COMPETITION COMMISSION OF PAKISTAN
GOVERNMENT OF PAKISTAN
7th Floor, ISE Towers,
55 – B, Jinnah Avenue,
Islamabad
Tel:+92-51-9100260-63
Fax: +92-51-9100297

<u>OPINION</u>

COMPETITION CONCERNS IN THE SUGAR SECTOR OF PAKISTAN

1. The Competition Commission of Pakistan (the ‘Commission’) is mandated by the Competition Act, 2010 (the ‘Act’) to *inter alia* undertake enforcement, advocacy, and research efforts to provide for free competition in all spheres of commercial and economic activity to enhance economic efficiency, and to protect consumers from anti-competitive behavior.

2. Section 29(c) of the Act, as part of the broader competition advocacy mandate under the Act, empowers the Commission to hold ‘open hearings on any matter affecting the state of competition in Pakistan or affecting the country’s commercial activities and expressing publicly an opinion with respect to the issues’.

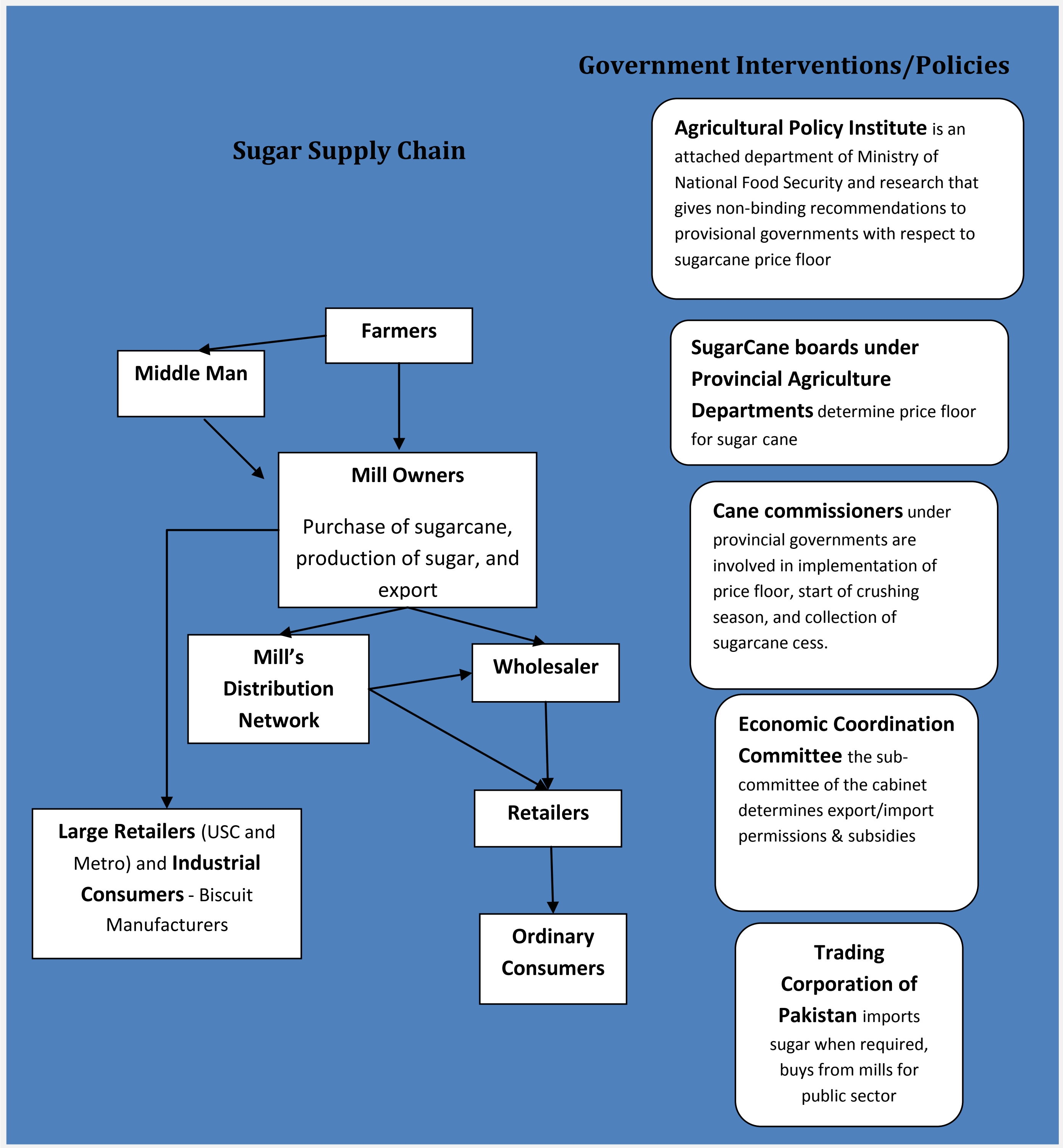
3. The importance of competition in the sugar sector cuts across various levels of the market from sugarcane growers, through sugar mills, to commercial and common consumers. Consequently, this sector has been subject of various enforcement, advocacy, and policy level initiatives of the Commission in the past, with all efforts invariably aimed at making the sector more competitive.

4. This opinion is being issued as culmination of the open hearing held on 25 January 2018 to discuss and identify the prevalent competition concerns in the Sugar sector of Pakistan as highlighted by its various stakeholders.

BRIEF OVERVIEW OF THE SUGAR SECTOR

5. Before identifying any concerns, it would be most useful to develop an understanding of the process flow in the production of sugar with the pertinent stake holder identified at each stage. In this regard, reference may be made to the flow chart produced below:

Figure 1: Flow Chart - Sugar Supply Chain and Stakeholders



6. From the government's end, Agriculture Policy Institute, an attached department of the Federal Ministry of National Food Security and Research gives a non-binding recommendation to each of the provincial governments for determination of the price floor. A sugarcane board with varying constitution depending on the province is tasked with determining the price floor for sale of sugar cane to the millers. Provincial cane commissioners or director level officers in the provincial food department are an essential

part of the said board in each province. Provincial cane commissioners are also then responsible for the operational details and implementation aspect of the government determined price floor and other policies. For example, it is the job of the cane commissioners to ensure that the farmers are paid the price floor agreed upon for a given year. It is also among the responsibilities of a provincial cane commissioner to ensure that the sugar cane crushing season is initiated by the millers within permitted schedule. The provincial cane commissioners may also play an essential role in any dispute resolution between the farmers and the millers in respect of any government policies in this regard.

7. The basic legal framework that governs the sugar sector is encapsulated in the provincial Sugar Factories Control Act, 1950 (the 'Sugar Act') which is in force in all provinces with minor differences. This Act, among other things, defines the crushing period, and permits the provincial governments to fix minimum price of sugar cane to be paid by millers and reserve areas of sugarcane for particular mills.

8. The millers usually procure sugar cane directly from the farmers. In some circumstances they make use of middlemen to do the needful. The sugar produced at the mills' end is then dispatched to wholesalers either directly or through company owned distribution network which is further sold to retailers for everyday consumption by individual consumers. Lastly there are large retailers such as Utility Stores Corporation of Pakistan ('USCP') and Metro Cash & Carry ('MC&C') and industrial consumers such as Biscuit & Confectionary Manufacturers that buy sugar from the mills by means of direct procurement. Being a public sector entity, USCP is entitled to a certain subsidy from the government to be able to sell its various commodities including sugar at prices lower than the prevailing market rates at any given time.

