CHAPTER 11

SUGGESTIONS, CONCLUSIONS AND SCOPE

FOR FURTHER RESEARCH
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11.1 SUGGESTIONS

Production

1. The sugar factories of Belgaum district should set up refineries, procure raw sugar and refine it. This will help the sugar factories to function throughout the year, thereby improving their capacity utilisation and revenues.

2. In order to enhance the global competitiveness of the Belgaum district sugar industry, the sugar mills need to participate more regularly in the global sugar trade. They should focus on manufacture of the desirable quality of sugar in the international market viz.

   c. Refined sugar whose ICUMSA value should be less than 45 and should be free from sulphur content, which is mainly in demand in the western countries.

   d. Raw sugar, which is mainly imported by sugar refineries.

The sugar mills should adopt the phosphofloatation method of manufacturing sugar, which leaves no traces of sulphur in sugar instead of the presently adopted double desulphitation method, which leaves traces of sulphur.
3. Sugar mills should increase their downstream value chain efficiency. This can be done by increasing their economies of scope by diversifying into value added products and by products, such as co-generation of electricity, manufacture of rectified spirit, manufacture of ethanol, bio-fertilizers, alcohol etc so that the sugar industry can become more cost competitive as their fixed cost now spreads across various products, reducing the per unit overhead cost.

4. In order to enhance their competitiveness, the sugar factories of Belgaum district should increase their capacities, as the average crushing capacity of Belgaum district sugar industry is 3468 TCD, which is below the national average of 3500 TCD. However it is much below than that of Brazil (9200 TCD), EU-25 (above 10000 TCD), Thailand (10300 TCD) and Australia (above 10000TCD). Also there is a need for consolidation of the fragmented capacities in order to derive economies of scale. Hence the sugar mills of Belgaum district should tap the prospects that exist for a sensible, moderate scale milling expansion opportunities. The viable minimum capacity is 5000 TCD

Sugarcane

5. In order to ensure a better cane supply, the sugar factories should intensify their extension programmes and educate the farmers on scientific ratoon management, cultivating high yielding cane varieties like Co86032 and Co671
instead of the low yielding Co8011 and Co7527, prevention of overdose of fertilizers and water to cane.

6. The sugar mills can also explore the possibility of contract farming as it will mitigate the drawbacks of small land holdings, ensure proper crop management and create a win-win situation for the farmer and the miller.

**Benchmarking**

7. Sugar factories should adopt the concept of benchmarking to improve their competitiveness. Minimum 100 tonnes cane output per hectare and minimum 12% sugar recovery” should be the mission target for farmers and millers respectively. The sugar mills of Belgaum district should also undertake research and development activities in a greater measure, especially in developing new varieties of cane and better farm/crop management practices in order to enhance the competitiveness, as is done by a majority of the sugar factories in Brazil.

**Sales/Marketing**

8. As only 8% of the sugar factories in Belgaum district sell to institutional buyers who buy in bulk, the sugar mills of Belgaum district will have to initiate and increase their institutional sales. This will help them to manage their sugar inventories better.

10. The sugar industry as a whole has never bothered to service household consumers directly. The industry had always produced and sold sugar in bulk.
There are over 18 crore households in our country with average consumption of 100 kg per annum per household.

None of sugar factories in Belgaum district have branded their sugar. Some have expressed the opinion that it is difficult to brand sugar and it would not be successful because retailing of sugar is not possible as it is traded as a commodity.

Hence, sugar mills must change their mindset, produce sugar of consistent quality and market it in a competitive environment. Excellent opportunities exist for branding and marketing sugar in consumer packs and it would help them to increase their revenues. Especially with supermarket chains opening up even in tier-2 cities of India, there may be a positive shift in the consumer purchase behaviour towards branded sugar.

11. Indian sugar manufacturers will have to explore the possibility of branding the sugar as it would help them gain a premium over unbranded sugar. However as per the survey conducted by the researcher and also as per secondary data, the concept of branding has not been so effective in Indian markets and sugar is still regarded as a commodity item.

Hence, product differentiation has to be carried out offering various types of sugar to users. By doing so the Indian sugar industry can cater not only to the specific needs of the different categories of users such as confectionaries, soft drink manufacturers, households, bakers etc but also make the concept of branding effective by providing diversified products for specific use under brand
names. This will help the sugar mills to increase their revenues as well as they can command higher price by branding the products.

**Training and Development**

9. The sugar mills will have to adequately train their staff in order to develop their expertise in commodities trading, so that the mills can avail the benefit of participating in the commodities trading. The staff should also be trained to gather information on the market share, delivery performance and capacity building activities of competing sugar mills, which have a bearing on their competitiveness.

**WTO**

12. There is a greater need to educate the personnel of sugar industry about the WTO, its regulations and their impact on the sugar industry as from the survey it is found that the awareness level about these aspects is very less.

