

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search
http://ageconsearch.umn.edu
aesearch@umn.edu

Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.

No endorsement of AgEcon Search or its fundraising activities by the author(s) of the following work or their employer(s) is intended or implied.



Asian Journal of Agricultural Extension, **Economics & Sociology**

12(2): 1-9, 2016; Article no.AJAEES.27551 ISSN: 2320-7027



SCIENCEDOMAIN international

www.sciencedomain.org

Review of Committee Reports on Indian Sugar Industry and Partial Decontrol

P. Asha Priyanka^{1*}, M. Chandrasekaran² and E. Nandakumar³

¹Research Scholar, Department of Agricultural Economics, Tamil Nadu Agricultural University, Coimbatore - 641 003. India.

²Department of Agricultural Economics, Tamil Nadu Agricultural University, Coimbatore – 641 003, India.

³Department of Humanities, PSG College of Technology, Peelamedu, Coimbatore – 641 004, India.

Authors' contributions

This work was carried out in collaboration between all authors. Author PAP organized the review paper under the supervision of author MC with the assistance of author EN. All authors read and approved the final manuscript.

Article Information

DOI: 10.9734/AJAEES/2016/27551

(1) Ian McFarlane, School of Agriculture Policy and Development, University of Reading, UK. Reviewers:

(1) Gustavo Henrique Silva de Souza, Instituto Federal do Norte de Minas Gerais (IFNMG), Brazil. (2) Ratya Anindita, University of Brawijaya, Indonesia.

Complete Peer review History: http://www.sciencedomain.org/review-history/15535

Review Article

Received 7th June 2016 Accepted 17th July 2016 Published 27th July 2016

ABSTRACT

The article has attempted to organise the various committee reports on Indian sugar industry from 1974 to 2013 and explicit their relevance to partial decontrol of sugar sector in 2013. A careful review of various reports indicate partial decontrol in sugar sector as a long awaited and well recommended measure by policy makers and heads of the committees. Most of the Committees had mentioned at least one issue decontrolled from 2013. Though controlling the major export and import policy of sugar and allied products by the Government whether this liberalisation of few clutches over sugar industry will yield the expected uphill out of debts in sugar industry is a major study to be researched.

Keywords: Sugar industry; committee reports; partial decontrol; sugar policy.

1. INTRODUCTION

India is the second largest producer of sugar with a share of 14.21 per cent next to Brazil and fifth in export (2.13 per cent) based on the five year average from 2009 to 2013 [1]. The Indian Sugar Industry is a source of livelihood for 50 million farmers and their families; and provides direct employment to over 5 lakh skilled and semiskilled labour in sugar mills and allied industries across the country. The annual turnover of the industry is estimated at Rs.41,000 crore [2]. Indian sugar industry remains highly regulated [3] and also known for its cyclicality in production, huge cane arrears [4] and non-satisfied farmers and millers. India has an ever growing demand for sugar because of huge consumer population. Government understanding the importance of sugar industry has formed Committees to study the reasons for short fall in Indian sugar industry, whose recommendations made the required policy change. In this context, the current article has attempted to review the various reports of Committees pertaining to sugar industry are presented in a chronological order. Policies and Committee's are related to each other, at times Committee reports have given policies and at times policies have led to the need of a Committee report. This part of the study also has detailed various funds and subsidies given by the Government of India to enable profitable sugarcane and sugar production.

2. COMMITTEES BEFORE BHARGAVA COMMITTEE

'McKennon Committee', 'Gundu Rao Committee' and 'Tariff Commission' were the Committees designated by the Government of India for appraising various aspects of sugar industry. The 'Tariff Commission' was assigned in 1958 to appraise the then existing price linking formula for sharing the cane prices among growers and millers. Later the Committee was requested to revise the pricing formula in 1960 and its formulation was presented in its' second report. The determination of fair price payable to the industry based on the new cost of production of schedule for sugar was the Committee's theme in its third report. Again in 1972, the Committee was requested to do a fresh study of the problem and it was presented in 1974 but was not made public [5].

The Committee on, 'Rehabilitation and Modernisation of Sugar Factories in India', was

widely known by the name of its' Chairman as 'Gundu Rao Committee'. Gundu Rao Committee, launched in 1963 was required to examine the problems of the old and uneconomic units in the sugar industry and to make recommendations for their rehabilitation and modernization. The report was submitted in 1965 [5].

