

Performance Evaluation of Sugar Industry in India

*¹Deepak Kumar, ²Anju Rani & ³Sunil Phougat

¹Research Scholar, Department of Economics, Chaudhary Ranbir Singh University, Jind (Haryana)

²Assistant Professor, Department of Economics, Chaudhary Ranbir Singh University, Jind (Haryana)

³Chairperson, Department of Economics, Chaudhary Ranbir Singh University, Jind (Haryana)

Abstract


Sugar industry is the 2nd biggest agro-based industry in India and it significantly contributes altogether to the socio-economic development of the country. The aim of the present paper is to assess the performance of sugar industry in India. Sugar production, export & import and domestic consumption are taken as performance indicators. Further, the study analysed the trends in Fair Remunerative Prices (FRP) sugarcane in India. The study based on the secondary data that has been taken from the various government reports and websites. The results of the study indicated that total agricultural cropped areas are increasing and percentage of sugarcane areas in total cropped areas are increasing and decreasing over the period. Annual growth rate of FRP of sugar was highest in 2009-10 with 59.94 %. There are zero annual growth rates of FRP of sugar during the period 2008-09, 2016-17 and 2019-20 whereas compound annual growth rate of FRP was 8.74 over the period. Export of sugar was increasing whereas import of sugar was decreasing over the period. Domestic consumption of sugar was decreasing between 2018-19 to 2019-20, after that it was continuously increasing.


Keywords: Sugar, Sugarcane, Export-Import, Domestic consumption, and Fair Remunerative Price


Article Publication

 Published Online: 30-Jun-2022

*Author's Correspondence

 Deepak Kumar

 Research Scholar, Department of Economics, Chaudhary Ranbir Singh University, Jind (Haryana)

 deepak.crsu@gmail.com

© 2022 The Authors. Published by *Revista Review Index Journal of Multidisciplinary*

This is an open access article under the CC BY-

NC-ND license 

(<https://creativecommons.org/licenses/by-nc-nd/4.0/>)

Introduction

Sugarcane and sugar have been sustained to a main commodity of exchange and livelihood. Indian sugar industry is the second biggest in the world. After textiles, sugar industry is the second biggest agro-based industry in India and it has effectively contributed towards giving employment and economic growth (Ahmed and Rahman, 2014). It is a critical driver of rural development and supporting the rural development of India. The business is intrinsically boundless supporting north of 6 million farmers, alongside laborers and business visionaries of more than 550 sugar factories, aside from a large group of wholesalers and merchants spread the nation over. Sugarcane contribution to the Indian GDP is 1.1 percent which is huge thinking about that the crop grown exclusively in 2.57 percent of the gross cropped region. Sugar is a fundamental item of mass consumption, the homegrown demand of sugar is around 25 million tons for every annum in India (Sushil Solomon, 2016). The sugar business in India has upheld 6 million farmers and their families (Verma, 2015). India is the largest consumer of sugar in the world (Economic Survey 2021-22).

In India, the agro-climatic areas of sugarcane cultivation can be separated into two sections: tropical and sub-tropical. The sub-tropical locale is the northern territories of Uttar Pradesh, Bihar, Uttarakhand, Punjab, Haryana contains 55% region under

sugarcane and contributes 47% of country's sugarcane creation. The tropical locale comprises principally the southern provinces of Maharashtra, Karnataka, Tamil Nadu and Andhra Pradesh (Upreti and Singh, 2017).

Historical Background

Sugar cane and sugar in India goes back to several thousand years BC. Indian tradition folklore vouches for this since it includes a few legends showing beginning of sugar cane. It was occasionally 4/6th century art of sugar creation was found. The process of sugar creation was rough outside imagination. Sugar cane was cut in pieces, squashed under significant burden in this way acquired was boiled and moved, till it turned solids. Solids of uneven shape and size were called sarkaran, a Sanskrit expression of 'gravel'. The word 'sugar' is gotten from the word Sarkara. In this manner, it may be appropriately said that India has been the original home for sugarcane as well as sugar make. Notwithstanding, all things considered, sugar handling by vaccum pan technique might have begun in some cases in 20s century. The development process was slow. Before independence, India met its sugar necessity through imports. In mid 20s century number of sugar factories jumped up in UP and Bihar. By 1930-31, there were 29 sugar processing plants producing only 100000 MT of sugar and they found adverse rivalry from Japanese sugar which was administering the Indian market (FAO).

