Sugar Industry

SECTOR UPDATE

April, 2018

Sugar Industry Overview

Sugarcane is one of the most important cash crops of Pakistan; it is a key input for sugar production as well as the paper and board industry. Pakistan is the 6th largest sugarcane producer, 9th largest by sugar production and 8th largest sugar consuming country in the world. Over the years, domestic sugar consumption has grown from 0.5 million (m) metric tons (MeT) in 1975 to 5.1m MeT in 2017 on the back of population growth. Per capita consumption of refined sugar in Pakistan was estimated at 25.7kg in FY17. Processed food sector which includes candy, ice cream and soft drink manufactures accounts for almost 60% of total domestic sugar consumption. Furthermore, absence of major substitutes for sugar makes its demand inelastic.

Refining and Processing Sugar

Sugar manufacturing comprises five primary procedures cleaning, slicing, extraction, evaporation and crystallization which are illustrated in the figure below.

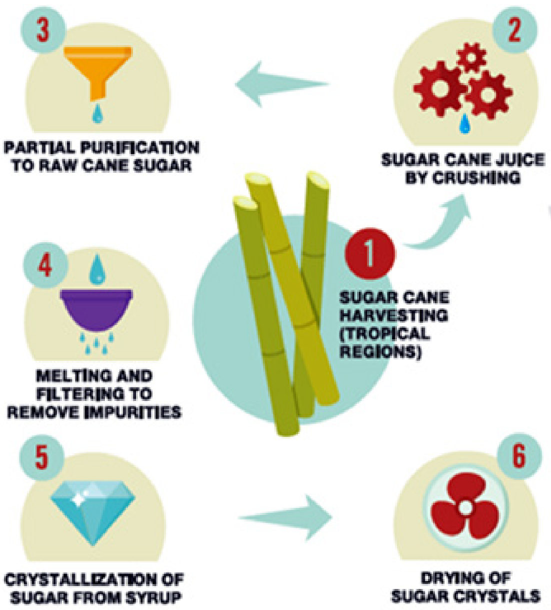

Figure 1: Sugarcane refining process

Major by-products of sugar production are molasses and bagasse fiber. Molasses are used as raw material for ethanol production. Local sugar mills export molasses, sell it locally or process molasses into ethanol through their own distillery. Pakistan's sugar sector has the capacity to produce over 2.5m MeT of molasses. Moreover, sugar manufacturers mainly utilize bagasse for paper and chip board manufacturing. The same may also be used as a raw material for power generation.

Sugarcane Plantation Area and Production

Sugarcane has a seasonal production spell for a period of five months from November to March. Sugarcane is a labor-intensive crop that requires about 134 man-days/hectare. Sugarcane cultivation provides a partial and seasonal employment to 3.9m people approximately, which is about 12.14% of the total agricultural labor force.

Table 1: Sugarcane Plantation area by province ('000's Hectares)

Province	FY15	FY16	FY17
Punjab	685	705	778
Sindh	318	313	320
KPK	113	113	119
Total	**1,113**	**1,131**	**1,217**

Total sugarcane production in FY17 amounted to 75.5m MeT (FY16: 65.5m MeT) whereas for FY18, 78.4m MeT has been forecasted. On a provincial basis, highest sugarcane production was contributed by Punjab followed by Sindh and KP during FY17.

Table 2: Sugarcane production and yield by province

Province	Sugarcane Production (MeT)			Yield (Tons Per Hectare)		
	FY15	FY16	FY17	FY15	FY16	FY17
Punjab	41.0	41.9	49.6	60.1	59.5	63.8
Sindh	16.6	17.9	20.2	52.4	57.5	63.1
KPK	5.1	5.5	5.6	45.4	48.8	47.5
Total	**62.7**	**65.5**	**75.5**	**56.4**	**57.8**	**62.0**

Source: Provincial Agricultural Departments and FAS/Islamabad

During FY17 yield was healthy in the sugarcane crop specifically in Punjab and upper part of Sindh Province compared to other parts. Due to scarcity of water, the production of sugar in lower part of Sindh but on an overall basis the total production was higher than previous year.

Sugar Production

A total of 89 sugar mills are presently operating in the country and are pre-dominantly owned by the private sector. Out of 89 sugar mills, 45 are located in Punjab, 38 mills in Sindh and remaining mills are located in KP. About 40% (36 sugar mills) in Pakistan are listed on Pakistan Stock Exchange (PSX).

During FY17, total sugarcane crushed amounted to 70.9m MeT (FY16: 50.0m MeT) while sugar production was reported at 7.0m MeT (FY16: 5.1m MeT), indicating a recovery rate of about 9.8% (FY16: 10.2%). Sugar production is projected at 6.6m MeT in FY18.

Table 3: Province-wise break up of sugarcane crushed, sugar production and recovery rate in FY17.