The 'Sugar Enquiry Commission' known as the 'Sen Commission' was set up in 1964 and submitted its' report in 1965. The terms of reference were: (a) determination of the price and the system of distribution of sugar; and (b) policy regarding licensing of new sugar factories and expansion of the existing sugar factories. It was also required to study certain aspects of export of sugar and the question of production of sugar of different grades. The Government of India also appointed a few Departmental Committees to study specific subjects such as: the question of payment of premium for higher sugar recovery on the basis of proportionality; the development of sugarcane in the northern States, etc. Some State Governments also appointed ad hoc committees to study the condition of the sugar industry in their respective States. A committee which was set up by the Uttar Pradesh Government, even considered the question of nationalization of the sugar industry [5]. Committees and their reports in chronological order are presented in Table 1.

3. REPORT OF MAHAJAN COMMITTEE

The Mahajan Committee was formed in 1998 during the ninth five year plan. The Terms of Reference of the Committee were (a) modification, amendments or repeal of any existing law and controls with a view to ensure healthy growth and development of the sugar industry and building healthy relationship between the farmers and the industry, (b) ways and means to increase production and efficiency through modernization so that sugar is available to the general public at reasonable prices and (c) methods for increasing productivity of sugarcane and ways to ensure fair and remunerative prices to sugarcane growers [6]

Committee's view was to continue the Cane Area Reservation (CAR) with certain modifications such as; permanent demarcation of CAR to be applied to Co-operative as well as Private mill. The Committee's report discussed the pros and cons of presence and absence of CAR. In the

Table 1. Chronological order of reports on sugar industry in India

S. no	Committee chairman	Presented year	Title	Facilitating department
1.	Shri. V. Bhargava	1974	Sugar Industry Enquiry Commission -Volume I and II	Ministry of Agriculture
2.	Shri. B. B. Mahajan	1998	Report of High Powered Commiittee on Sugar Industry Volume I & II	Department of Sugar & Edible Oils, Ministry of Food and Consumer Affairs
3.	Shri. S. K. Tuteja	2004	Revitalisation of Sugar Industry	Ministry of Consumer Affairs, Food and Public Distribution
4.	Dr. Y. S. P. Thorat	2009	Report of the Group of Experts on Sugar Roadmap for Indian sugar sector	Department of Food and Public distribution
5.	Shri. Shivajirao G. Patil	2009	Report of the High Powered Committee on Cooperatives	Ministry of Agriculture
6.	Shri. T. Jacob	2013	Report of the Working Group on Sugarcane Productivity and Sugar Recovery in the Country	Directorate of Sugar , Department of Food and Public Distribution, Ministry of Consumer Affairs, Food and Public Distribution
7.	Dr. C. Rangarajan	2013	Report of the Committee on the Regulation of Sugar Sector in India: The Way Forward	Economic Advisory Council to the Prime Minister

presence of CAR there was reduced interest in competition and because of the highly perishable nature of sugarcane, it dries up and loses its sucrose content if it is not crushed within a short period after harvesting. In the absence of CAR, it will be difficult for the sugar factories to regulate the supply of cane by the farmers according to crushing capacity available on each day which would lead to uneconomic working of mill when cane availability is inadequate and long waiting period for farmers when cane availability is excessive. Some of them may in latter case have to carry their cane to distant mills for disposal involving higher transportation cost as well as drying of cane. The Committee recommended adequate penalty for poaching in reserved area of other mill. The Committee also recommended a permanent designation of cane reservation [6]. At present, CAR is followed in many states in India except Maharashtra and Gujarat. CAR assures millers, assured supply of cane and farmers an assured buver for cane. Though CAR encourages mills to invest in farm and extension services, Indian sugar Mills

Association (ISMA) fears a complacency and lack of investment in farm by cane growers. ISMA also have encouraged a permanently demarcated CAR which was originally a suggestion of Mahajan Committee.

The Committee's recommendation for decontrol of sugar was to be in a phased manner over two years period. For two years, the levy sugar has to be reduced to 20 per cent and then should be completely decontrolled. The Committee advocated an interest to be paid to mills for non-lifting of levy within time limit. As a part of decontrol the Committee suggested if Government wishes to continue sugar under PDS, required quantity has to be purchased from industry by tendering or fixed price [6].