9. The Trading Corporation of Pakistan ('TCP') was setup by the Government of Pakistan back in 1967 with the mandate to act as a public sector trade house responsible for exporting of agriculture and consumer goods and import of essential commodities under the specific directives of the Government. Since then some new roles have been assigned to TCP while keeping its basic role intact. While within the context of sugar, TCP has not been involved in any exports, it has in the past partaken in import of sugar under Government direction in times of dearth of sugar in the country. Given that in the most recent years, the supply of sugar in the country has surpassed its demand, there has been no requirement on the part of the government to declare it as an essential commodity and give any direction with respect to its import. TCP's role with respect to the latest developments in the sugar industry therefore appear to be dormant during the period in question.

10. With regard to sanction of export of sugar, quantity to be exported, and any subsidy to be applied in this regard, the Economic Coordination Committee ('ECC') is the relevant authority.

11. Having given a brief glimpse of the process flow in the production of sugar, its major stake holders and government's role with respect to the industry, we next proceed to outline what appears to be the main issues prevalent in the sugar industry in current times, as brought forth by its key players existing at different stages of its value chain, through submissions made in the open hearing.

SUMMARY OF STAKEHOLDER VIEWPOINTS

Farmers

12. Representatives of sugarcane farmers made the following submissions:

a. Mills do not make timely payments for their sugar cane. There are farmers awaiting payments from the previous season.
b. Often there are delays in the purchase of sugar cane, causing the produce to lose both weight and sucrose content. This can be avoided if permits are issued in accordance with the area planted.
c. The farmers have to go through multiple scales both outside and inside the mills with accuracy of the same in question.
d. Mills often fail to pay the farmers the price floor set by the respective provincial Governments. The latter have also been failing to ensure implementation to this effect.
e. Middle men tend to exploit the situation by (a) buying sugar cane from the farmers at a lesser price vis a vis the Government price floor (b) weighing the commodity less than its actual weight. Hence any roll of the middlemen should be removed from the process.
f. When mills seize to operate, due to bankruptcy or a court decree, they bring adverse consequences for the farmers.
g. There should be quality check at every mill's gate(s) to prioritize quality (amount of sucrose content) over weight in sugarcane purchase.
h. It is the farmers who primarily bear the brunt of the situation as mills continue to make profits from by products of the sugar extraction process. The latter,can not only be utilized as fuel for running a mill, but, when sold, are known to garner profit margins higher than sugar.

Millers and PSMA

13. The representatives of PSMA and individual millers made the following submissions:

a. Mills are still functioning under an Act, put in place back in 1950. It is 2018, but no modifications have been made in the said Act.
b. There is no sugar policy or advisory with regard to determination of price floor for sugar cane. If farmers were told in the previous season that the price floor of sugar cane would be around Rs 130-140/40 kg they could have made alternate choices.

c. The price of sugar cane should be based on its quality. Sugar Cane is planted on an area of 1 million hectare in Pakistan but there is no emphasis on its quality.
d. The demand for sugar in the country is 5.5 mmt whereas the production in the previous season was 7.5 mmt and this year it is 8.5 mmt. There was carry over stock in the previous season, there would be carry over stock this year and yet the government keeps increasing the price floor. Had excess sugar been exported on time, its price would not have been so low in the market to render the millers incapable of paying the farmers in accordance with the Government determined price floor.
e. There is a department in every province that forecasts the successive year's crop production by October of each year. Despite Pakistan being a water starved country, 1.3 million hectares of its agricultural land is under sugar cane cultivation.
f. API at federal level used to conduct visits to the field and farmers to recommend the price of sugar cane. This department needs to be made active again.
g. Sugar cane seed is not produced locally which is why Pakistan cannot compete with countries like India and Brazil who produce their own varieties.
h. All the sugar that has been exported so far has not had any subsidy so far because the Government is cash strapped itself, rendering it uncompetitive in the international market where prices are lower.
i. TCP is only buying limited stocks of sugar and that too at a minimal price of Rs 45/kg. If the millers sell sugar at such a low price, would they be able to pay the farmers as per price floor.
j. Sugar cane generally constitutes 82% of the cost of producing sugar. Its cost is higher in Pakistan in comparison with other countries.
k. In Pakistan there is a large area dedicated toward cultivation of sugar cane and yet the recovery of sucrose content is very low.
l. If proper zoning is carried out, it could be possible to make farmers their payments within 15 days.
m. At the current average ex factory price of sugar of Rs. 48/kg, there is likelihood of 10-15 mills going bankrupt in the near future.
n. Mills themselves are cash-strapped as banks and financial institutions offer them loans on the basis of retail price of sugar. With excess stocks leading to low retail end price of sugar, and financial institutions offering them loans accordingly, how could mills be expected to pay a price floor of 180/40kgs.
o. If serious efforts are made, it is possible to accurately measure the quality of sugar and buy from the farmers on the basis of quality of their produce.
p. The rate of sugar cane is the same while its quality varies, recovery of sucrose in Central Punjab is 8-9% while the same is 11-13% in Southern Punjab.
q. The shifting of mills should not be interpreted as establishment or expansion of a mill, the later being prohibited by Government notification of 6-12-2006.
r. Rehabilitation of mills in new areas could only increase competition and break up any monopolies that may exist there. If a mill goes into loss after being shifted, it will exit the market at its own expense.

s. With regard to the concern that mills make profit out of molasses, it is not so, the veracity of which could be confirmed from the accounting statements of mills.
t. While it is true that mills could become more efficient by setting up ethanol and power plants, the primary issues remains to be that of supply vs demand.

Government Departments

14. The following submissions were made by representatives of various federal and provincial government ministries and departments:

a. In all the provinces a sugar cane control board is constituted that takes input from both the farmers and the millers in addition to non-binding suggestion from Agriculture Policy Institute (API) in arriving at a price floor for sugar cane.
b. Representative from the Cane Commissioner Punjab submitted that the supply of sugar in the country has outdone its demand and the ex-factory price of sugar has come down from Rs 61/kg in the previous year to Rs 45/kg currently. Under the circumstances he was of the view, that farmers should be redirected to grow other crops. Regarding the exploitation of farmers at the hands of middlemen, he said that action had been taken against 55 such individuals.
c. As per a representative of Department of Agriculture, Sindh, the sugar cane control board under the ministry was of the view that the price floor for sugar cane should be decreased as the prices of inputs have gone down in the current year, however both the stakeholders i.e. mills and the farmers could not agree on a mutually acceptable price.
d. As per representative of Cane Commissioner, KPK, the Sugarcane Control board in KPK invited all the stake holders and settled at a price of Rs. 180/40 kg after reaching a consensus with all parties.
e. With regard to the question whether any of the pertinent provincial departments ever received any suggestion regarding purchasing sugar cane based on quality, the representative from the office of cane commissioner Punjab, said that such an initiative was taken in the form of mobile labs, but was later discontinued due to implementation issues and litigation. While no input was received from representative of Sindh, the representative from KPK's Cane Commissioner Office said that their office never received any suggestion in this regard.
f. A sugarcane expert from Agriculture Research Institute of Tandojam, Sindh said that there exist minimum thresholds with regard to quality of sugar cane in Punjab and Sindh and there is also a system to reward any additional quality, however due to lack of implementation with regard to payment to the farmer based on quality of produce, the farmers do not invest in quality sugar cane any more.
g. Representative from the Ministry of Commerce informed that as per ECC decision, sugar was allowed to be exported in quantities of .225 MMT and 0.5 MMT at different occasions. With regard to export, there was also a recommended subsidy worked out by the Ministry of Industries & Production on the basis of price differential between local and international sugar and that amounted to Rs.