Review of Literature

Upreti & Singh (2017) analysed the trends in area, production, productivity, costs, yield & effectiveness of sugarcane and also recognized the several indicators which were contributed in the direction of productivity of sugarcane in main sugar construction states of Uttar Pradesh and Maharashtra. The study detected that area expansion has significantly contributed towards increased production of sugarcane but productivity has endured stationary. Further, their study concluded that the contribution of human labour, machine, fertilizers, insecticides and size of plot has constructive and noteworthy association with the yield of sugarcane. Rajan and Chandrasekaran (2015) studied the economic routine of sugar industry in India. They have selected five sugar industries in India EID Parry, Shree Renuka Sugars, Balrampur Sugars, Bajaj Hindustan and Dhampur sugar mills. The study used correlation coefficient for the critical sets of financial ratios. They make a point of the necessity for economic expert carefully monitoring volume, yield, margin and account payables and noticed that capacity of production increase does not significantly decrease the restrictions as it is broadly accepted. Pandey (2007) analysed the progress, problems and challenges of sugar industry in India liberalization process. Author found challenges sugar industry in India is variation in production of sugarcane because of insufficient irrigation services, lowest productivity of sugarcane, and continuing droughts in hot and sub-hot areas. Author suggested that prices of Sugarcane should be fixed on basis of sugar retrieval. The areas of sugar cultivation should be taken under drip irrigation to reserve water as well as manure. Nandhini and Padmavathy (2017) analysed production of sugarcane for the period 2000-2010 state-wise. Their study used annual growth and the simple linear regression model for find trend of sugarcane. In case of areas and production, they found a negative annual percentage growth rate but in case of productivity, there was a positive growth rate during the period 2004-05. Solomon (2011) studied the overview of Indian Sugar Industry. He found a huge number of sugar factories have varied into spin off based industries and their set up distilleries, organic chemical plants, and cogeneration plants. The sugar essentials of the country are growing always with the population growth. The imminent growth of this sector would need to depend steadily on yield and effectiveness enhancements particularly at level of plant and farm. Chithelen (2016) studied the root of co-operative sugar industry in Maharashtra. Author talked about co-operative sugar industry in three sections first, the spread of canal irrigation, integrate with financial help from a co-operative credit infrastructure, enabled the rich farmhand to cultivate sugarcane, highly as well as hardly as seen second and third sections. The disaster of the great agricultural dejection of the before time 1930s gives rise to a series of defensive responses from the rich peasantry. Zaidi, Saeed and Shahid (2013) analysed the impact of low sugar cane crop on sugar industry in Pakistan. They found in Pakistan, greatly 45 percent people give rise to their income for agriculture sector and 85 percent are small farmers. All agricultural financial institutions should increase agriculture financing facilities recognition push through media and low-priced accessibility of credit. Emam (2010) focused to measure the competitiveness of sugar cane during the period 2004/05, 2005/06, and 2006/07 in Kenana. For fulfil the objective, Policy Analysis Matrix (PAM) were used. They recommended that, the government should exempt sugar cane production from taxes, inducement to encourage sugar industry production and secure maintainable and stability foreign exchange. Solomon, et al.

(2020) analysed the impacts of COVID-19 on sugar industry in India. They found a braking of port operations outstanding to low holder traffic, in short availability of labour supply, public transport and truancy of courier services. They suggested that Indian sugar industry should increase its effort for diversification products. Tradition-hiring facilities and economical farm machinery suitable to small and marginal farmers must be given importance.

Result and Discussion

There are 506 sugar manufacturing plants in India as on 04.02.2022, with adequate smashing ability to produce around 350 lakh MT of sugar. Generally, the producing capacity is crudely distributed equally between private units and co-operative units.