4. REPORT OF TUTEJA COMMITTEE

The Tuteja Committee [7] was basically a Committee for revitalization of sugar industry which was ailing entangled in the complex web of problems such as; high stocks, low sugar prices,

poor profitability, mounting cane arrears, financial crunch, limited modernizationor expansion or diversification and poor international competitive edge.

The prominent suggestions made by the Committee are presented below;

- Sugarcane area must be scientifically rationalised which will have a direct impact on the economy of the sugar industry.
- Use of alternate feed stocks like sugar beet and sweet sorghum may be encouraged and projects for seed development, cultivation and processing of such crops may be provided loans from Sugar Development Fund (SDF).
- iii. State Governments may provide special attention to provide and maintain necessary infrastructure like irrigation, power, roads and drainage, etc., for sugarcane cultivation and transportation.
- iv. The present (2004) arrangement of SMP (was changed as FRP during 2009-10) along with benefits of price sharing with sugarcane farmers as per Clause 5A of Sugarcane (Control) order, 1966 is equitable and may continue.
- v. The Central Government may dispense with the release mechanism for free sale sugar with effect from 1st October, 2005.
- vi. The present system of 10 per cent of production as levy sugar may continue.
- vii. Augmentation of sugar supply in the country may be effected when required through facilitation of imports of raw sugar. Indian Sugar Export and Import Corporation (ISEC), an organ of the sugar industry may play a prominent role both in import and export of sugar.
- viii. A scheme similar to the one available for integrated textile units should be sanctioned for the sugar sector for reducing their debt service burden.
- ix. In order to improve profitability of sugar industry through value addition to byproducts like bagasse and molasses, Cooperative sugar mills having potential for setting up of diversification projects may be encouraged.
- x. Rate of interest on existing loans from Sugarcane Development Fund (SDF) may be pegged at two percentage points below the prevailing bank rate.
- xi. Expansion of capacity of sugar mills up to 10000 TCD may be deemed as 'modernisation' for the purpose of loans from SDF.

The Committee also recommended for a maximum three months as a period of lifting levy sugar, after which levy quota should be automatically converted to free sale. This Committee was the first to comment on the distance between two factories recommended it to be fixed at 25 kilo meters (km). Apart these suggestions, the Committee has recommended SDF loans for environment pollution abatement installations. The Committee has also suggested sugar industry to be placed in 'ORANGE' category of Central Pollution Control Board's (CPCB) polluting industries classification [7].

5. REPORT OF THORAT COMMITTEE

The Committee was formed during 2009 and its recommendations address the interests of farmers, consumers and mills. Suggestions were also made regarding the role of the Government in determining policy. The Committee called for decontrol of the industry, with the decontrol measures being calibrated for completion of the process over five years. The Committee has reported that by offering full flexibility to sugar mills in manufacturing any product from cane, the Government can reduce the cyclicality in sugar production, cane production and their prices. By quoting full flexibility to sugar mills in manufacturing of any product, the Committee meant new capacities for direct production of alcohol, ethanol and derivatives from cane, permission for setting up stand alone ethanol units, creation of co-generation capacities and dismantling the market release mechanism for sugar. This flexibility in production to choose food or fuel was already in operation in Brazil, where 75 per cent of the mills produce sugar and ethanol and have all of them have the flexibility to re-direct around 10 per cent of their production to one or the other product [8]. The Committee also supported export manufacturing of sugar mills by requesting the Government to stabilise a long term export and import policy for a given period of time. It also recommended Government to set up a Sugar Regulatory Authority (SRA) for market conduct regulation and growth of the sector. The Committee's recommendations on Decontrol of Sugar Sector, included the following;

- Removal of sugar from Essential Commodity Act and a complete deregulation of sugar sector.
- ii. On the cane pricing issue, to let the buyer and seller determine the same without

- external intervention as in the case of any other agricultural produce.
- Decontrol of the mills in the area of merging with existing mills and investment in new mills.
- iv. Total recall of factory-wise cane area reservation policy.
- v. Scraping of levy sugar mechanism and recommended to procure sugar from open market for supply under Public Distribution System (PDS).