Province	Sugarcane Crushed (MeT)	Sugar Production (MeT)	Recovery Rate
Punjab	44.1	4.3	9.8%
Sindh	21.9	2.2	10.2%
KPK	4.8	0.5	9.4%
Total	**70.9**	**7.0**	**9.9%**

Recovery rate of sugar is primarily dependent upon favorable weather, availability of water, type of sugarcane seed and soil conditions. Variation in sucrose recovery rate from sugarcane across the country has a direct impact on cost of manufacturing and profit margins amongst different producers. As a result, mills operating in high recovery area have a competitive advantage over others. Moreover, per hectare yield of sugarcane in Pakistan is significantly lower vis-à-vis global averages. Recovery rate has also ranged between 9-10.5% over past couple of years compared to other major sugar producing countries where average recovery rate is over 10.2%.

Given the rise in output levels, domestic surplus situation in sugar is expected to continue with domestic consumption of 5.1m MeT in FY17 During the outgoing year FY17, sugarcane production was higher vis-à-vis the previous period, as well as the consumption thereby leading to surplus. Furthermore, bumper sugarcane crop is expected to resurface during next year FY18 due to favorable climatic conditions, intensifying supply glut in the sector.

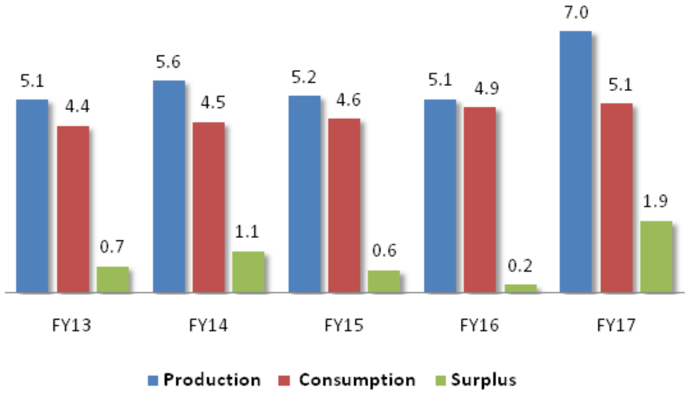

Figure 2: Domestic sugar production, consumption and surplus (MeT)

Domestic Prices

Government actively controls the support prices of sugarcane. The sugarcane retail average price per 40 Kg stands at Rs. 180.6 (FY17: Rs. 180.6) in FY18. However, the sugar average retail price per kg stands at Rs 53.0 (FY17: Rs. 61.4) in 9MFY18.

Table 4: Comparison of sugarcane procurement

Year	Sugarcane Indicative Price (Rs.)			Avg. Sugar Retail price/Kg**
	Punjab*	Sindh*	KP*	
FY14	170	172	170	54.8
FY15	180	182	180	58.9
FY16	180	172	180	63.8
FY17	180	182	180	61.4
FY18	180	182	180	53.0***

**Price is per 40kg, **Average prices of period (Oct-Sep), Source: Pakistan Bureau Statistics*

Over the past four years, sugarcane prices have remained stable and increased slightly by Cumulative Average Growth Rate (CAGR) of 1.4% whereas, the sugar average retail price has shown improvement and increased by CAGR of 3.8%. Figure 3 depicts the comparison in average retail prices of sugarcane and sugar.

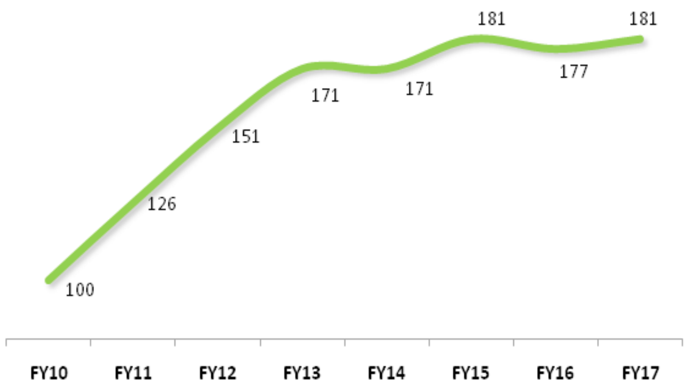

Figure 3: Sugarcane indicative price (Rs./40 Kg.)

Given that sugarcane prices are fixed by the government and sugar prices are determined by market forces, which is exhibiting a declining trend, the same may result in a cost-price mismatch, whereby change in retail sugar prices may not correspond with the change in raw material costs including other overheads as well. Some players in this sector are diversifying their revenue base by undertaking other ventures like power production, Medium Density Fiber (MDF) board and ethanol production. Trend analysis of sugar retail prices is presented below:

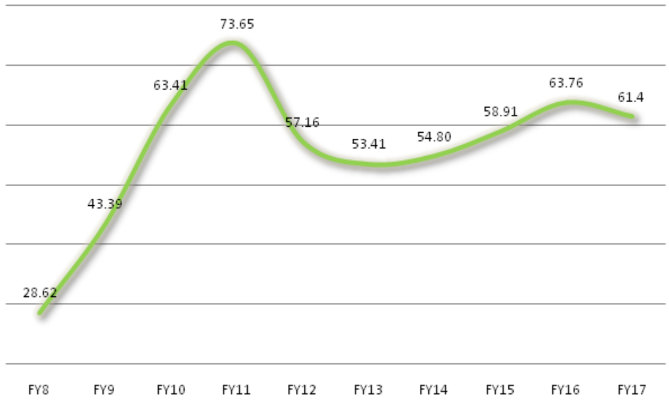

Figure 4: Sugar average monthly retail price (Rs./Kg.)