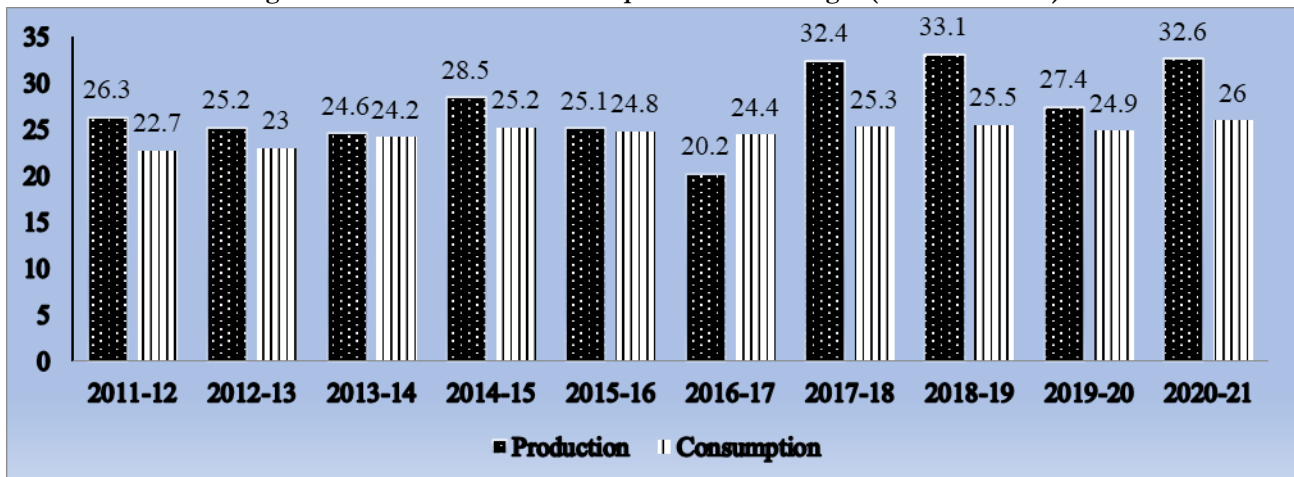
**Table 1: Break-up of Operational Sugar Mills
(As on 04.02.2022) Number**

Sr. No.	Sector	Number of Factories
1.	Co-operative	204
2.	Private	292
	Total	506*

* Including 3 refineries, 1 each in Gujarat, West Bengal and Andhra Pradesh.

Source: Department of Food & Public Distribution.

Figure 1: Production and Consumption Levels of Sugar (Million Tonnes)



Source: Economic Survey 2021-22.

Figure: 1 shows the production and consumption levels of sugar during 2011-12 to 2020-21. Production of sugar was increasing 2011 to 2020-21 with 26.3 per cent to 32.6 per cent respectively whereas it is decrease in 2016-17 with 20.2 per cent. Consumption of sugar level was increasing 2011-12 to 2020-21 with 22.7 per cent to 26 per cent respectively.

Table 2: Total Cropped Area and Sugarcane Area

Years	Total Cropped Agricultural Areas	Sugarcane Cropped Areas	% of Total Cropped Agriculture Area
2001-02	122.78	4.41	3.59
2002-03	113.86	4.52	3.97
2003-04	123.45	3.93	3.18
2004-05	120.08	3.66	3.05
2005-06	121.60	4.20	3.45
2006-07	123.71	5.15	4.16
2007-08	124.07	5.06	4.08
2008-09	122.85	4.42	3.60
2009-10	121.34	4.17	3.44
2010-11	126.67	4.88	3.85
2011-12	124.75	5.04	4.04
2012-13	120.78	5.00	4.14
2013-14	125.04	4.99	3.99
2014-15	124.30	5.07	4.08
2015-16	123.22	4.93	4.00
2016-17	129.23	4.44	3.44
2017-18	127.52	4.74	3.72
2018-19	124.83	5.06	4.05
2019-20	127.59	4.57	3.58

Source: Directorate of Economics & Statistics, DAC&FW.

Table 2 shows the total cropped area and sugarcane area during the period 2001-02 to 2019-20. Total agricultural cropped areas and sugarcane cropped areas increased over the period.

