Chapter - V

Problems of Sugar Industry
CHAPTER V
PROBLEMS OF THE SUGAR INDUSTRY IN THE STUDY AREA

Sugar Industry in India has been facing several insurmountable problems both specific and general in nature. In Thanjavur District also sugar industry in public and private sectors face the same problems prevailing all over India in addition to their own area specific problems. These problems have been discussed in this chapter.

Sugar in India has always evoked strong feelings whether it is consumer, a farmer, a politician or a businessman. Governments have been known to suffer hiccups as sugar price and availability affect two important segments of the society – the consumer and the farmer. Fifty million farmers are directly involved in the cultivation of sugarcane and several more are indirectly employed by this industry.

Despite liberalization and globalization, the industry continues to be regulated with controls imposed at almost every step. Political lobbying has been one of the more prominent reasons why this industry has not developed in India as fast as in other countries like Brazil. It is time that a long-term growth oriented policy is formulated for the industry.

It will be unrealistic to expect total freedom for the industry to which the fortunes of million of farmers and billions of consumers are linked. At the same time, controls and regulations will need to be kept to the bare minimum to ensure healthy growth.
5.1 AN ENERGY CROP

Sugarcane today is characterized as an energy crop and not merely a sugar-containing crop. The farmer’s role and contribution in the development of sugarcane is paramount. The role of the factory is limited to extracting sugar and energy from cane.

The sugar content depends on the quality of cane that in turn is influenced by variables such as climate, irrigation facilities, usage of fertilizers and varieties chosen. Most sugar mills, in their self-interest, take keen interest in developmental activities to improve the quality of cane at the farms. Despite such initiatives, there still exists scope for further improvement in yield of cane and its sucrose content. Research institutes in particular, can help by creating and propagating improved varieties of cane.

5.2 CANE PRICING ISSUE

The pricing of sugarcane is probably the most sensitive issue. The world over, sugarcane price is determined on the basis of its sucrose content and sugar price. In India too, these parameters have been accepted by the Government.

The minimum support price announced by the Government links cane price to a basic sugar recovery percentage while providing for an increase for higher recovery percentage (sucrose content). Furthermore, any additional price realized above the price of levy sugar is shared equally by the farmers and the industry. In actual experience, however, this scheme does not work in many parts of the country mainly because of intervention by the state government.

Sugarcane price, with its political implications, is fixed by state governments on an ad hoc basis irrespective of the sucrose content or sugar price.
In the past, this was a universal phenomenon but some state government in South India have given up this undesirable practice. North Indian states of Uttar Pradesh, Bihar, Punjab, Haryana and Uttarakhand continue this practice causing avoidable aberrations. Thus serious distortions take place.

This leads to the important phenomenon of the vicious sugar cycle which sees a few years of bumper production followed by years of low production. This volatility is influenced by two factors-natural and manmade. Natural factors include rainfall and other climatic conditions while man-made factors are primarily government policies on cane and sugar price.

Irrespective of the level of sugar prices, cane prices are determined on political considerations and have always been increasing. When there is a wide disparity caused by high cane price and low sugar price payment arrears to farmers start mounting.

In such a situation, farmers switch from cane cultivation to other crops and sugar production falls. Reduced supply results in increased sugar prices and once the health of the industry is restored, the cycle resumes. Two recent instances occurred in 2000-01 and 2001-02. In these years, cane price arrears mounted till the situation took serious turn with fall in cane and sugar production and consequential increase in sugar price. Such situations can be managed by a pragmatic policy framework.

Other sugar producing countries have faced such situations but they tide over the problem with direct government support. In Thailand, a major sugar exporter, revenues fell sharply with a precipitous decline in sugar prices. This adversely impacted the ability of the sugar miller to pay for sugarcane as announced by the Government.
The Thai Government took a pragmatic approach and disbursed sizeable amount of about 18 billion Thai Baht (Rs 1800 crore) directly to the cane farmers over a period of four years. This revived the sugar economy.

Similar support was given by the Australian government and to an extent by the South African government. At no time was the industry allowed to go sick or farmers made to suffer due to arrears. Such initiatives can be incorporated by the Indian government while formulating its sugar policy.

All this leads to the conclusion that sugarcane pricing needs to be depoliticised. The best course will be to have an independent body headed by a retired judge to fix sugarcane prices under certain guidelines. The guidelines should include factors such as cost of farming sugar prices and sucrose content in cane. Only with a fair system for determination of cane price can volatility in sugar production be minimized.