10.7/kg. However the representative also brought on record that the Government was not in a position to buy all the commodities for exporting them at a subsidy. Despite the foregoing, the Government is keen on buying limited quantities of sugar from the millers through TCP for the stated purpose.

h. TCP representative informed that, TCP had opened a tender for a maximum purchase of 10,000 metric tons from one sugar mill at Rs. 45/kg, however only those mills could participate who had started crushing on time and made timely payments to the farmers.

i. Representative from Ministry for National Food Security & Research submitted that the cost of production of sugarcane is much higher in Pakistan than neighboring countries such as India, where the price of inputs such as fertilizer is much cheaper and electricity is free, that is why its is hard to compete with them in exports and the Government lacks funds to offer subsidy on the same. He said that the price of cane is linked with quality which is evident from a minimum threshold requirement of 8.7% recovery. He said that mills are not as innocent as they may sound as they also make money from byproducts. He also said that while the power to determine the price of cane has been devolved to the provinces, they do seek input from API. For the current year API calculated the expense of producing sugarcane to be Rs. 177/40kgs.

Retailers

15. Metro Cash & Carry being the only representative from the retail/wholesale sector had the following concerns:
    a. They are buying sugar at Rs 50/kg or above. In Karachi the price of sugar has been as high as Rs 62/kg.
    b. It seems Prices are being decided by local mandis.
    c. Why is there so much difference between the end price and ex-factory price being presented by the mills representatives?

SUMMARY OF PAST CCP ACTIONS IN SUGAR SECTOR

16. The Commission has had a history of taking various initiatives as mandated under the Competition Act, 2010, whether under the direction of Supreme Court on one occasion or having itself realized ostensible occurrence of market distortions in the sugar sector at the cost of healthy competition from time to time. A brief of all such actions is provided below:

    a. **One Man Commission Report:** The report dated **15 October 2009** found that non-availability of sugar, made worse by the panic sealing of storage places of sugar on suspicion of hoarding, was the real reason for the abnormal price hike rather than abnormal profits of the mills. The Commission recommended that price of sugarcane be linked to its sucrose content, that the sugar sector be allowed to work on free market basis, that free export and import of sugar be allowed while maintaining a strategic reserve, that price floor, if at all, should be calculated while keeping in mind effect on entire market and with reference to other crops, a payment mechanism be outlined by the government to ensure timely payments to farmers, and that policies should be consistent, realistic and based on sound economic principles.

b. **Inquiry Report:** Inquiry report dated **21 October 2009** determined that Pakistan Sugar Mills Association and sugar mills are ‘engaged in setting sugar cane price, territorial division for sugar cane procurement, bid rigging in TCP tenders, establishing entry barriers by advocating restrictions on the opening of new mills, setting sugar prices by making estimates and indulging in collective targeted/desired price negotiation.

c. **Policy Note with respect to Agreement between Federal Government and PSMA:** A policy note issued by CCP around **August 2009** took notice of an agreement between the Federal Government and PSMA regarding fixing of ex-mill prices of sugar in Sindh and Punjab and recommended that the agreement be terminated being anti-competitive in nature.

d. **Sectoral Assessment Report on Sugar 2008-09**: The report was an advocacy action by the Commission covering the various dynamics of the sugar industry such as Government intervention, demand/supply situation, barriers to entry/exit and others and their impact on state of competition in the sector.

e. **Trading Corporation of Pakistan ('TCP') Order**: Through the Order dated **12 February 2010**, finding that some of the terms and conditions in the tender for import of sugar by the TCP seemed to exclude competitors from the tendering process to the potential detriment of consumers and public at large, The Commission advised TCP to make changes to the same, such that there remained no distortion of competition under Competition Act, 2010.

f. **Policy Note with respect to Ban on New Mills in Punjab:** A policy note issued by CCP on **8 June 2012** to the government of Punjab recommended that the five year ban on establishing new sugar mills, and expanding existing ones, be lifted. The government had placed a ban citing excessive water usage, excessive substitution of other crops by sugarcane, and pest carried by the sugarcane crop, as reasons for the ban. The Commission noted that the reasons for the ban were not supported by evidence, that other ways to achieve the same aims were available, and that placing a ban would only benefit existing players. It further noted that the ban created legal barriers to entry and was likely to make it easier for existing players to collude, would reward inefficiency and potentially raise prices.

SNAPSHOT OF ISSUES

17. The sugar sector in Pakistan is characterized by heavy regulation and intervention of the government at various stages of its supply chain particularly during growing and crushing of sugarcane. At the farm end, each of the provincial governments sets the minimum price at which the mills are required to buy their sugar cane from the farmers for the purpose of crushing.

18. Coming to the production of sugar, the crushing season on the part of the mills is specified under the Sugar Act and it is the job of the respective provincial governments to enforce the same. All mills have to notify the start of their crushing operations to the provincial government. Under the same law, provincial governments can also define areas from where the mills may purchase sugarcane. Provincial governments also regulate the entry, expansion, and exit of sugar mills. Punjab for example has banned entry of new mills and the expansion and relocation of existing ones since many years now.

19. Sanction of export of sugar, its quantity and any subsidy that may apply, requires approval of the Federal Government based on various considerations. For importing sugar the Federal Government primarily makes use of TCP depending upon various economic or food security objectives. Often, decisions regarding international trading of sugar are made in a reactive mode by the Federal Government leading to unrealized trade potential.

20. The sector is also marked by low efficiency at production stage. Most mills do not make optimal use of by-products to generate ethanol, and power from burning bagasse. This makes mills overly susceptible to variation in domestic and international prices thereof.

ISSUES

Minimum Price/Price floor of Sugarcane

21. Governments often intervene in markets with the primary intention of maintaining a level playing field between different players in the market. For various reasons, however, such as pressure from a lobby representing any/all stake holder(s), the government may intervene by setting a price floor that disturbs the free market dynamics in favor of an arrangement that may turn out to be harmful in protecting the interests of the very stakeholders that constitute that particular economic cycle. In such a situation, all the stakeholders may stand to lose. To explain this phenomenon, the following figure may be examined:

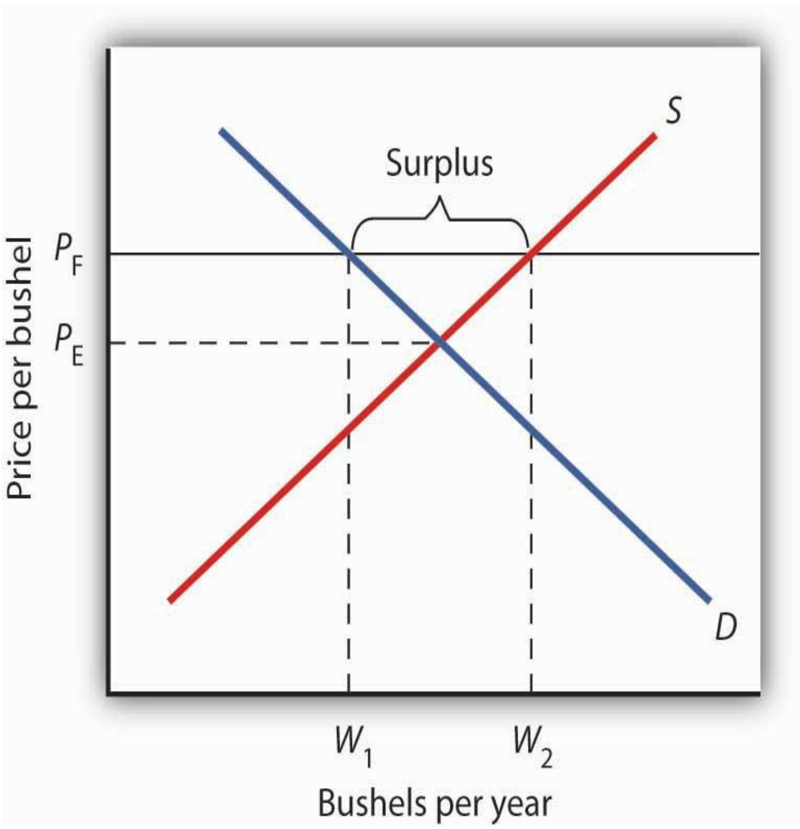


Figure 1[1]**:** **P_E** = Equilibrium Price**;** **P_F** = Price Floor introduced by the Government