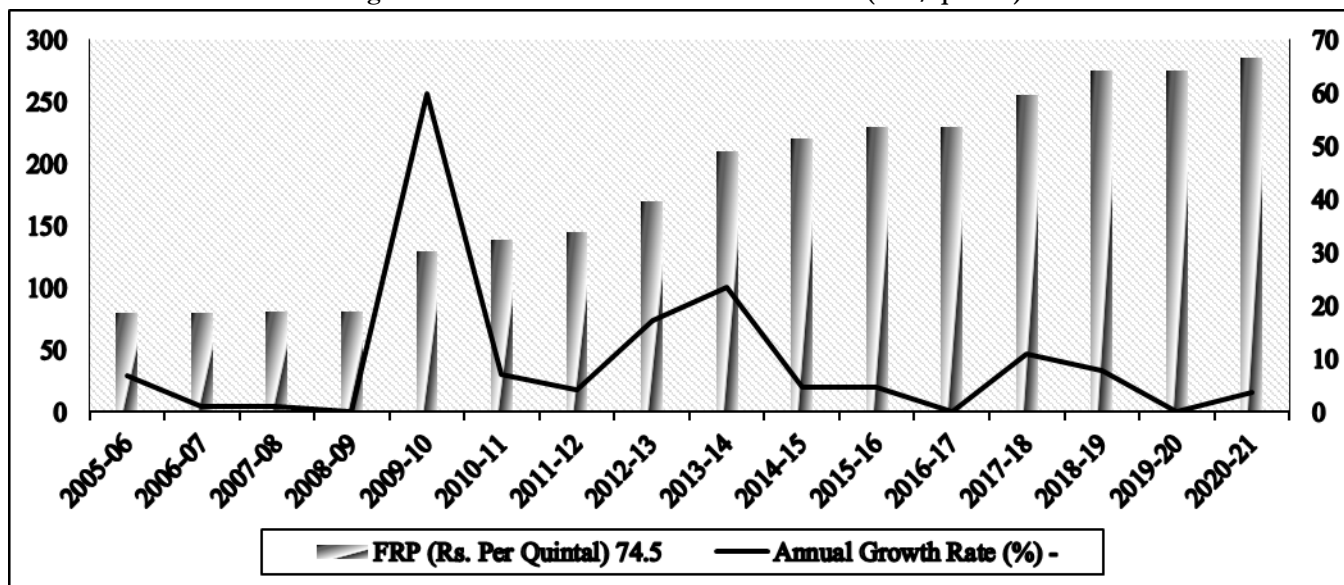
Table 3: Trend of FRP of Sugarcane in India

Year	FRP (Rs. Per Quintal)	Annual Growth Rate (%)
2004-05	74.5	-
2005-06	79.5	6.71
2006-07	80.25	0.94
2007-08	81.18	1.15
2008-09	81.18	0
2009-10	129.84	59.94
2010-11	139.12	7.14
2011-12	145	4.22
2012-13	170	17.25
2013-14	210	23.52
2014-15	220	4.76
2015-16	230	4.54
2016-17	230	0
2017-18	255	10.86
2018-19	275	7.84
2019-20	275	0
2020-21	285	3.63
CAGR	8.74	

Source: www.indiansugar.com

Table 3 shows the trend of FRP of Sugarcane in India. Annual growth rate of FRP was highest in 2009-10 with 59.94 %. It was followed by 2013-14 with 23.52 and 2012-13 with 17.25 %. There are zero annual growth rates during the period 2008-09, 2016-17 and 2019-20. Compound annual growth rate of FRP was 8.74 over the period.

Figure 2: Trend in Fair & Remunerative Price (Rs. /quintal)



Source: www.indiansugar.com

Figure: 2 shows the trend in fair & remunerative price during the period 2005-06 to 2020-21. FRP increased over the period. Annual growth rate of FRP and remunerative price increasing and decreasing. Annual growth rate was highest in 2010-11.