5.3 RESERVATION OF CANE AREA

The next tricky issue relates to sugarcane procurement through the system of reservation of cane areas. There are several models operating in other countries that are tailor made for local conditions. In some countries, the mills own large areas and use them for cane plantations. The factories themselves undertake all farming activities including harvesting and transportation. In other countries, there are systems of reservation of cane area for each factory. What is however common is that a factory has certain exclusive area for its captive use from where it procures all its cane requirements and can conduct development oriented initiatives. It is imperative for sugar factories to undertake developmental activities to ensure quality cane availability.
All over the world, new factories are allowed only where there is potential to develop additional cane and not by cannibalizing cane of existing factories. In India, the policy is quite ambiguous where each state government has its own policy.

The Central Government decided to de-license the sugar industry without fully understanding its implications or providing safeguards that would allow the industry to grow in a healthy manner. As a result, two factories are being set up in such close proximity that they will spend their lifetime competing for cane until one or both shut down. A solution to this problem will have to be found in the new policy.

5.4 SUBSIDY BURDEN ON MILLS

As for issues relating to sugar, the Indian industry is obligated to supply 10 per cent of its production as levy sugar for sale to Below Poverty Line (BPL) families under the Public Distribution System. This is an archaic system. The government requires the industry to subsidize sugar sold to a certain section of the society. Unfortunately, this system is not working effectively. It is open secrets that levy sugar leaks out from the ration shops to the open market where unscrupulous traders make huge profits. Some way of directly subsidizing sales to the target families such through coupons will be more meaningful. In any case, if this system has to continue, the government should meet the subsidy cost instead of casting the burden on the industry. Another control on sugar is regulated releases through the monthly release mechanism. This is a tool devised by the government to keep the open market price in check. Unfortunately, this mechanism has fallen apart during years when the industry was forced to carry...
huge inventories due to glut conditions. Sugar mills bypassed the release orders of the government with the help of court orders. It becomes clear that it is impossible to go against market forces, which alone can determine price levels.

5.5 TRADE POLICY ANOMALIES

The next issue that needs to be tackled is policy anomalies in foreign trade. While the U.S and EU countries have high import tariffs and subsides/incentives to protect their domestic industry such support is lacking in India. In fact, there was a situation when import duty was brought down to zero. This led to large scale import of sugar that depressed prices, hitting the farmers and millers hard. Again, when there is surplus production in India, export of sugar is banned. This may lead to a crash in prices affecting the farmers and the millers. A supportive policy must allow free exports and discourage imports except during periods of shortage. The Indian industry has ensured since 1993 there was no shortage of sugar. Even during a fall in production in 2003-04, sufficient sugar was available to meet domestic demand.

5.6 ENERGY SOURCE

Sugarcane, till now, has been thought of as a crop to produce sugar. The industry is gradually realizing the true potential of sugarcane as an energy crop as it produces two by-products which are important raw materials for renewable energy. Ethanol is a bio fuel produced from molasses and has been found to be an excellent substitute for petrol. Ethanol is widely used in a blend with petrol all over the world. In fact, Brazil boasts a fleet of over three million vehicles running on ethanol. Blending has been mandated by the Brazil government at 24 per cent.
The technical advantage of using ethanol is substantial as it is an excellent oxygenate as well as octane booster.

High and volatile oil prices have forced countries to opt for such alternative sources of energy. India has started this programme rather late. However the government is pushing this programme forward and it is hoped that in the next two years India will reduce its dependence on crude oil imports significantly filling the gap with ethanol.

Electricity is another product of a sugar factory which using bagasse as fuel. The sugar industry has the potential to co-generate 7000 MW of power. The generation at present is around 850 MW. It took a few years to reach this level of co-generate power due to initial hiccups in the policy framework. However, the industry has now begun to make sizable investments in this sector. An additional advantage is the recognition of these renewable sources of energy under the Clean Development Mechanism of the Kyoto Protocol. This allows such environment friendly projects to earn revenues by trading in carbon credit.

5.7 AVAILABILITY OF INPUTS

The decline of the sugar industry in Bihar was mainly due to non-availability of sufficient quantity of sugarcane and lack of infrastructure. Poor linkages, lack of irrigation facilities, irregular power and poor varieties of sugarcane have left the industry crippled. Moreover, yield per hectare in Bihar is lower than the sugarcane producing regions in north India. The main reason for this is that out of the total cultivable area, a sizeable portion is fallow land and not suitable for cultivation of sugarcane in the absence of drainage facilities. Hence, yield is only 41.4 tonne per hectare in Bihar against the national average of 59.4 tonne per hectare.
The sugarcane growing season is also of a lesser duration than other sugarcane growing states. It means that sugar mills would remain operational only during some months of the year. It also reduces the viability of standalone sugar mills and emphasizes the importance of both increasing the duration of the crushing season and establishing integrated mills that can remain profitable during the time of the year when crushing is not possible.