The steady rise in sugarcane procurement prices has made it difficult for mills to profitably produce sugar, but the industry is currently protected by a 40 percent import tariff designed to boost domestic sugar sector and protect the local industry from imports.

Government intervenes in imposing trade controls over import and export of sugar by buying and selling sugar. Moreover, in order to support the export market of sugar government extends the export rebates to the mill owners every year. Additionally, government set the export quotas to keep the domestic prices stable. The quota is approved and monitored by the State Bank of Pakistan (SBP) on a first come first serve basis. Trend comparison of sugar monthly domestic and international prices is presented below:

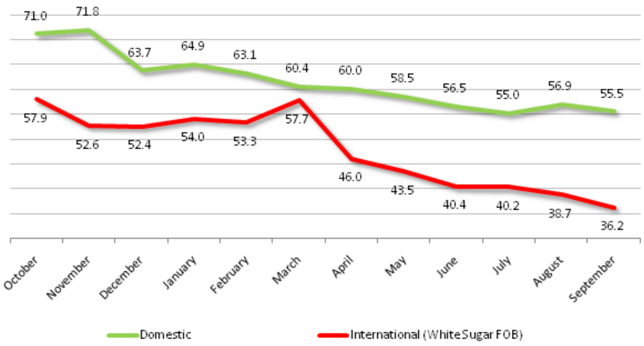

Figure 5: Monthly average sugar prices (Rs./Kg.)- domestic vs. international (FY17)

During FY17, total sugar exports allowed by Economic Coordination Committee of Pakistan (ECC) amounted to 1.2m MeT. 0.7m MeT out of total exports was at no subsidy however, remaining 0.5m MeT of sugar was exported at a subsidy of Rs. 10.7 per Kg. In view of the availability of surplus sugar, 1.5m MeT of exports was allowed by ECC on end-Nov 2017.

Molasses and ethyl alcohol are the two major by-products of sugar that are also exported. Over the past two years, Ethyl Alcohol (Ethanol) exports have been of higher value than sugar exports. There has been no or very little import in the sugar market. During FY17, a total of 8,923 tons of refined sugar was imported while no raw sugar has been imported since past five years.

Trend in sugar exports over past eight years is presented below:

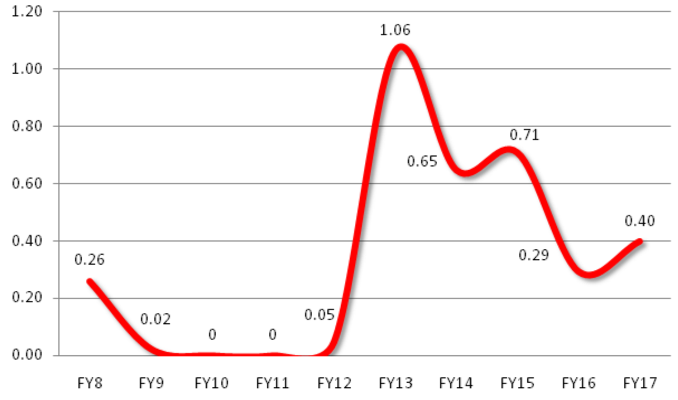

Figure 6: Sugar exports (MeT)

Financial Analysis of Industry
The excess supply of sugar in the market has kept the sector under pressure and weakened the financial profile of the industry. Due to lower selling price, players in the industry delayed selling of inventory, thereby, resulting in higher short-term borrowings for longer periods. This resulted in higher leverage levels as well as finance cost.

Profitability and resulting cash flows were considerably lower due to lower margins and higher finance cost as explained above. However, the competitive advantage of low-cost production has favored large players as well as companies that have diversified their business to other products categories such as ethanol and MDF by utilization of by-products of sugar.

Outlook
Government subsidy for export of sugar for local companies has helped companies to reduce inventory levels at the beginning of crushing season, thereby, avoiding a significant downturn. However, given that Pakistan will experience a bumper crop next year, which will increase sugar supply further; financial profile of sugar companies is expected to deteriorate, going forward.

Analysts Contacts

Jazib Ahmed, CFA
Senior Manager
jazib.ahmed@jcrvis.com.pk

Muhammad Tabish
Assistant Manager
muhammad.tabish@jcrvis.com.pk