22. The figure provided above depicts an example of government intervention in the form of an agriculture price floor P_F with regard to the sale of bushels of wheat. The price floor determined by the government doesn't take into account the supply demand dynamics that lead to an equilibrium price P_E in a competitive environment. The principles of economics dictate that with the price set at P_F, the buyer will only be able and willing to purchase a quantity equal to W_1, whereas at this very price the seller is inclined to produce a quantity that equates to W_2. This leaves a surplus (W_2-W_1) in the market. The likely outcome of any such situation is that a buyer would be unwilling to buy the total quantity produced by the seller (W_2) or if it does buy anything more than W_1 it will be inclined to do so at a price less than P_F.

23. It is interesting to note that the price floor set by provincial governments with respect to sugarcane has created a scenario that appears to be a similar to the situation presented above. While the domestic demand of sugar in the year 2016-17 stood at approximately 5-5.5 MMT, the incentive in the government set price floor was such that production amounted to something between 7-7.5 MMT as shown in Table 1. The stock in excess of domestic demand could not be exported due to a combination of late decision making by the government, inability of mills to export in time, and low international sugar prices. While the excess supply still existed in the country, the price floor remained unchanged,

[1] https://open.lib.umn.edu/principleseconomics/chapter/4-2-government-intervention-in-market-prices-price-floors-and-price-ceilings/

thus encouraging the grower to again produce high quantity of sugarcane that, as per submission of Vice Chairman of APSMA, has resulted in a total supply of 8.5 MMT of sugar in the country this year. As depicted in the example above, the price floor set by the government led to sugarcane production well in excess of what was required by the mills. Invariably, this appears to be the root problem which has led to the present situation in which all the stakeholders are losing out.

Years	Sugar Supply (in MMT)
2015-16	6.5
2016-17	7-7.5
2017-18	8.5

Table 1: Sugar Supply[2] in FYs 2016,17 and 18

24. As per PSMA, sugar produced in the year ending September, 2016 was roughly 5.1 MMT as against local consumption of 4.9 MMT and sugar exported the same year was almost 0.3 MMT. There were carryover stocks of roughly 1.26 MMT of sugar at mills as well as TCP's end. Since in the last two seasons particularly, the supply of sugar in the country has well surpassed it demand, this has had the impact of putting a downward pressure on the price of sugar on the retail/wholesale end, as evident from the following table and graph:

Sugar Price Trend 2014-17		
Sr. No	**Year**	**Sugar Price/kg**
1	2014	54.61
2	2015	59.59
3	2016	66
4	2017	57

Table 2: Values tabulated from data available from Pakistan Bureau of Statistics

[2] http://www.psmacentre.com/

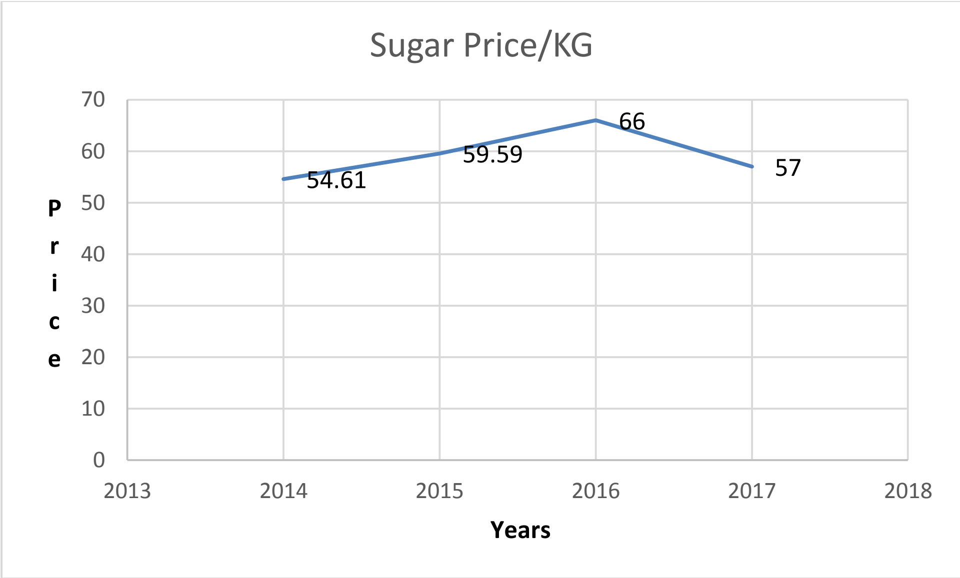


Figure 2: Average retail price of sugar as tabulated from Pakistan Bureau of Statistics data

25. The above graph shows average retail price of sugar (hereinafter 'average retail price') for years 2014, 2015, 2016 and 2017. We see the average retail price peaking during the year 2016 at Rs 66/kg. In the year 2017, the average retail price plummeted to Rs 57/kg. As per PSMA, in the season ending September 2017, the sugar produced in the country was roughly 7.1 MMT as against a demand of 5 MMT. In addition, as reported by PSMA and Federal Government representatives in the hearing, exports were neither timely nor were the prices of local sugar competitive enough for the international market. As per rules of economics, whenever there is excess supply against demand, prices are bound to go down, which accurately explains the phenomenon we observe above. While the principles of free market dictated a downward trend in the retail prices of sugar, the same could not be realized effectively in the case of sugarcane, as the prices of latter were fixed by the government in the form of price floor.