Export - Import of Sugar

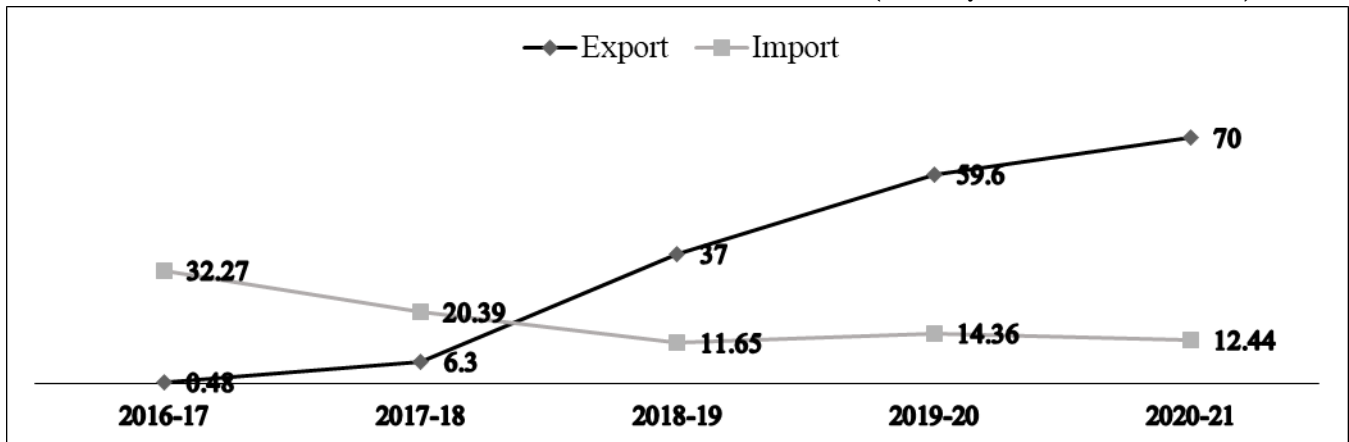
Sugar Export in India

Sugar is a significant item in India. Its sale and distribution of sugar were controlled by the public authority under the Essential Commodities Act, 1955. Till 1997, export of sugar commodities was being done under the arrangements of the Sugar Export Promotion Act, 1958. The notified sugar export agencies are; Indian Sugar and General Industry Export Import Corporation Ltd. (ISGIEIC) and State Trading Corporation of India Ltd. (STC). The Sugar Export Promotion Act, 1958, was revoked through a statute in 1997. In this manner, the export of sugar was decanalised. Presently, the export of sugar is done without any quantitative limitations.

Sugar Import in India

From 2009, Central government allowed the import of crude sugar without any duty under Open General License (OGL) which was applicable till 30.06.2012. From that point, a moderate duty of 10% was re-imposed which was consequently expanded to 15 percent in 2013. Because of excess stock of sugar in the country. The public authority expanded the import duty from 15% to 25 percent in 2014, which was accordingly expanded to 40 percent in 2015 and further expanded to 50 percent in 2017. To forestall any unnecessary import of sugar and to maintain at an appropriate level domestic price, the focal government has expanded custom duties on import of sugar from 50% to 100% in 2018.

Figure: 3 Trends in Sugar Export-Import
(Quantity in Lakh Million Tonne)

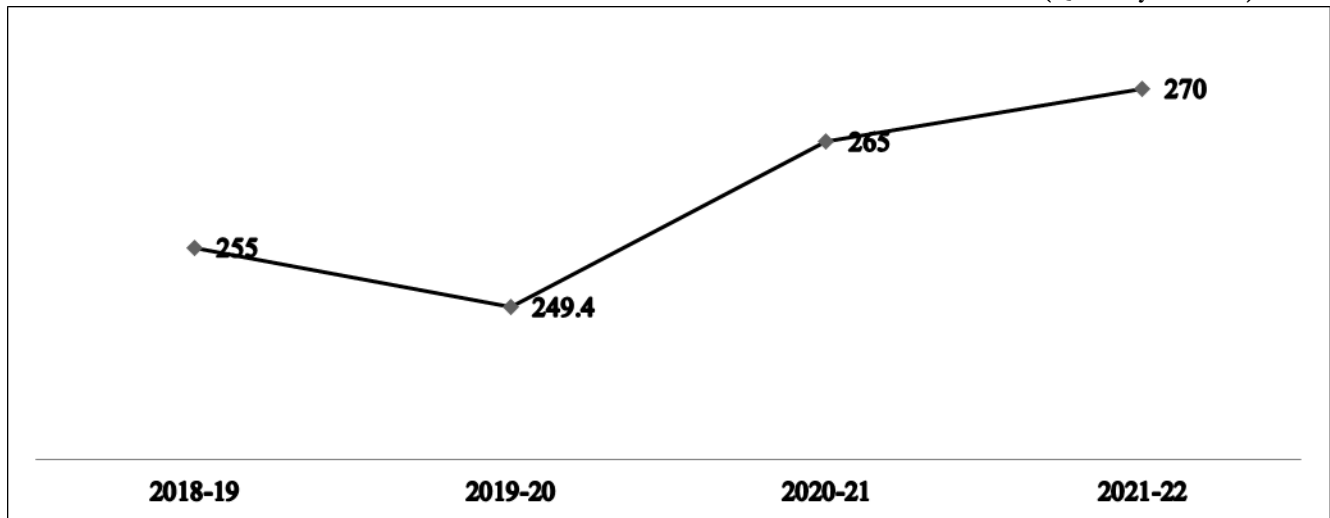


Source: Department of Food & Public Distribution

Figure: 3 shows the trends in Export-Import of sugar during the period 2016 to 2021. Export of sugar was increasing whereas import of sugar was decreasing over the period.

