriexchange.apeda.gov.in/index/genReport_combined.aspx)
- Anonymous, 2022c, Indian pomegranates export destinations. [https://agriexchange.apeda.gov.in/index/genReport\\_combined.aspx](https://agriexchange.apeda.gov.in/index/genReport_combined.aspx)
- Mate V L, 2019, Export performance of Pomegranate in India. M.Sc. (Agri.) Thesis, Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola, Maharashtra, India.