26. By looking at the following graph, it can be seen that production of sugarcane has increased from roughly 55 MMT to 73 MMT between 2011 and 2017. In 2015 the production of sugarcane in the country was roughly 63 MMT that increased to about 65 MMT in FY 2016, eventually reaching a figure of 73 MMT in FY 2017, despite the price floor being more or less the same during this period. While the dynamics of the sector changed in that the supply of sugar exceeded its demand domestically this failed to reflect in the price floor, thereby encouraging the pattern of the growth we see in graph down below:

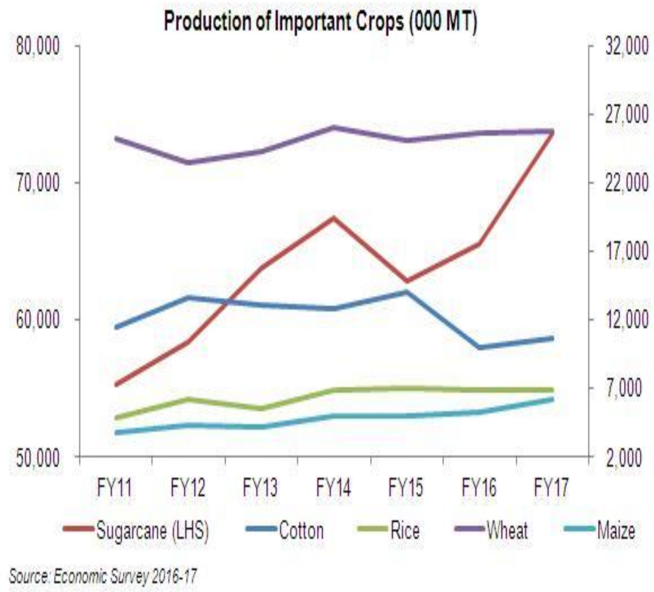


Figure 3: Production Trend of Important Crops

27. An examination of the following figure demonstrates that the area under sugarcane plantation has seen a very significant increase of almost 0.35 million hectares between FY 2013 and FY 2015. In the same period the plantation area under cotton has gone down about 0.4 million hectares. Given the importance of other industries dependent on crops and factors such as water shortage, one is forced to wonder whether there exists a coherent policy framework at the national level in this regard that factors in important considerations of overall industry requirements and optimal agriculture input allocation among others in determining an ideal balance in crop production in line with any long term vision of economic growth and resource preservation.

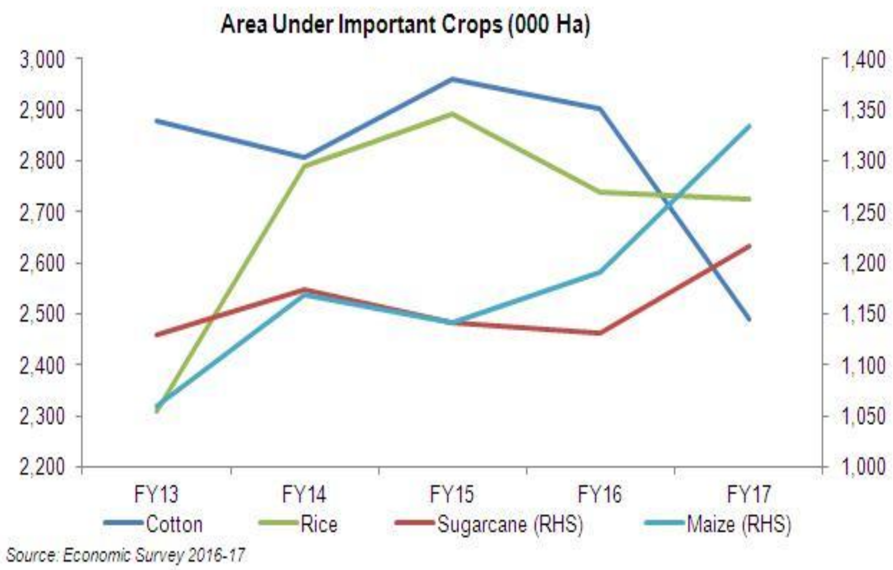


Figure 4: Cultivation Area of Important Crops

28. The Federal Government, through the Agriculture Policy Institute shares an indicative price with the provincial governments. As per the One Man Commission report, the indicative price of sugar cane is calculated after accounting for the following factors:
    (i) cost of production of sugarcane,
    (ii) average wholesale price of sugar,
    (iii) price received by cane growers in the last year,
    (iv) import parity based on average FOB London price of white sugar,
    (v) export parity based on average FOB London price of white sugar, and
    (vi) average of (i) to (v)

29. It appears that several of the factors have not been taken into consideration by the government. While domestic and international prices have shown a downward trend, particularly in 2017, the price floor has remained the same over past several years, clearly indicating that the focus has mostly been on cost of production. These factors are discussed in greater detail in the sections ahead.

30. With this scenario in background, any intervention by the provincial government in the form of price fixing without due consideration and a long term perspective is an inherently harmful measure and tends to find strength and reason in the reasoning provided for in the one man commission report[3] in this regard as reproduced below:

> *"Meddling by the Government and fixing while choosing not to consider the real situation, including data analysis, results in things going awry. While analyzing policy responses to rising food prices the Food and Agriculture Organization of the UN in its 2009 report states that price-controls may appear to work in the short-term, but they cause long term harm."*

31. There also seems to be a complete incoherence in the policy objectives. On one hand there is complete ban on establishment of new mills or expansion of existing ones in Punjab, seemingly to control overgrowth of sugarcane. On the other hand, the provincial governments are fixing sugarcane prices at levels, incentivizing more production of sugarcane. The root of the problem remains, in that the provincial governments keep fixing a price floor that encourages production of sugarcane, while seemingly ignoring a limited domestic demand and export potential of the country in respect of sugar.

32. The provincial government's minimum price, is therefore apparently set above equilibrium/market rates, encouraging sugarcane production in excess of the quantity the mills are willing to buy. Coupled with the lack of sucrose testing facilities and optimal

[3] Report prepared by former chairman of the Commission at the direction of the Honorable Supreme court of Pakistan. A brief summary of the said report is provided in paragraph 16 of this Opinion.

efficiency utilization at mills' end, delays in purchase of sugarcane and/ or default in payment by mills ensue.

Cost of Sugar Production

33. Based on data from the cost audit reports obtained from SECP of some randomly selected sugar mills across Pakistan for the FY 2016, price of sugarcane primarily contributes 75-85% of the total cost of sugar production with the average coming down to 76% as shown in the following table.

Proportion of Sugar Cane Cost as a Percentage of Total Cost of Sugar Production (FY 2016)					
Location	Recovery	cane cost per kg	cost to make and sell before tax	cost to make & sell after tax*	sugar cane % of total cost
Sindh	10.47%	45.41	47.49	51.97	87.37%
Punjab	9.17%	48.41	57.57	62.05	78.01%
Punjab	10.27%	47.20	53.98	58.46	80.73%
Punjab	7.47%	60.48	75.18	79.66	75.92%
Punjab	10.14%	47.69	55.00	59.48	80.18%
Punjab	9.48%	49.20	70.04	74.52	66.02%
Punjab	10.38%	42.68	51.18	55.66	76.68%
Punjab	9.50%	51.22	59.88	64.36	79.58%
Punjab	7.82%	68.07	105.40	109.88	61.95%
Punjab	11.10%	42.50	63.60	68.08	62.43%
Sindh	9.47%	54.13	79.70	84.18	64.30%
Sindh	10.75%	45.22	52.38	56.86	79.52%
Sindh	10.97%	40.66	47.88	52.36	77.65%
Sindh	11.00%	45.23	46.93	51.41	87.98%
Sindh	10.20%	48.69	53.42	57.90	84.10%
Average	**9.88%**	**49.12**	**61.31**	**65.79**	**76.16%**
*taxes are assumed to be 8% FED on a fixed amount of Rs. 56 (Rs. 4.48) as per SRO 492(I)/2016 issued by FBR; no tax exemptions if any applicable at the time have been applied					
Source: Tabulated from cost audit reports available for companies for the FY 2016					

Table 3: Proportion of Sugar Cane Cost as a Percentage of Total Cost of Sugar Production (FY 2016)

34. As per submission of PSMA representative in the hearing, 82% of the total cost of sugar production can be attributed to the price of sugarcane. Whether 76% or 82%, it follows that sugar cane is the most significant cost factor in the production of sugar and therefore has a direct impact on any prices that follow down the value chain.