Mills in other sugar producing states are also facing problems. Sugar factories in Uttar Pradesh have been thrust into a 'cane war' situation after new units were allowed near existing sugar mills. In Tamil Nadu, high transport costs are an issue with sugar factories having to source sugarcane from 50-100 km away. In Maharashtra, the reason for sickness is the crowding of sugar factories. With so many units in close proximity, raw material shortage is a problem.

5.8 COOPERATIVE NATURE OF SUGAR MILLS

The overwhelming majority of sugar mills in India are set up on the cooperative model. In a cooperative mill, farmers buy shares proportional to the amount of land they own. A share entitles a farmer to sell a specified amount of cane to the mill, and obliges the mill to crush that amount of cane. Public funds were (and still are) used to set up mills, provide bailouts when mills faced threats of bankruptcy and provide subsidized loans for operation. State and national governments have also heavily regulated the sugar industry. Sugar mills were given monopoly power under the 'command area' or zoning system, whereby farmers who had land in a particular area could only sell cane to the assigned mill in that vicinity, and the mill could only buy cane from the farmers in its command area.
Cane price floors are set by both the state and national government. A typical cooperative consists of 20,000-30,000 shareholder farmers. The conventional operating structure of the cooperative consists of a Chairman, Vice-Chairman, Secretary, Treasurer, along with a board of directors, all of whom are elected every four or five years. In these elections, each shareholder is entitled to a single vote, regardless of the number of shares they own. Cooperative elections allow politicians to gain control over the mill. On the other hand, internal elections might also be constrained on rent extraction. Most observers agree that elections for the executive positions are intensely contested, with the opportunism and maneuvering characteristic of elections across India. While the price of cane paid is not the only criterion for judging candidates—other forms of patronage such as providing employment, and caste and village affinity play a role—it is certainly a very important factor.

5.9 UTILIZATION OF BY-PRODUCTS

The country has still to evolve a system for effective utilization of by-products derived in the manufacture of sugar. It extracts only 40% of the alcohol capacity, and the potential for co-generation of power using bagasse is enormous. Likewise, various downstream products from molasses and other by-products have very good potential for value addition but currently are not being produced or utilized because of the fragmented nature of the industry and the high capital costs involved. Also, over 50% of the units in India have capacity of less than 2,500 TCD, which is the minimum economic size hence making them unviable & loss making.
5.10 TECHNOLOGY

A sugar factory crushes sugarcane for approximately six months of the year ranging from September until May. The technology is fairly straightforward: cane is crushed to yield juice in the mill house, which is evaporated in the boiler house and crystallized to yield sugar. There are approximately constant returns to scale with respect to cane supply, within the capacity limits of the factory. Capacity limits have increased substantially over the duration of the industry, between 750 tons per day in the oldest factories to 10,000 tons per day in the most recent factories. However, capacity levels do not change for the vast majority of factories. Sugarcane procurement constitutes the bulk (60-70%) of the costs of a factory. The harvested cane needs to be crushed within a few hours to avoid loss of sucrose content, necessitating close coordination of harvesting and cane supply with cane crushing operations. Apart from this, the main determinants of factory efficiency are: (i) cane quality, represented by percentage of sucrose content in the juice (ii) factory recovery rate, in turn the product of rates of mill house and boiler house extraction.

5.11 MARKETING

In India, the government purchases a fixed proportion of the sugar output of each factory at a controlled price (called the levy price), with the remainder sold in the free market. The sugar so procured is distributed to consumers through fair price shops that serve as outlets of the public distribution system. The levy price is determined on the basis of a cost plus formula, and usually lies substantially below the market price. Owing to progressive ‘liberalization’ of industrial policy, the government has lowered the proportion of sugar procured at the levy price.
This has raised the effective sugar price received by the factories over time though not at a rate faster than the general rate of inflation. The free market price is subject to considerable fluctuations being closely linked to the world market price. India has been a net exporter of sugar through most of the past two decades, while resorting to imports in a few years when domestic production slumped. With about four hundred factories operating nation-wide, that factories have no market power on the output. This is in contrast to the significant monopsony power exercised by factories over cane suppliers, chiefly on account of the need to crush sugarcane very soon following harvesting.