**Investment abroad**

13. The sugar factories of Belgaum district should explore the possibilities of investing in a foreign sugar factory, especially in Brazil and Thailand, as is being done by the sugar factories of Europe and Australia, to enhance their competitiveness. This would give them the competitive advantage through access to cheaper raw materials, low cost of labour, access to markets abroad and lower freight costs associated with transportation of sugar. This would make the Belgaum district sugar industry more competitive in the global market.
Induced Cyclicity

14. The sugar factories of Belgaum district should initiate steps to eliminate the induced cyclicity that has become a regular feature and a bane of the Indian sugar industry. This calls for a greater farmer-miller relationship built on mutual trust and sharing profits, sharing of ideas for better farm management and a greater participation of the miller in the farming activity. The sugar factories can explore the possibility of adopting contract farming as it would be mutually beneficial to both the farmer and the miller and help reduce the induced cyclicity. Also tapping the export market would help in improving the profitability and quicker cash realisation for the sugar mills, which would help to reduce the induced cyclicity.

Export orientation

15. In order to leverage the freight advantage that India has with respect to Indian Ocean rim countries, the sugar mills should concentrate on exporting both refined and raw sugar to the Indian Ocean rim countries.

16. The Indian and Belgaum sugar industry should tap the potential for entry to more high quality refined sugar markets, as EU whites (white refined sugar) exit, due to the ruling of the WTO Dispute Settlement Body against the subsidised European Union sugar exports.
Diversification

17. The stand alone sugar mills of Belgaum district should diversify into cogeneration of electricity as India is an energy deficient country. This would help the sugar mills to improve their profitability by generating in-house the electricity required for sugar manufacturing and selling the surplus electricity to the state.

18. The sugar mills of Belgaum district should also diversify into ethanol production both for domestic and export market as the global demand for ethanol would be in the range of 50 to 200 billion liters by 2017.
11.2 CONCLUSIONS

The insights emerging out of the study have implications for the academic world as well as the corporate world.

i. Analysis of the hypotheses reveals that

Ho) 1: Awareness level among the sugar industrialists of Belgaum district about the implications of the various provisions of WTO is very minimal is accepted.

Ho) 2: The sugar factories of Belgaum district are not competitive to tap the export market is accepted.

Ho) 3: The performance of the co-operative sugar mills of Belgaum district has deteriorated during post-implementation period of WTO regulations is accepted.

Ho) 4: The performance of the private sugar mills of Belgaum district has deteriorated during post-implementation period of WTO regulations is rejected.

Ho) 5: There is no difference between the performance of the co-operative sugar mill and the private sugar mills during the pre-implementation period of WTO regulations is rejected.

Ho) 6: The performance of the private sugar mills is better than that of the co-operative sugar mills during the post-implementation period of WTO regulations is accepted.

ii. There is a positive impact of the WTO regulations on the sugar industry of Belgaum district due to the ruling of the Dispute Settlement Body against the subsidised exports of sugar from the European Union (to the tune of 4.5 million MT), as it provides an opportunity to the Belgaum district sugar industry to tap
the market vacated by the EU. For this purpose the Belgaum district sugar industry will have to focus on the manufacture of refined sugar with an ICUMSA of less than 45 with no traces of sulphur.

iii. The liberalised global trade regime, which is an offshoot of the WTO regulations, has led to the setting up of the destination refineries in major sugar importing countries. This provides an opportunity to the Belgaum district sugar industry to export raw sugar to these destination refineries. For this purpose the Belgaum district sugar industry should focus on manufacture of raw sugar for export purpose.

iv. WTO regulations have facilitated greater investment opportunities abroad as can been seen from the investments of the EU sugar mills in Brazil and the Australian sugar mills in Brazil and Thailand. Hence, the Belgaum district sugar industry should explore the possibility of investing in sugar mills abroad to take advantage of the cheap source of raw material, labour, manufacturing cost and reduced export freight charges.

v. The threats, which the Belgaum district sugar industry will face from the developments arising due to the WTO regulations, are, threats of cheaper imports of sugar, due to the market access provision of WTO, especially from Brazil, which exports at marginal price. Also the domestic sugar prices are no longer insulated from the global sugar prices. Hence the Belgaum district sugar industry has to be cost competitive and diversify into being a sugar-complex manufacturing ethanol, rectified spirit, bio-fertilizers, cogeneration of electricity, paper boards rather than being a stand alone sugar mill.
11.3 SCOPE FOR FURTHER RESEARCH

The scope for further research has been suggested in the following areas:

i. The scope of the study can be broadened to assess the impact of the WTO regulations on the sugar industry of India in general and of the major sugar producing states in particular.

ii. The data solicited in the questionnaire, to assess the competitiveness of the Belgaum district sugar industry is for the period from 1995-96 to 2005-06. Hence, any changes in the parameters of assessment that might have taken place after 2005-06 has not been incorporated. Any future study can focus on the developments and data post 2005-06.

iii. Studies can be undertaken to focus on the competitiveness of the farming practices with respect to cane cultivation and its impact on the competitiveness of the sugar industry.

iv. Studies can be undertaken on the farmer-miller relationship in order to create a win-win situation that will help to mitigate the problems arising due to the induced cyclicity, thereby improving the competitiveness of the sugar mills to face the competition, in the changed liberalised environment.