35. From the available cost audit reports mentioned above, cane cost for producing one kg of sugar in the FY 2016 was also calculated and the average comes out to approximately Rs. 49/kg as demonstrated in the following table:

Sugarcane as Factor of Sugar Cost - FY 2016			
Mills in Punjab			
Name of sugar mills	**Recovery%**	**cane cost per 40 Kg**	**Cane cost per KG of sugar***
Baba Farid	9.17%	170.92	48.41
Ashraf Sugar Mills	10.27%	191	47.20
Darya Khan Sugar Mills	7.47%	180	60.48
Fatima Sugar Mills	10.14%	180	47.69
Adam Sugar Mills	9.48%	179.64	49.20
Alliance sugar Mills	10.38%	180	42.68
Chanar Sugar Mills	9.50%	190	51.22
Haseeb Waqas Sugar Mills	7.82%	180	68.07
Gulf Sugar Mills	11.10%	177	42.50
Average	9.48%		46.98
Industry average	10.12%		49.12
Mills in Sindh			
Name of sugar mills	**Recovery%**	**cane cost per 40 Kg**	**Cane cost per KG of sugar**
Al Abbas	10.47%	172	45.41
Dewan Sugar Mills	9.47%	172	54.13
Habib Sugar Mills	10.75%	180	45.22
Deharki Sugar Mills	10.97%	172	40.66
Faran Sugar Mills	11.00%	172	45.23
Al Noor Sugar Mills	10.20%	172	48.69
Average	10.48%		46.56
industry average	10.12%		49.12

* Average cost of cane for 1kg sugarcane production for Punjab mills ignore mills for recovery % less than 8.5

Source: tabulated from data available in cost audit reports of FY 2016

Table 4: Sugarcane as Factor of Sugar Cost - FY 2016

Comparison of Pakistan with some Major Sugar Exporting Countries

36. If we compare the average cane cost incurred in Pakistan with the average cane cost incurred in production by mills in some major exporting countries of sugar (India, Brazil and Thailand) for the year 2015-16 as estimated by Mr. Tarun Sawhney,[4] President of Indian Sugar Mills Association, it turns out that the cost for procuring sugarcane to produce sugar is the highest in Pakistan.

Cane Cost to Produce Sugar 2015-16

Countries	Cane cost per kg of sugar (In PKR)
India	38.71*
Thailand	38.2
Brazil	21.5
Pakistan	49**

*Based on price floors in states of UP, Maharashtra and Karnataka;

** Based on cost audit reports of select sugar mills from Punjab and Sindh

Table 5: Cane Cost to Produce Sugar – 2015-16

37. This relatively high cost of production of sugar in Pakistan renders exports unfeasible, when despite having excess sugar in the domestic market, the local stocks for exports cannot compete with their comparatively lower priced competing stocks in the international market.

Impact of Quality of Sugarcane on Sugar Production Cost

38. The quality of sugarcane produced is one of the most significant factors to impact the production cost of sugar. In this regard, the following table may be examined, where values are tabulated based on cost audit reports of randomly selected sugar mills in the FY 2016. As per data thus reproduced, the cane cost for production of 1 kg sugar is found to be as high as PKR 60 when the cane is of a poor quality (7.47% recovery) versus a much less corresponding cost of PKR 42.5, when the quality of sugarcane is the highest in the considered sample (11.10% recovery).

[4] http://www.indiansugar.com/PDFS/Current_sugarcane_pricing_policy__0405-Tarun_Sawhney.pdf

Sucrose Recovery Affect On Cane Cost Per KG Of Sugar – FY 2016					
Sugar Mills	Darya Khan Sugar Mills	Baba Farid	Ashraf Sugar Mills	Alliance sugar Mills	Gulf Sugar Mills
Cane price per 40kg	180	171	191	180	177
Recovery	7.47%	9.17%	10.27%	10.38%	11.10%
Cane cost per kg of sugar	60.48	48.41	47.2	42.68	42.5
Variance for improvement in recovery rate		12.07	1.21	4.52	0.18
Source: Own calculation based on Cost Audit Report					

Table 6: Sucrose Recovery Effect on Cane Cost Per KG Of Sugar - FY 2016

39. For a more vivid example, consider the calculations made by the President of Indian Sugar Mills Association in his critical analysis of sugar cane policy of India prevalent in FY 2016 as shown in the following table:

	Recovery %	Cane Required For 1 tonne of Sugar (in tonnes)	Cane Rate (PMT)	Cane Price per Tonne of Sugar
2015-16(*)				
UP	10.60%	9.434	2800	26,415.09
Maharashtra	11.30%	8.850	2733	24,187.05
Karnataka	10.80%	9.259	2615	24,212.85
2014-15				
UP	9.54%	10.482	2800	29,350.10
Maharashtra	11.29%	8.857	2640	23389.00
Karnataka	11.06%	9.046	2561	23166.81
2013-14				
UP	9.26%	10.799	2800	30,237.58
Maharashtra	11.40%	8.772	2522	22124.00
Karnataka	10.95%	9.132	2500	22831.05

(*)Estimates

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Table 7: Assessment of President Indian Sugar Mills Association

40. What one observes is that in states of Maharashtra and Karnataka, where the quality of sugar is high (recovery of 11.4% and 10.95% in FY 2014) the cost to produce 1 kg of Sugarcane is 22.1 INR (34.48 PKR - based on conversion rate in FY 2016 = 1.56 approx.) and 22.8 INR (35.57 PKR) respectively as against UP (recovery of 9.26%) where the corresponding cost was reported to be 30.2 INR (47.11 PKR). Similarly for FY 2015, the cost to produce 1kg of sugar for the three respective states was calculated to be 29.35 INR (45.78 PKR), 23.39 INR (36.48 PKR) and 23.17 INR (36.14 PKR) while their qualities stood at 9.54%, 11.29% and 11.06% in the same order.

41. The foregoing demonstrates the tremendous impact that the quality of sugarcane can have on the cost of sugarcane to produce 1 kg of sugar. It is a very neat inverse relationship between the two variables of quality- read recovery and sugarcane cost incurred in producing a kg of sugar, as one goes up, the other goes down. What it also implies is that, for Pakistani sugar to be competitive in the international market, the Government must introduce an active policy to increase the quality of locally produced sugar cane and ensure its implementation/execution at the stakeholders' end. We find the following observation of report of One Man Commission in this regard very apt and believe that the government must take serious steps in this direction.

> "The quality of the cane is influenced by the expertise of the grower as well as the resources available to him. Pakistan does not have institutions or bodies conducting research regarding improvements in agricultural productivity at par with other countries that grow sugarcane on a large scale. Research institutions in the public sector tasked with coming up with new varieties of sugar cane appear to be starved of funding. Similarly, no training facilities exist to enhance the growers' knowledge of possible improvements to the quality of his crop. The growers often use out-dated varieties of seed with no regular replacement. Growers and PSMA also informed the Commission that there is often unchecked spread of unapproved varieties. Hence, the quality of the cane along with the yield is adversely affected by all these factors. Non-adoption of improved production technology also leads to low yields. Furthermore, low recovery of sugar from sugarcane can be attributed to the fact that quality seed varieties are not used in large parts of the country."

Impact of International Price Trends

42. Having discussed the various factors from the farm end that impact the overall cost of sugar production, we now examine the international trend of sugar prices in recent years.