5.12 DIVERSIFICATION OF SUGARCANE

Sugarcane is utilized by sugar mills as well as by traditional users like jaggery / gur and khandasan producers. In the early 1980’s, the production of cane lifted by sugar industry was around 35% which went up to 50% in the 1990’s and to as high as 65.6% in 2002-2003. Though lion’s share of the sugarcane is diverted to the manufacture of white sugar, still significant quantum of sugarcane is used in the manufacture of jaggery and Khandasan. All the same in 2003-2004, the share of sugar mills declined to 9.8% due to more intense competition gur and Khandasan.

5.13 CYCLICAL FLUCTUATIONS:

Sugar is a cyclical industry and historically it has been repeating its peaks and lows of production in a span of five to six years. In sugar cycle starts with higher production leading to depressed prices and lower realization and profitability.
The lower profitability further results in irregular and delayed payment to cane growers, which compel the farmers to diversify to some other remunerative crops. Consequently, the price of sugarcane and sugar would increase gradually. For instance, if sugar production is in an increasing trend leading to a glut situation in the country.

5.14 INADEQUACY OF CASH CREDIT LIMITS.

Bankers are generally unwilling to extend the limits for sugar factories because of their high of risk perceptions. The problems has got further worsened due to fall in the sugar prices from Rs. 1,300 in 2001-02 to Rs. 1,050 a quintal in 2002-2003. As a result, the sugar factories face severe cash crunch causing payment arrears to sugarcane farmers.

5.15 INTEGRATED OPERATIONS

Many large sugar companies are implementing their plans of becoming integrated players. Large integrated sugar manufacturers, with a presence in other businesses such as ethanol production, other by-product related chemicals and power are likely to have more stable margins. Sugar revenues as a percentage of total industry revenues are expected to fall from the current 78% to around 70%. With a shortfall in energy likely in India over the next three to five years, demand for ethanol-blended petrol will rise, whilst distribution companies will buy more co-generated power, providing opportunities for sugar companies.
5.16 FUTURE DEMAND-SUPPLY SCENARIO

During the year 2007-2008, it is estimated that domestic demand will be between 19.5 million metric tonnes (mt) and 20.5 million mt. A large increase in sugar capacity has been planned in India, especially in Uttar Pradesh (UP) due to the various incentives given by the state government. Domestic supplies are expected to increase to between 23 million mt and 24 million mt in 2007-08. In the likely event of increasing sugar stocks, manufacturers will need a good export strategy. While this clearly indicates that excess supply is pending, a substantial amount of this capacity has arisen due to tax incentives. The factors that would help sustain the cycle and those that could dampen the overall performance of the industry.

5.17 FACTORS EXTENDING THE CYCLE

5.17.1 Exports

Indian sugar manufacturers have the option of exporting if the Indian government allows exports without any accompanying export quota obligations (i.e. free exports). However, profitability will depend on the prevailing sugar price in the international sugar market. Historically, sugar has been exported from the ports of Mumbai, Tuticorin, Pondicherry, Chennai and Vizag. The companies located closer to these ports are likely to benefit more, due to lower freight costs. Uttar Pradesh is not close to any of the ports. Yet Uttar Pradesh is where the lion's share of additional sugar capacity is being added, accounting for around 66% of all Indian capacity being added at April 2006, and contributing nearly 40% of all
Indian sugar production in FY05. If excess supply should occur, companies from this region will feel the pinch of higher freight costs if they plan to export.

If exports seem unviable they are likely to liquidate their stocks by supplying other distant domestic markets, but they are likely to face higher freight charges and competition from regional sugar manufacturers in those areas. In 2006 India will contribute around 14% of the total global sugar production of around 146 million mt. Historically, India has usually been self-sufficient in meeting sugar demand. However, in the years which have seen imports by India, global sugar prices have increased.

Excess sugar capacity is expected in India in 2007-2008 onwards. This will necessitate free exports from the country. Large, long-term exports of sugar from India are unprecedented. The country is unreliable as a source for sugar procurement due to the regulatory uncertainty of the sugar release quota mechanism, sugar exports and cane pricing. If there is a favourable regulatory scenario, exports to Pakistan, Bangladesh and other South-East Asian countries may be feasible due to low freight charges.