In India, mills that want to expand to 10000 TCD were denied loan assistance from SDF (modernization and expansion). But international experience has shown that some of the larger units was more profitable and could withstand the fluctuations in international commodity prices better. The report of the Committee also suggested to promote energy conservation, pollution control, research on alternate raw material development and cane development, extension and mill process improvements through SDF. The expert group felt that SDF loan terms should be left to the banks and borrowers. The Committee also recommended to provide low interest loans to sugar mills through SDF for,

- Setting up and expansion of co-generation units.
- ii. Investments in environment conservation and pollution mitigation plant and equipment.
- iii. Investments in balancing equipment to take in alternative raw material such as sugar beet, sweet sorghum, etc.
- Research and development in agronomy of sugarcane cultivation for improving yield and reducing costs.
- v. Action research in collaboration with industry for application of available technologies which have advantages, but not used currently.
- vi. Pilot projects on critical areas of importance such as; reducing power, steam consumption and reducing moisture in bagasse.
- vii. Comprehensive cane development programmes by sugar mills.

The research and academic institutes should be run autonomously by boards constituted with representation from industry, farmers' organisations and the Government. The funding of these institutions should be done out of the SDF. The Government should invite the industry to come forward and design the governance and

funding of the institutes in a Public Private Partnership (PPP) mode. The Committee also suggested a Technology Mission on Sugarcane, which should address the issues relating to the sector from a techno-economic knowledge base.

Increasing the minimum distance between factories to be 25 kms, withdrawal of sugar packaging order were the other important recommendations of Thorat Committee [9].

6. REPORT OF THE HIGH POWERED COMMITTEE ON CO-OPERATIVES

Under the Chairmanship of Shri. Shivajirao G. Patil, a Committee was constituted in 2009 to analyse and report on the problems and challenges faced by Co-operative agro-based industries. The Committee classified Co-operative sugar mills in India as the 'sick and non-viable co-operative organizations'. In the words of the Committee;

"A large number of the non-viable co-operatives are, in fact, on the verge of sickness or incipient sickness. The sickness is particularly visible in the processing sector, of which sugar, textiles and vegetable oil account for a sizeable portion. It must be recognized that most cooperatives function in the agricultural sector where the risk element is relatively high and the returns on investment low and they, therefore, start off with an initial disadvantage."

The Committee also has included Sugar Cooperatives in Maharashtra as a successful model. The sugar co-operatives in Maharashtra have succeeded as a result of ensuring remunerative prices to their members, democratic management, providing proper depreciation reserves and resource generation through compulsory deposits by members, provision for technical guidance and inputs through creation of Agricultural Departments by each co-operative, making available irrigation facilities, equitable distribution of benefits amongst members and very importantly, the provision of welfare services [10].

7. REPORT OF SHRI. NANDAKUMAR COMMITTEE

The Committee headed by the former Union Food Secretary, Shri. T. Nandakumar in 2010 had recommended a formula, wherein mills would pay cane growers 70 per cent of their

average realisation from sugar multiplied by a specific recovery factor. The recovery factor, in turn, represents the sugar recovery of a particular factory (or the average for its zone, whichever is higher) divided by the all-India average sugar recovery. Thus, if the average realisation from sugar was ₹ 2500 a quintal and the all-India average sugar recovery at 10 per cent, a factory in Maharashtra recording a 13 per cent recovery would pay its growers ₹ 227.50 per guintal of cane. If the recovery for a factory (and the zone in which it is located) was only 9.50 per cent, the corresponding cane price would come to ₹ 166.25 a quintal. This formula was accepted among sugar mills but never implemented.

8. REPORT OF DR. RANGARAJAN COMMITTEE

The Rangarajan Committee was formed in the year 2012. In the report that was submitted to the Government, the Rangarajan Committee has suggested removing major Government controls on the sugar sector. It advocated for the removal of levy obligations which calls for a number of sugar mills to supply 10 per cent of sugar at a cheaper rate to the Government. In addition, the Committee suggested giving freedom to the mills to sell sugar in the open market and introducing a stable export and import policy. According to the Committee sugar mills should be allowed to sell in the export markets and also be allowed to import and sell in the open market to take advantage of price differential. In the long run, the Committee also suggested doing away with cane area reservation and minimum distance criteria for setting up sugar mills, besides doing away with controls on by-products like molasses [11].