43. The average international price of sugar, as reported in a World Bank report[5] of October, 2017 on commodity prices, increased from a low of PKR 31.2 in the FY 2015 to PKR 46.8 in the 3rd and 4th quarters of the year 2016. However, as the FY 2017 progressed, the average international price started showing a downward trend going as low as PKR 33.28 as demonstrated in the following table:

International Average Price Of Sugar		
In (PKR)		
Time Period	**Quarters**	**Sugar World**
2015		
	2015 (yearly avergage)	31.2
2016		
	2016 (yearly average)	41.6
	Q3 2016	46.8
	Q4 2016	46.8
2017		
	Q1 2017	44.72
	Q2 2017	35.36
	Q3 2017	33.28
Exchange rate taken as USD = 104 PKR		
Source: World Bank Report[6], Oct, 2017		

Table 8: International Average Price of Sugar

44. Seemingly this fluctuating trend in the international prices can probably be explained by the supply demand dynamics that have existed in the world for the corresponding years as given in Table 9.

45. In the FY 2015, the export of sugar amounted to 54.9 MMT as against import requirement of 50.2 MMT. In FY 2016, the trend reversed with import requirement rising to 54.3 MMT while the available exports were 53.8 MMT. In FY 2017 again, the

[5] : http://pubdocs.worldbank.org/en/743431507927822505/CMO-October-2017-Full-Report.pdf
[6] ibid

available export quantity of 57.8 MMT out did imports of 54.6 MMT by 3.2 MMT, which is perhaps why we see a downward trend in international prices as observed in table 8. The estimate/forecast for the FY 2018 is that export supply at 59.2 MMT is going to outdo the import requirement of 51.3 MMT by a hefty 7.9 MMT. This implies that the downward trend in international prices that raised its head in the FY 2017 is going to continue into the current year, which means that the challenge being faced with respect to export of sugar may not subside in the near future.

46. In the light of the foregoing the gap in the price of sugar being produced in Pakistan as against some of the other exporting countries needs to be studied by the government. The representative of the Ministry for National Food Security and Research remarked in the Hearing, that particularly in India, the cost of producing sugar cane is comparatively low on account of availability of free electricity to the farmers and much cheaper fertilizer. He also mentioned that India and Brazil have indigenized the production of seed varieties required for producing sugar cane as against Pakistan, which is not self-reliant in this regard. The Government through its pertinent federal and provincial departments must play an active role in understanding the causes which are making domestically produced sugar uncompetitive and take policy measures to correct the situation.

Years	2015/16	2016/17	2017/18*
	(million metric tons)		
Production	164.7	170.8	179.6
Stocks	43.9	38.8	38.2
Exports	53.8	57.8	59.2
Imports	54.3	54.6	51.3

Table 9: Global Sugar Supply/Demand Situation[7]

EFFICIENCY DURING PRODUCTION STAGE

47. Having discussed the factors impacting the cost of sugarcane at the farm end and their impact on export potential and economic viability of the sector, we next proceed to discuss a couple of such factors on the millers' end, less impactful in terms of quantum and yet important considering the level of competition existing in the international market for sugar.

48. It appears that most mills are not fully utilizing production capacities which is an impediment to achieving economies of scale and lower production costs. To this end, the Government's policy of restriction of establishment of new mills or the expansion of the

[7] ibid

existing mills is also of concern. This prohibition not only acts as a barrier to entry of newer and more efficient players, but also encourages inefficient players to stay in the market at the cost of the consumers and competition. In a market without barriers, inefficient market players would exit and more efficient ones would enter in the medium to long term. Instead of facilitating this process, the ban does exactly the opposite.

49. Most of the sugar mills in Pakistan solely rely on the production and sale of sugar as a commodity and little on value addition through optimal use of by-products listed below.
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a. Molasses
b. Bagasse
c. Press Mud

50. This impacts the cost of sugar production at the mills' end. As noted in the One Man Commission Report, the realizable value of these by products is deducted when arriving at the cost of production of sugar. The Report notes, that while Bagasse and Press Mud do not have a material impact on cost of production, Molasses does heavily impact this aspect. Molasses recovered from the manufacturing process is either sold at market value or used by mills that run distilleries to produce ethanol.

51. Since very few mills appear to be efficient enough to be running the abovementioned distilleries, the government should introduce incentives in the form of tax concessions or any other measure that it deems appropriate to encourage more and more mills to make efficient use of its by-products particularly molasses not only to reduce the overall production cost of sugar but to also make gains on their own end, ethanol being a profitable commodity, with the goal to enhance their ability to pay the farmers.

52. Based on the cost audit reports of the same sample of mills considered for cost analysis above, at least one third of them were found to be making losses for the fiscal years 2015 and 16 (in the range -2.2% to -88.5% with one outlier of -496%). Of those registering a profit, the average profit margin for the two years was 7.7% and 6.4% respectively. These were years when the demand-supply disparity had not reached the levels that exist today or in the recent year and yet the scenario does not appear to be all that promising, assuming integrity of the data involved.

53. A third important cost factor on the mill end is any applicable taxes/concessions prevalent at the time. We reserve any comment in this regard, since this factor may be tweaked by the government at any point in time to achieve any desired objectives. However, whenever the government considers any such measures, apart from revenue consideration, heed may also be given to factors such as export potential as discussed in detail in the previous sections and internal food security objectives such as maintaining a certain reserve in case of special circumstances.

ISSUES AT THE WHOLESALE/RETAIL END

54. The primary issues highlighted on the retail end as learned through research/government sources are:

   a. Periodic and sudden price hikes
   b. Short selling by wholesalers/retailers and/or
   c. Temporary shortage of supply on the millers' end to generate the situation in (a)

55. As per Commission's understanding the two probable reasons for this phenomenon are

   a. The decision on the part of these mills to temporarily withhold the supply of sugar in the market in order to bring the supply and demand in somewhat parity with each other. This is a position maintained in some of the newspaper reports regarding increase in price of sugar and seems plausible given that one of the mills situated in Punjab in its correspondence with the Commission stated that:

      > *"In case of prices going down even below the cost of production, a manufacturer stops selling the product and starts waiting for prices reaching a reasonable level where he could at least recover the cost...... in order to avoid heavy losses the mills resisted sale and waited the prices to reach a reasonable level which led to an increase in prices for a week or two. This could only result from temporary shortage either created on the part of the mills or at the wholesale/retail end."*

   b. The other possible reason for any sudden price increases and that has come to the Commission's notice is reported behavior on the part of some wholesalers and retailers. Reportedly whenever there is an indication of plunge in the prices, some speculators/wholesalers/retailers generate a situation so that they can carry out 'short selling' of sugar in the market. When they move in to cash in on their short positions, it creates a temporary demand surge resulting in a sudden increase in prevailing prices.

56. Whether on account of mills and/or due to cashing of short positions created at the retail end, these price hikes have been temporary since in actuality, as of late, the supply of sugar has been in excess of the real demand, thus any sudden price hike does not sustain in the long run with the market correcting itself. It is for this reason that the average retail price of sugar maintained an overall downward trend in the year 2017.

57. However, an effective way to curb the above described problem is for the Government to direct the TCP to purchase a certain reserve stock of sugar as deemed fit, so that whenever the market experiences any such price fluctuation on account of a perceived

manipulation from any of the stakeholders mentioned above, some stocks could be floated in the market to curb/discourage this practice. This purchase on TCP's end will also take care of some of the excess supplies at the mills' end and also generate some cash flow at the latter's end to increase their ability to pay the farmers. As prolonged government intervention in a market is always undesirable, the operations through entities like TCP should be strategic in nature and undertaken without the desire to create a parallel supply chain.