5.17.2 Ethanol

Ethanol-blended petrol is a small step towards meeting India's increasing energy demands. Currently, the oil companies are negotiating ethanol procurement at Rs 21 per litre from the sugar companies. It is assumed that the price of ethanol procurement will remain at the current level over the short-to-medium term. One metric tonne of sugar cane yields around 70-75 litre of ethanol, assuming the production of ethanol directly from sugar cane. This means that sugar companies can generate around Rs 1,570 per mt of sugar cane crushed. With sugar
cane costs at Rs 1.250 per mt (using the cost prevailing in I P. as a high ethanol capacity is expected there) and assuming a conversion cost of Rs 125 per mt, a sugar company will make a profit of around Rs 220 per mt of cane crushed.

This produces a profit margin of above 15%. If ethanol is produced from the molasses route, along with sugar, the consolidated profit margin for the sugar company is higher. This will vary between 13% and 26% if sugar prices are between Rs 1,500 per tonne and Rs 1,850 per tonne, respectively. Stand alone ethanol production and sales at current prices provide some relief. When the sugar companies add ethanol production to their sugar sales, it helps to stabilize the operating margin.

5.18 FACTORS ACTING AS DAMPENERS

5.18.1 Large capacity expansions

Sugar manufacturers have been encouraged by the presence of low cost and long tenure sugar development funds (SDF) and fiscal incentives from states such as UP and Bihar to undertake large capital expansion plans. In April 2006, over 79,000 tonne crushed per day (TCD) of additional sugar capacity was being developed in India. There are some credit concerns over the size of these expansion plans. In many cases the proposed expansion is significant when compared with the current fixed asset base of the company. Most of the companies undertaking these expansions are doing so for the first time, simultaneously venturing into two or three different segments, exposing them to additional risks relating to project management. The capacity growth needs to be supported by a swift commencement of operations to generate cash and the industry, as a whole needs to keep striving for efficient operations and high recoveries.
5.18.2 Cane availability and pricing

Past data indicate neither a significant increase in acreage nor a significant increase in yields of sugar cane cultivation in India. It is imperative for sugar manufacturers to forge good relations with farmers. An increase in sugar capacity will require more cane and this can primarily be achieved through increasing the cane drawal. Incidences of cane arrears would be adverse for the industry. Companies with a stronger track record for meeting cane payments are likely to benefit in this scenario. The sugar cane price has been increasing steadily over the past five years. The proposed increase in manufacturing capacity will lead to higher demand for cane. It is expected that the sugar cane prices to remain firm over the next two-to-three years due to greater competition as a result of the need to feed the additional capacity.

5.18.3 Financial flexibility

During the year, 2004-05 saw an equity infusion through the issuance of shares to investors by most large sugar companies. Analyzing the equity holding pattern of the top 10-15 sugar companies, the promoter holding stayed close to 45%-55% in the quarter ending 31 March 2001. In 2003, the year that saw a poor performance from many of the sugar companies, the promoter holding for the same set of companies was higher, at close to 55% However, it subsequently declined and stood between 35%-40% in the quarter ending 30 June 2006. Additionally, many of the companies have raised capital through the issuance of hybrid securities, which has not been the case historically. On conversion these would further dilute the promoter's equity holding. Any further equity infusions would have to include an injection from the promoter or risk the dilution of their holding.
The promoter’s willingness and ability to make such an injection of equity capital is a concern for the overall financial flexibility of sugar companies.

5.18.4 Expected credit health

Sugar revenues as a percentage of total industry revenues are expected to decline, and the contribution of sugar to profits will be lower. However, the sugar cane price, which forms the input cost for all these businesses, is likely to remain steady or increase due to the higher competition. According to industry projections, average industry operating margins are likely to fall. The cash flow available for servicing debt will be subject to risks relating to smooth project implementation and the vagaries of the weather. Even in Uttar Pradesh, where the irrigation system is good, the cane crop yield, and its recovery will be affected by weather conditions. According earlier research studies, the debt metrics of the sugar companies undertaking large expansions are likely to be constrained over the next two years. The debt/PBDITA and debt/equity ratios are likely to be over 3.5x (2.49x in FYE05) and 2.0x (1.31x in FYE05), respectively.

5.19 CONCLUSION

Sugar will remain one of the important agro-based industries. It has just begun to see its potential. In the current sugar season 2006-07, sugar output has reach 28 million tonnes. Rapid growth is already taking place in the development of the two renewable sources of energy-ethanol and co-generation. India should become a major sugar exporter in the years to come. For this, the government will have to devise a suitable long-term policy for the industry that takes into account the interests of farmers, consumers and millers.