Figure: 4 Domestic Consumption of Sugar in India

(Quantity in LMT)



Source: Economic Survey of India

Figure: 4 shows the domestic consumption of sugar in India during the period 2018 to 2022. It was decreasing between 2018-19 to 2019-20, after that it was rapidly increasing continuously.

The current scenario of the sugar industry

Sugarcane and sugar production cycle in India have continued on an increasing trend. In a sugar cycle of around five years, the business as a rule encounters over-production for three to four years Followed by low production for a one or two years. Until before few years ago, the crop displayed sturdy cobweb behaviour.

Conclusion

The sugar industry plays a significant role in India's agricultural economy. This study found that total agricultural cropped areas are increasing and percentage of sugarcane areas in total cropped areas are increasing and decreasing over the period. Annual growth rate of FRP of sugar was highest in 2009-10 with 59.94 %. There are zero annual growth rates of FRP of sugar

during the period 2008-09, 2016-17 and 2019-20 whereas compound annual growth rate of FRP was 8.74 over the period. Export of sugar was increasing whereas import of sugar was decreasing over the period. Domestic consumption of sugar was decreasing between 2018-19 to 2019-20, after that it was continuously increasing.

References

1. <https://www.fao.org>
2. <https://sugarcane.icar.gov.in>
3. Ahmed, M. and Rahman, F. (2014). Changing Paradigms in Regulating and Deregulating the Sugar Pricing Mechanism in India. Saaransh. *RKG Journal of Management*, 5(2): 77-86.
4. Solomon, S. (2016). Sugarcane Production and Development of Sugar Industry in India. *Sugar Tech.*, 18(6): 588-602.
5. Verma, A. (2015). The Indian Sugar Industry: Current Status & Way Forward. Indian Sugar Mills Association, New Delhi. December 2016.
6. Zaidi, et al. (2013). Impact of Low-Sugar-Cane-Yield on Sugar Industry of Pakistan. *Interdisciplinary Journal of Contemporary Research in Business*, 4(12), 58–86.
7. Solomon, S. (2011). The Indian Sugar Industry: An Overview. *Sugar Tech*, 13(4), 255–265.
8. Abdalla Emam, A., & Musa, O. M. (2011). The Competitiveness of Sugar Cane Production: A Study of Kenana Sugar Company, Sudan. *Journal of Agricultural Science*, 3(3), 202–210.
9. C R, R., & N, C. (2015). Drivers of Financial Performance of Sugar Industry in India. *ICTACT Journal on Management Studies*, 1(4), 183–189.
10. Upreti, P., & Singh, A. (2017). An Economic Analysis of Sugarcane Cultivation and its Productivity in Major Sugar Producing States of Uttar Pradesh and Maharashtra. *Economic Affairs*, 62(4), 711–718.
11. Solomon, S., Rao, G. P., & Swapna, M. (2020). Impact of COVID-19 on Indian Sugar Industry. *Sugar Tech*, 22(4), 547–551.
12. Nandhini, T S Krishnamoorthy Durgesh, V. P. (2017). A Study on Sugarcane Production in India. *International Journal of Advanced Research in Botany*, 3(2), 13–17.
13. Chithelen, I. (1985). Origins of Co-operative Sugar Industry in Maharashtra. *Economic and Political Weekly*, 20(14), 604–612.
14. Zimmermann, B., & Zeddies, J. (2002). International competitiveness of sugar production. *13th International Farm Management Congress*, 1–15.
15. Sarbapriya Ray. (2012). 11. Reviewing Performance of Indian Sugar Industry: An Economic Analysis Economic Analysis. *Food Science and Quality Management*, 3(2012), 35–53.