The recommendations were made in view of the current sugarcane price fixing and the sharing of 70 per cent revenue by sugar firms with farmers. The Indian Sugar Mills Association (ISMA) has welcomed the revenue sharing formula and insisted it to be included in the Sugarcane (Control) Order, 1966 [12]. Industry groups such as ISMA and the National Federation of Cooperative Sugar Factories (NFCSF) have backed the recommendations made by the Rangarajan Committee, stating that the current regulations were making the industry uncompetitive [13]. The president of ISMA stated that, "The sugar industry has missed the liberalisation bus while all other industries that have been liberalised have grown. It is high time

that the Government removed the archaic controls that the industry is burdened with", adding that the removal of the levy obligations will benefit the industry which is worth ₹ 3000 crore annually [14]. However, some farmers are not agreeable to the normalisation of the sugar industry. The Tamil Nadu Sugarcane Farmers' Association and the National Sugar Mill in Alanganallur had expressed fear that the move would lead to the closure of Government and Cooperative sugar mills – potentially opening up the field for private players [15].

9. REPORT OF SHRI. JACOB'S COMMITTEE

This Committee was mainly formed to asses and report on the sugarcane productivity and sugar recovery front in the year 2013. Recommendations the Committee on of sugarcane productivity included credible seed programme, institutionalized extension support, sustainable utilization of water, fertilisers and cultivation practices, mechanization of sugarcane cultivation and framing a special scheme for drainage problems in Bihar. The Jacob's Committee recommendations of regarding policy support are as follows.

- To utilise ethanol as a major contributor to the energy security of the country and to promote the development of flexi fuel engines as well as delivery pumps.
- To take needed effort on the certification, branding or marketing of specialty sugars by the sugar industry's bodies, especially to promote production and branding of 'organic sugar'.
- To make necessary changes in import policy to promote sugar beet as a complementary sugar crop.
- To propagate central variety release speedily.
- The Committee insisted active persuasion by the State Governments regarding longer duration of cane area reservation suggested by Dr. Rangarajan's Committee.

The Committee recommended SDF to support research organizations for establishment of breeder seed production facilities; sugar mills for conducting technical consultancy with the identified research organization from each state. Further, the Committee recommended expansion of SDF grants to pilot projects to promote production of organic sugar [16].

10. PARTIAL DECONTROL

Indian sugar industry operations are highly regulated by the Government. The sector was controlled by the Government right from production to marketing of the commodity. each month. the Accordingly, Central Government even decided on the quantity of sugar that mills were allowed to put on the market. Several Committees such as; Mahajan Committee, Tuteja Committee, Thorat Committee and Nanda Kumar's Committee have submitted recommendations on decontrol of the Indian sugar industry in the past, but almost all these recommendations continue to remain in the records of the Government and no action was taken to decontrol in some cases that too on ad hoc basis. But after Rangarajan Committee's report in 2012 and on April, 2013 the then Indian Government released some of its clutches on sugar industry calling it as a 'Partial Decontrol'. The sugar industry will continue to be subject to production controls by State Governments, including sugar industry licensing, specified cane procurement areas for sugar mills and cane pricing. The controls of State and Central Government on sugar industry before and after April, 2013 are given in the Table 2.

The sugar industry in India was under 'partial decontrol' during several periods of time. The Government imposed a statutory control over production, distribution and price of sugar during 1942. The control was lifted from December. 1947 to September, 1949. Decontrol was not functioning properly and several irregularities committed by the Sugar Syndicate and its' members came to light. There were allegations of heavy premium being charged by factories and selling agents over the price informally agreed to by the industry. The prices of sugar also rose in several markets. Again from 1967-68 the Government of India called it as a 'partial decontrol' as it allowed the sugar industry a free sale of 60 per cent of its produce whereas 40 per cent was still under levy system.

11. THE NEW SYSTEM FOR DISTRIBUTION OF SUGAR IN THE PUBLIC DISTRIBUTION SYSTEM (PDS)

The Central Government has decontrolled the sugar sector partially by removing the levy obligation on sugar mills and doing away with the regulated release mechanism on open market