58. The Commission has time and again seen that when the government makes purchases through public organizations such as TCP, it imposes a price ceiling beyond which it would not purchase. In a general sense, often the imposition of such price ceilings has a detrimental effect on competition in the market to the extent that it facilitates cartelization amongst the bidders. When price ceilings are imposed, bidders tend to offer prices around it creating a lack of competition and choice for the government. Similarly, when tenders are designed to 'spread' purchase from more than one bidder, collusion in form of market division is facilitated. Such practices must be avoided as they harm competition in the market and allow players to collude.

CONCLUSION

59. To sum up, due to excess supply of sugar in the country, as against its demand in the recent years, a surplus has been created in the market. This surplus has created a conflict between the farmer and the miller, the latter producing a quantity and expecting a payment in accordance with the government determined price floor while the latter finding the proposition unviable.

60. The problem is further exacerbated by the inability of the mills to export their sugar at internationally competitive rates. On one hand, most of the millers are heavily reliant on sugar as a product and have not diversified (making optimal use of by-products) to reduce costs. On the other hand, the government departments appear to be lacking in their assessment of price floor by either being unaware of its impact on production of sugarcane, and consequently sugar by not indulging in active forecasting of the same, or if they are aware, they have apparently failed to factor that in with regard to determination of the sugar cane price.

61. Being self-sufficient in country's sugar requirements is a desirable outcome, having amounts that can be exported is even better, but if that doesn't translate into earning potential for the country, it has limited benefits for the economy. The government departments must take measures to ensure that the production cycle in the country from the farm end to retail has comparable efficiencies in terms of costs as well as quality with the countries that we may compete with in respect of locally produced sugar.

62. The sugar sector suffers from inefficiencies at all levels. Serious efforts are required to design appropriate government interventions, improve sugarcane quality, enhance and diversify production processes, and improve export competitiveness.

RECOMMENDATIONS

63. In respect of price floor, we are of view that:

a. The provincial governments should ideally not fix price floor of sugarcane and let the market determine price based on supply and demand. Price floors should only be imposed for limited periods in situations where food security is gravely threatened.

b. In situations where the government does impose a price floor, careful consideration must go into its determination.

i. While calculating the cost that it takes to produce sugarcane, the federal and provincial departments responsible must ensure detailed field visits and rely on firsthand knowledge duly acknowledging the divergent conditions and factors prevalent in different areas, in the interest of accuracy.

ii. More importantly, the pertinent government departments at the federal and provincial levels must ensure that they have an independent way of forecasting the production of sugarcane in any proceeding season and its impact on the total supply of sugar in the country vis-à-vis its demand, so that this consideration is built into estimation of any potential price floor for sugarcane. The cost of a commodity is very important in determining its price, but that is not the only factor. An equally important consideration is the value of the commodity held by the buyer in light of the laws of supply and demand. When such consideration is built into any suggestive price, it will ensure that the seller or the farmer gets his price.

iii. In either of the foregoing suggestions the pertinent government department must have an independent mechanism of collecting information and should not be relying on data available with PSMA or any other stakeholder with vested interest in the process.

iv. We also agree with the view of One Man Commission report that suggested that while fixing the price of sugarcane, price floors or any applicable support price of other crops must also be considered so as not to discourage the farmers of those crops to grow them. For example when pricing the sugarcane crop, the price of cotton crop that feeds an important industry of textile and that requires a lot less water than sugarcane and any such other crops must be kept in consideration so as not to convert the farmer from one crop to the other, while not even insuring the security of being paid.

c. This also bring us to our next recommendation, which is in line with the view of One Man Commission Report, that whenever after duly deliberating on all the foregoing factors, the provincial government arrives at a price floor, it must then take it to its logical conclusion, in that regardless of circumstances, the government must ensure that it pays the farmer its due as fixed by the government as if it were an underwriter.

d. Any policy regarding determination of price floor for sugarcane must take the emphasis away from weight and shift it to quality, so that farmers have an incentive to shift toward more efficient methods and be rewarded accordingly. Farmers producing higher quality sugarcane must be paid a premium against farmers who grow relatively inferior product. This will also help in reducing the overall production cost for sugar.

64. The Commission strongly recommends that provincial governments review the legislative framework under which the sugar sector operates. The Sugar Act is severely outdated and does not serve any purpose in the contemporary times. All provincial governments should review legislation to limit government intervention and bring it in line with the recommendations given above. Any revised or new legislation should encourage principles of free market.

65. The Commission is further of the view that research and development ('R&D') is the cornerstone of any efficient industry. It appears that lack of R&D has prevented the sugar industry from realizing its potential (both export and local) particularly at the farm end where there appears to be no efforts to introduce more effective seed varieties and indigenize them to produce superior quality sugarcane for long term benefit. As previously noted in the One Man Commission Report, despite being ranked 6th in terms of harvested area, Pakistan stood at number 15 among the 16 major sugarcane producing countries, with regard to yield and quality of sugarcane. Yield and quality are therefore important areas where the R&D should be focused. Similarly and as importantly, R&D activities must also be carried out to make the processes at the mills end more efficient. Such activities should range from making the manufacturing process more efficient and cost productive to making the most efficient use of the by-products. The government should offer incentives in this regard. We are of the view that the PSMA must also play a very active role in this regard.

66. With regard to the role of Government with respect to exports, we are of the view that, in addition to the R&D measures suggested above to reach our export potential, the concerned government departments must also be very vigilant regarding the existing

stocks of sugar in the country. In addition, there is need for active forecasting with regard to the quantities of sugar that will be produced in any upcoming season vis-à-vis its demand and up-to-date knowledge of prevailing prices of sugar internationally so that a timely and effective export strategy can be adopted, based on actual facts on ground.

67. Regarding any artificial shortage of sugar supplies on the retail/wholesale or mills' end, the Commission is of the view that the government through TCP may maintain certain amount of reserves of sugar as a check/deterrent for any such market manipulation. Ideally market forces must be allowed to operate freely, and so this must be done very sparingly if at all needed, as the scenario thus described is less likely to sustain in current circumstances where owing to excess supplies and lack of export channels, the market is very likely to correct itself within a short period of time. However any such reserve, apart for being a deterrent may also be considered for export at an opportune time in the event of international prices of sugar rising at any point in time.

68. It is also recommended that the Federal Government reduces the time required to make import/export decisions and give permissions. International trade shows no mercy on nations that cannot utilize the best times to carry out trade, particularly when dealing with commodities. When excess stocks are expected, the government must facilitate timely export. This requires proactive monitoring and management by the Federal Government.

69. Lastly it is recommended that the Government may consider setting up a committee comprising all the pertinent Government departments dealing with the Sugar Sector at federal and provincial level (such as provincial food departments, research departments whether attached or independent, provincial cane commissioners, Agriculture Policy Institute, Ministry of National Food Security and Research, Ministry of Commerce and Trade Corporation of Pakistan) in addition to representatives of farmers and mill owners to be able to coordinate effectively in aligning their objectives and be able to deliberate over a workable long term plan based on the recommendations provided above and/or any new ideas or issues that may emerge overtime for making the sugar sector internationally and locally competitive and thereby an economically efficient sector catering to the welfare of its stakeholders as well as consumers in the longer term.

Islamabad the April 25, 2018