sale of sugar. Prior to it, sugar mills were mandated to supply 10 per cent of their production to meet the Public Distribution System (PDS) demand. Sugar mills are now free to sell their entire production as per their commercial prudence as in Partial Decontrol, Regulated Release mechanism was demolished. However, under the new dispensation, to make sugar available in the PDS at the existing retail issue price of ₹ 13.50 per kg, the State Governments and Union Territories administrations have been asked to procure it from the open market through a transparent system. The Central Government is reimbursing the States and Union Territories at ₹ 18.50 per kg, limited to the quantity based on their existing allocations. Further, with a view to ease out the financial burden of the State Governments, the Government releases advance subsidy, on quarterly basis, to all the State Governments who approach the Central Government for the same. In the process, total sugar subsidy burden on the Government exchequer is estimated to be at about ₹ 5000 crores per annum for estimated supply of 27 lakh MT. So far, 27 States and Union Territories have participated in the new subsidy scheme from June, 2013 onwards and ₹ 3307.19 crores has been released to these States and Union Territories. A sum of ₹ 859.98 crores was released during the financial year 2013-14 and ₹ 2447.21 crores till 30th September, 2014 was released during the financial year 2014-15 including ₹ 900 crores to Food Corporation of India. Decontrol of sugar marketing will be reviewed in two years after assessing its effect on farmers and market prices.

The Rangarajan Committee had recommended sharing of 70 per cent of the revenue from sale of sugar produced from a guintal of cane, to rationalize pricing of cane. Loading the value of by-products (molasses, bagasse and press-mud) on value of sugar, this pricing formula worked out to about 75 per cent of the ex-mill value of sugar produced from a quintal of cane. Though Shri. Nandakumar's Committee had previously given a similar formula; it was not brought into effect. Under the Revenue Sharing Principle (RSP), sugarcane growers will, in the first place, be paid some Minimum Fair and Remunerative Price (MFRP) as fixed by the CACP, with the balance paid at a later stage after realization of revenues by the mills. The MFRP is fixed on the basis of trend in sugar prices minus one or half of a standard deviation, say one or half sigma, which sets a floor for farmers as far as cane prices are concerned. A similar revenue sharing principle of

S.	Before partial decontrol		After partial decontrol		
no	Controls under State Government	Controls under Central Government	Controls under State Government	Controls under Central Government	
1.	Minimum distance criteria between mills	Levy sugar obligation on mills	Minimum distance criteria between mills	Jute packing only for 40 per cent of sugar	
2.	Cane area reservation	Regulated release mechanism	Cane area reservation	Tariff rates on sugar	
3	Fixing SAP	Fixing FRP	Fixing SAP	Fixing MFRP and FRP	

Import and export of all kinds of sugar from mills

Table 2. Controls over sugar industry before and after partial decontrol

70 per cent: 30 per cent was followed by the Government of Thailand for pricing sugarcane since 1982-83.

The CACP's calculations show that RSP will not only ensure a fair and stable return to farmers, but also assure mills a reasonable return on their investments [17,18]. Karnataka has already decided to adopt a revenue sharing formula, which deserves credit. The CACP is given to understand that Maharashtra is also moving in that direction and hopefully they will also adopt this formula. It is high time that the states in the north, especially Uttar Pradesh, also make a note of this and start moving in that direction in the overall interest of this sector's growth and stability. To empirically map this revenue sharing principle, one needs to get, (1) the cost of producing cane by farmers and (2) cost of converting cane into sugar and its by-products by millers [18].

12. CONCLUSION

As quoted earlier the president of ISMA has stated that, "the sugar industry has missed the liberalisation bus while all other industries that have been liberalised have grown", [14]. Indian Sugar Industry was partially decontrolled twice earlier, in 1967 and in 1998 [19]. In 1998 a major step to liberate the sugar sector from controls taken by abolishing the licensing requirement for new sugar mills. It has caused a significant growth in the installed capacity in the sugar sector from 3.30 per cent to at almost seven per cent annually. Structurally, till 1997-98, sugar cooperatives dominated the sugar industry but by 2011-12 this changed significantly with the private sector contributing the largest share of total installed capacity [20]. But, whether this decontrol (2013) of few regulations over sugar industry can help the industry out of debts calls for a separate research to be carried out,

especially when export and import policy of sugar and allied products are still under the control of Government. Other major recommendations still under control are Sugarcane Pricing, Cane Area Reservation, Minimum Distance Criteria and regulations relating to by-products.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

- FAOSTAT. Statistical Division. Food and Agriculture Organisation of United Nations; 2014.
 - Available: http://faostat3.fao.org (Accessed 13 Dec 2015)
- 2. Credit Analysis and Research Limited. Indian Sugar Industry; 2015.

 Available: http://www.careratings.com/uploa_d/NewsFiles/SplAnalysis/Indian%20Sugar_%20Industry%20-%20An%20Update%20-%20June%202015.pdf
 (Accessed 21 May 2016)
- Sangeeta S, Jayanti K. Sugar sector: Is it sustained by subsidies? Indian Journal of Agricultural Economics. 2014;69(3).
 Available: http://ageconsearch.umn.edu/bitstream/229841/2/16-Sangeeta%20Shroff-01-n.pdf
- 4. Soan R, Amrita G, Smita M. The ethanol blending policy in India. Economic and Political Weekly. 2012;47(1).

 Available: http://www.indiaenvironmentport al.org.in/files/file/ethanol 0.pdf
- 5. Bhargava V. Sugar Industry Enquiry Commission. Ministry of Agriculture, Government of India. 1974;(1 and 2).
- Mahajan BB. Report of High Powered Committee on sugar industry. Department of Sugar and Edible Oils. Ministry of Food

- and Consumer Affairs. Government of India. 1998;(1 and 2).
- Tuteja SK. Revitalisation of sugar industry. Ministry of Consumer Affairs, Food and Public Distribution, Government of India; 2004.
- Géraldine K. Biofuels policy: Some insights from Brazil. Presented at The European Parliament; 2012.
 Available: https://www.iisd.org/gsi/sites/default/files/bf-biofuelseminar-kutas.pdf (Accessed 29 May 2016)
- Thorat YSP. Report of the group of experts on sugar roadmap for Indian sugar sector. Department of Food and Public distribution, Government of India; 2009.
- Shivajirao GP. Report of the High Powered Committee on cooperatives. Ministry of Agriculture, Government of India; 2009.
- Rangarajan C. Report of the committee on the regulation of sugar sector in India: The way forward. Economic Advisory Council to the Prime Minister. Government of India; 2012.

Available:<u>eac.gov.in/reports/repsugar1210.pdf</u>

(Accessed 12 June 2015)

- 12. Srinivaasan. Presidential address. 79th
 Annual General Meeting of the Indian
 Sugar Mills Association. Indian Sugar Mills
 Association, New Delhi; 2013.
- Indian Sugar Mills Association (ISMA). Sugar Industry Bodies Urge Government to act on Rangarajan Report. ISMA, New Delhi; 2012.

Available: http://www.indiansugar.com/NewsDetails.aspx?nid=1725 (Accessed 12 June 2015)

Vedika N, Anuj C, Vaishali S. Commodities daily report – Agricultural commodities. Angel Commodities; 2012.
 Available: <a href="http://agriwireglobal.com/reports/Agri%200Commodities%20Research%2

eport%2009-11-2012-20121108091931.pdf

(Accessed 21 May 2016)

- The Hindu. Farmers oppose decontrol of sugar; 2012.
 - Available: http://agritech.tnau.ac.in/daily_ev_ents/2012/english/nov/19_nov_12_eng.pdf (Accessed 24 March 2015)
- 16. Jacob T. Report of the working group on sugarcane productivity and sugar recovery in the Country. Directorate of Sugar, Department of Food and Public Distribution. Ministry of Consumer Affairs. Food and Public Distribution. Government of India: 2013.
- Uttar Pradesh Sugar Mill Association (UPSMA). UPSMA press release. Lucknow. Indian Sugar Mills Association; 2013.

Available: http://www.indiansugar.com/uploads/upsma interaction with media on 11 july_2013.pdf

(Accessed 13 June 2015)

- Price Policy for Sugarcane (2014-15 Sugar Season). Commission of Agricultural Cost and Prices (CACP). Department of Agriculture and Cooperation, Ministry of Agriculture. Government of India. New Delhi; 2013.
- Singh SP. Assessing efficiency trends in the Indian sugar industry. World Academy of Science, Engineering and Technology. International Journal of Social, Behavioral, Educational, Economic, Business and Industrial Engineering. 2016;10(7).
- Sakshi B. Report summary: Report of the committee on the regulation of sugar sector in India: The way forward. PRS Legislative Research. Centre for Policy Research. New Delhi- 110021; 2012.

Available: http://www.prsindia.org/administrator/uploads/general/1351831763~~Summary%20--

%20Deregulation%20of%20sugar%20sect or%20-%20final.pdf (Accessed 21 May 2016)

© 2016 Priyanka et al.; This is an Open Access article distributed under the terms of the Creative Commons Attribution License (http://creativecommons.org/licenses/by/4.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Peer-review history:

The peer review history for this paper can be accessed here: http://sciencedomain.org/review-history/15535